University of South Alabama

2014 - 2015

Undergraduate and Graduate Bulletin

UNIVERSITY CALENDAR
2014-2015

FALL SEMESTER 2014

Registration for Continuing and Readmitted Students	April 7-June 8, Mon.-Sun.
Freshman 1 Orientation/Registration	June 9, Mon.
Freshman 2 Orientation/Registration	June 11, Wed.
Freshman 3 Orientation/Registration	June 16, Mon.
Freshman 4 Orientation/Registration	June 18, Wed.
Transfer 1 Orientation/Registration	June 20, Fri.
Freshman 5 Orientation/Registration	Jun 23, Mon.
Freshman 6 Orientation/Registration	Jun 24, Tues.
Freshman 7 Orientation/Registration	July 7, Mon.
Freshman 8 Orientation/Registration	July 9, Wed.
Transfer 2 Orientation/Registration	July 11, Fri.
Freshman 9 Orientation/Registration	July 14, Mon.
Freshman 10 Orientation/Registration	July 16, Wed.
Transfer 3 Orientation/Registration	July 18, Fri.
Freshman 11 Orientation/Registration	July 21, Mon.
Freshman 12 Orientation/Registration	July 22, Tues.
Adult Orientation/Registration	July 25, Tues.
Baldwin County Orientation/Registration	July 31, Thurs.
Open Registration for All Eligible Students for Fall 2014	Aug. 1-11, Fri.-Mon.
Registration for New Fall 2014 Graduate Students	Aug. 1-11, Fri.-Mon.
15% of all tuition & fees including housing and meals due	Aug. 4, Mon.
Registration schedule cancelled if 15% payment is not received by August 4th (Students with awarded Financial Aid that exceeds 15% of tuition and fees and students participating in the Tuition Payment Plan will be excluded)	Aug. 5, Tues.
Financial Aid Bookstore charges begin	Aug. 11, Mon.
International Student Orientation	Aug. 12, Tues.
Residence Hall Check-In for students participating in August Orientation, 9:00 a.m. - 4:00 p.m.	Aug. 12, Tues.
Residence Hall Check-In for returning students, 9:00 a.m. - 4:00 p.m.	Aug.12-15, Tues.-Fri.
Orientation/Advising/Registration First-Time Freshmen	Aug. 12, Tues.
Orientation/Advising/Registration Transfer Students A-K	Aug. 13, Wed.
Orientation/Advising/Registration Transfer Students L-Z	Aug. 14, Thurs.
Open Registration for All Eligible Students	Aug. 15-17, Fri.-Sun.
Residence Hall Check-In for new students, 9:00 a.m. - 4:00 p.m.	Aug. 16, Sat.
JagFest	Aug. 16, Sat.
Residence Hall Check-In for new students, 1:00 p.m. - 4:00 p.m.	Aug. 17, Sun.
Classes begin	Aug. 18, Mon.
100% refund period begins on dropped courses and complete withdrawals (including housing)	Aug. 18, Mon.
Late Registration and Drop/Add (ends at 5:59 p.m. on August 20)	Aug. 18-20, Mon.-Wed.
Last Day to Add a Course (5:59 p.m.) Last Day to Change to Audit (5:59 p.m.)	Aug. 20, Wed.
Financial Aid Bookstore charges end	Aug. 20, Wed.
Balance of tuition and fees including housing & meals due if paying on campus	Aug.22, Fri.
Balance of tuition & fees including housing & meals due if paying on-line	Aug. 24, Sun.
Refunding financial aid credit balances to students begins	Aug. 25, Mon.
50% refund period begins on dropped courses and complete withdrawals (including housing)	Aug. 25, Mon.
All registration schedules released if payment deadline not met	Aug. 25, Mon.
Reinstatement Period	Aug. 26-29, Tues.-Fri.
No refunds after this date	Aug. 31, Sun.
Labor Day Holiday for students, faculty, staff and administration	Sept. 1, Mon.
Last day for Spring Semester 2015 degree applications	Sept. 5, Fri.
Priority readmission deadline for Spring Semester 2015	Sept. 19, Fri.
Time Tickets Posted for Spring 2015 Registration	Sept. 25, Thurs.
Spring Semester 2015 advising for continuing and readmitted students	Sept. 25 - Oct. 10, Thurs.-Fri.
Fall Break for Students	Oct. 6-7, Mon.-Tues.
Last day for faculty reports on incomplete grades (undergraduate and graduate)	Oct.10, Fri.
Spring Semester 2015 Registration for continuing and readmitted students	Oct. 13 - Jan. 6, Mon.-Tues.
Last day to drop from a course (4:59 p.m.) Last day to withdraw from University (4:59 p.m.)	Oct. 24, Fri.
Theses/dissertations first submission deadline to Office of the Graduate Dean by 5:00 p.m.	Oct. 27, Mon.
Theses/dissertations due in the Office of the Graduate Dean by 5:00 p.m.	Nov. 14, Fri.
Thanksgiving Holidays for Students (includes weekend classes)	Nov. 26-Nov. 30, Wed.-Sun.
Thanksgiving Holidays begin at noon on Wednesday for faculty, staff and administration	Nov. 26-28, Wed.-Fri.
Registration for New Spring 2015 Graduate Students	Dec. 1-Jan. 6, Mon.-Tues.
Last day of classes	Dec. 4, Thurs.
Exam Preparation Day	Dec. 5, Fri.
Final Examinations	Dec. 8-11, Mon.-Thurs.
15% of all Spring 2015 tuition and fees including housing and meals due	Dec. 9, Tues.
Registration for Spring 2015 cancelled if 15% payment not received by December 9th (students with awarded financial aid that exceeds 15% of tuition and fees and students participating in tuition payment plan will be excluded)	Dec. 10, Wed.
Residence Hall check-out deadline for students not enrolling Spring Semester 12:00 noon	Dec. 12, Fri.
Commencement	Dec. 13, Sat.
Residence Hall Check-out for Graduating Students, 12:00 noon	Dec. 14, Sun.
Final grade web entry due by 10:00 a.m.	Dec. 15, Mon.
Holidays for staff and administration	Dec. 24- Jan. 1, Wed.-Thurs.

SPRING SEMESTER 2015

15% of all tuition and fees including housing and meals due	Dec. 9, Tues.
Registration schedule cancelled if 15% payment is not received by December 9th (Students with awarded Financial Aid that exceeds 15% of tuition and fees and students participating in the Tuition Payment Plan will be excluded)	Dec. 10, Wed.
Faculty, staff and administration return to work	Jan. 2, Fri.
International Student Orientation	Jan. 6, Tues.
Residence Hall Check-In 9:00 a.m. - 4:00 p.m.	Jan. 6, Tues.
Financial Aid bookstore charges begin	Jan. 7, Wed.
Orientation/Advising/Registration for First-Time Freshmen	Jan. 7, Wed.
Orientation/Advising/Registration for Transfer Students	Jan. 8, Thurs.
Open Registration for Spring 2015	Jan. 9-11, Fri.-Sun.
Classes begin	Jan. 12, Mon.
100% refund period begins on dropped courses and complete withdrawals (including housing)	Jan. 12, Mon.
Late Registration and Drop/Add (ends at 5:59 p.m. on January 14)	Jan. 12-14, Mon.-Wed.
Last day to add a course (5:59 p.m.) Last day to change to audit (5:59 p.m.)	Jan. 14, Wed.
Financial Aid Bookstore charges end	Jan. 14, Wed.
Martin Luther King Holiday for faculty, staff, and administration	Jan. 19, Mon.
Balance of tuition and fees including housing and meals due	Jan. 20, Tues.
50% refund period begins on dropped courses and complete withdrawals (including housing)	Jan. 21, Wed.
Refunding financial aid credit balances to students begins (refunds)	Jan. 21, Wed.
All registration schedules released if payment deadline not met	Jan. 21, Wed.
Reinstatement period	Jan. 22-23, Thurs.-Fri., Jan. 26-27, Mon.-Tues.
No refunds after this date	Jan. 27, Tues.
Last day for Summer Term 2015 degree applications	Feb. 6, Fri.
Mardi Gras Holiday for students, faculty, staff and administration	Feb. 17, Tues.
Last day for faculty reports on incomplete grades (undergraduate and graduate)	Feb. 23, Mon.
Spring Break for students (includes weekend classes)	Mar. 2-8, Mon.-Sun.
Priority readmission deadline for Summer and Fall 2015 terms	Mar. 6,Fri.
Time Tickets posted for Summer/Fall 2015 Registrations	Mar. 16, Mon.
Summer/Fall Semester 2015 advising for continuing and readmitted students	Mar. 16-27, Mon.-Fri.
Theses/dissertations first submission to Office of Graduate Dean by 5:00 p.m.	Mar. 23, Mon.
Last day to drop from a course (4:59 p.m.) Last day to withdraw from University (4:59 p.m.)	Apr. 3, Fri.
Summer 2015 Registration for continuing and readmitted students	Apr. 6-May 19, Mon.-Tues.
Fall 2015 Registration for continuing and readmitted students	Apr. 6-June 3, Mon.-Wed.
Theses/dissertation due in the Office of the Graduate Dean by 5:00 p.m.	Apr. 10, Fri.
Last day of classes	Apr. 30, Thurs.
Exam Preparation Day	May 1, Fri.
Final Examinations	May 4-7, Mon.-Thurs.
Registration for New Summer 2015 Graduate Students	May 4-19, Mon.-Tues.
Residence Hall Check-Out deadline for students not enrolling summer term 2:00 p.m.	May 8, Fri.
Commencement	May 9, Sat.
Residence Halls Closed (Check-Out deadline of 12:00 noon for residents not assigned for Summer)	May 10, Sun.
Final grade web entry due by 10:00 a.m.	May 11, Mon.
Summer Transition (Spring residents assigned for Summer move to summer room assignment)	May 12, Tues.

SUMMER SEMESTER 2015

Financial Aid bookstore charges begin	May 19, Tues.
International Student Orientation	May 19, Tues.
Residence Hall Check-In 9:00 a.m. – 4:00 p.m.	May 20, Wed.
Orientation/Advising/Registration for First-Time Freshmen	May 20, Wed.
Orientation/Advising/Registration for Transfer Students	May 21, Thurs.
Open Registration for Summer 2015	May 22-25, Fri.-Mon.
Memorial Day Holiday for faculty, staff and administration	May 25, Mon.
Classes for Full/First Term begin	May 26, Tues.
100% refund period begins on dropped courses and complete withdrawals for Full/First Terms (including housing)	May 26, Tues.
Late Registration and Drop/Add Summer 2015 (ends at 5:59 p.m. on May 29th)	May 26-28, Tues.-Thurs.
Last day to add a course Summer 2015 (5:59 p.m.) Last day to change to audit Summer 2015 (5:59 p.m.)	May 28, Thurs.
Financial Aid bookstore charges end	May 28, Thurs.
All tuition, fees, housing and meal plan balances are due in full. ($50 Late payment fee assessed May 30th)	May 28, Thurs.
50% refund period begins on dropped courses and complete withdrawals for First Term	May 29, Fri.
Last day for Fall Semester 2015 degree applications	May 29, Fri.
Refunding financial aid credit balances to students begins (refunds)	June 1, Mon.
No refunds after this date for First Term classes	June 2, Tues.
50% refund period begins on dropped courses and complete withdrawals for Full Term (including housing)	June 2, Tues.
All registration schedules released if payment deadline not met	June 2, Tues.
Reinstatement Period	June 3-5, Wed.-Fri.
No refunds after this date for Full Term classes	June 8, Mon.
Last day to drop a First Term class (11:59 p.m.) Last Day to withdraw from University if taking all First Term classes (11:59 p.m.)	June 9, Tues.
Theses/dissertations first submission deadline to Office of Graduate Dean by 5:00 p.m.	June 22, Mon.
Classes end for First Term classes	June 22, Mon.
Exam day for First Term classes	June 22, Mon.
Second Term classes begin	June 23, Tues.
Final web grade entry (First Term classes) due by 10:00 a.m.	June 25, Thurs.
50% refund period begins on withdrawals for Second Term courses	June 26, Fri.
Fall Semester 2015 advising for continuing and readmitted students	June 30-July 7, Tues.-Tues.
No refunds after this date for Second Term courses	June 30, Tues.
Last day to drop from a Full Term course (11:59 p.m.) Last day to withdraw from University (Full Term) (11:59 p.m.)	June 30, Tues.
Fourth of July Holiday for students, faculty, staff and administration	July 3, Fri.
Last day for faculty reports on graduate and undergraduate incomplete grades	July 6, Mon.
Last day to drop a Second Term course (4:59 p.m.)	July 7, Tues.
Theses/dissertation grades due in the Office of Graduate Dean by 5:00 p.m.	July 10, Fri.
Last day for Full Term/Second Term Classes	July 20, Mon.
Final Examinations for Full Term/Second Term classes	July 21-24, Tues.-Fri.
Residence Hall Check-Out deadline for students not enrolling for Fall Semester 12:00 noon	July 25, Sat.
Final web grade entry (Full Term and Second Term classes) due by 10:00 a.m.	July 28, Tues.

UNDERGRADUATE/GRADUATE BULLETIN
2014-2015

University of South Alabama

Mobile, Alabama 36688-0002
http://www.southalabama.edu

The University reserves the right to make changes as required in course offerings, curricula, academic policies, and other rules and regulation affecting students, to be effective whenever determined by the University. These changes will govern current and former students. Interpretations of these policies will be made by the appropriate University authorities, keeping in mind the interests of the students and the University. Enrollment of all students is subject to these conditions.

The University of South Alabama does not discriminate in its student and employment practices in violation of any applicable laws. The University of South Alabama is an Equal Opportunity Employer - Minorities/ Females/Veterans/Disabled.

ABOUT THE UNIVERSITY

The University of South Alabama, a diverse and vibrant public university, is making a difference in the lives of the people of Alabama and the nation through teaching, research, service and health care. The Division of Academic Affairs offers a wide range of high-quality programs of study through six colleges and schools: Arts and Sciences, the Mitchell College of Business, Education, Engineering, Computing, and Continuing Education and Special Programs. The Division of Health Sciences, composed of the College of Medicine, Pat Capps Covey College of Allied Health Professions, and College of Nursing, provides contemporary education in medicine, nursing and allied health. The educational programs in the Health Sciences are integrated with the USA Health System (USA Physicians, Mitchell Cancer Institute, and USA Hospitals) which provides comprehensive, state-of-the-art health care for the people of the Gulf Coast region. Enrollment at USA now exceeds 15,000, and the number of degrees awarded by the University recently eclipsed 70,000.

USA's academic programs provide a solid base to allow students to grow intellectually, economically, and socially. At the present time, USA offers 41 different bachelor level programs, 31 masters level programs, and 10 doctoral level programs. The recent addition of several new academic programs provides greater opportunities for students while improving the quality of health care, safety and economic well-being of the region. Some of the newer degree programs offered at USA include master's degree programs in environmental toxicology and civil engineering with a focus on coastal design, and a doctoral program in clinical and counseling psychology. A new Doctor of Business Administration program began in 2013. Additionally, program offerings at USA's Baldwin County Campus continue to expand, enhancing one of the state's fastest-growing counties. We're also proud of our Scholarship Program and the success of our Honors Program in recognizing and rewarding academically talented students.

In addition to USA's outstanding academic program, our students enjoy a wide variety of social, cultural, entertainment and athletic activities that contribute to a well-rounded college experience. The inaugural season of the Jaguar football and marching band programs was launched in September 2009. Each year enthusiasm increases as the program works towards a full NCAA I-A/FBS classification. The USA Mitchell Center is home to Jaguar basketball, concerts and a host of other exciting activities. A multi-million-dollar Intramural Field Complex also provides students with a wide range of activities, and a campus-wide transit system, JagTran, makes campus travel more convenient. Meisler Hall also provides added convenience, bringing all student services together under one roof for easy access.

Several new construction projects will enhance campus life for students, including the completion of the new home for engineering and computing sciences, Shelby Hall, the addition of a new Residence Hall, and major renovations to the Campus Bookstore. Other recent projects include the campus Moulton Bell Tower and Alumni Plaza, the new state-of-the-art, 116,000-square-foot Student Recreation Center, new Dining Hall, the new Glass Art Studio, and the $45 million Health Sciences Building, which houses the Colleges of Allied Health Professions and Nursing. New entry way portals for the campus and enhanced landscaping help make the tree filled campus a beautiful environment.

Our students and faculty benefit from major renovations and expansion of the University Library, as well as from opportunities provided by USA's Technology and Research Park. The College of Medicine and the Mitchell Cancer Institute are putting USA at the forefront of medical research and treatment. Both the tech park and cancer institute contribute substantially to the $2 billion economic impact the University has each year on our community.

We invite you to learn more about USA through our Web site (www.southalabama.edu), or better yet, through a personal visit to our campus by calling 251-460-6141. The University of South Alabama experience is best defined by the people – students, faculty, staff, alumni and friends – who share a common enthusiasm as members of the USA family. We hope you will consider becoming a part of our family.

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GENERAL INFORMATION

THE UNIVERSITY

The University of South Alabama, the only major public institution of higher learning on the upper Gulf Coast, was created by act of the Alabama State Legislature in May, 1963. With Alabama's two older universities more than 200 miles distant, the University is strategically located in the greater Mobile area, which has a population of more than a million within a 100-mile radius.

THE GULF COAST REGION

Exploration in the Mobile River area began in 1519 when the Spanish Admiral Alonzo Alvarez de Pineda entered and charted the area now known as Mobile Bay. The old fort, now known as Fort Morgan, guarding Mobile Bay, was first fortified by the Spanish in 1559. Settled in 1711 by the French, the bay area has had a tradition rich in culture and vital in the affairs of the nation from its formative years to the present.

Trade and shipping are vital to the economy of the area. Millions of tons of shipping are handled annually through the Port of Mobile, which is rated among the top ports in the country More than fifteen million tons of shipping are carried yearly on the Tombigbee-Black Warrior waterway system with its modern locks and dams. The intracoastal waterway, crossing the southern end of the state, is connected at Mobile Bay with both inland and ocean shipping. Railroads and airlines serve the Bay area. Diversified farming, woodland crops, and seafood and fisheries are major factors in the area's economy.

MISSION STATEMENT

The University of South Alabama, with a global reach and special focus on the Gulf Coast, strives to make a difference in the lives of those it serves through promoting discovery, health, and learning.

VISION STATEMENT

The University of South Alabama will be a leading comprehensive public university internationally recognized for educational, research, and health care excellence as well as for its positive intellectual, cultural, and economic impact on those it serves.

INSTITUTION PHILOSOPHIES AND PURPOSES

The University of South Alabama is dedicated in purpose to the creation of an environment of intellectual excitement and an educational climate that will stimulate both faculty and students. A forum of free thought and discussion is provided which is intended to help develop an independent spirit undergirded by the moral and ethical values essential for effective participation in a free society. The University strives for fresh approaches to courses and programs. Emphasis is placed on the traditional dedication to the advancement and dissemination of knowledge, as a center of learning concerned with the arts and humanities, study of human nature, phenomena of the physical world, processes of human relationships, and the knowledge and skills necessary for participation in professional vocational endeavors. The University actively encourages the students to take responsibility for their own welfare and that of the community, thus stimulating them to become vitally involved in the pursuit of knowledge and the continuing use of their intellectual capabilities as responsible and effective individuals. Students are encouraged to participate in University decisions involving their own welfare, impressing upon them the responsibility inherent in this participation. The University is conscious of its obligation to the local, state, and national communities to assist students to attain the fullest possible knowledge of themselves in relation to society, and to become enlightened participants in civic affairs. An ever-present concern with the problems of a changing society causes recognition of the University's responsibility to cooperate with local, civic, professional, and governmental organizations. It inculcates an awareness of the necessity for effective leadership in the social, political, and economic affairs of our society. The University intends to extend its academic and professional programs to the highest level by introducing graduate programs and forming new schools and colleges when appropriate. New programs will be instituted only after necessary facilities, library resources, and faculty are acquired. The University reaches outward to the international community and encourages a wide exchange of knowledge and cultural relationships with other peoples. Relations are maintained with other colleges and universities, for the purpose of sharing resources and responsibilities in teaching, research, and service, in this country and abroad, as well as with the secondary schools and junior colleges in this vicinity. The need for continuing adult education accounts for the public being offered an opportunity to profit from these intellectual and technical resources. By contributing to the advancement of knowledge, by involving faculty and students in teaching, learning and research, and by offering its services to society commensurate with its resources, the University will achieve its maximum effectiveness.

THE UNIVERSITY OF SOUTH ALABAMA STATEMENT ON INSTITUTIONAL EFFECTIVENESS

To insure continued excellence as an educational institution, the University of South Alabama is committed to evaluating its effectiveness. The institution has carefully developed goals and objectives which are used as the basis for planning and evaluation. A variety of assessment methods are employed to determine the extent to which each goal has been met, and the results of such assessments are used to improve both educational and support activities.

ATHLETIC DEPARTMENT MISSION/ PHILOSOPHY STATEMENT

The mission of the Department of Athletics at the University of South Alabama is to complement and supplement the total educational program of the institution and to provide equality to both student-athletes and all staff members regardless of race, gender, creed, nationality or economic status. The athletic department must provide learning experiences for all student-athletes and give each individual the opportunity to share in personal and group success. The University of South Alabama Department of Athletics provides student involvement in activities that help develop unity by encouraging a common quest for all students, alumni, faculty, staff and friends of the University. The athletic program is committed to enriching the mental and physical capabilities of its student-athletes while developing and building a respected program that is competitive on a national level in selected sports, at the same time operating a quality program in the other sports, which will create a basis for pride among the varied constituencies of the University.

The Department of Athletics' philosophy includes the following ideals:

- Recognition of the dignity, worth, and respect of every individual who comes in contact with the Department of Athletics.
- Belief in the provision of opportunity equally given every student-athlete to develop his or her maximum ability, both in the classroom and on the playing field, regardless of race, gender, creed, nationality, or economic status.
- Belief in the provision of opportunity equally given to each and every Athletic department staff member to develop his or her maximum ability in the workforce.
- Provision of the best available coaching and training staff in order to bring out the athletic potential of all its student-athletes.
- Commitment to the ongoing development of all student-athletes so that each can become a contributing member of society and live a rewarding and fulfilling life.
- Commitment to the provision of academic support services necessary to maximize the opportunity for academic success and graduation for student-athletes through a system of advising, monitoring academic progress and identification of potential problems.

- Demonstration of sportsmanship through the ideals of fairness, civility, honesty, unselfishness, respect and responsibility in a competitive arena of intercollegiate athletics.

ORGANIZATION

The University of South Alabama, operating as a state institution of higher learning and financed in large part by public funds, is governed by a Board of Trustees composed of seventeen members; twelve members are appointed from south Alabama, three members are appointed from the State at large; the Governor of Alabama serves as President, ex officio, of the Board, and the State Superintendent of Education serves as a member, ex officio. Of the twelve members appointed from south Alabama, three of the members are appointed from Mobile County and one member is appointed from each of the nine southern senatorial districts as those districts were designated at the time the University was organized. All except ex officio members are appointed by the Governor with the advice and consent of the Senate. The administrative organization of the University has been designed to provide the greatest possible efficiency in operation for a multiplex, yet young, institution. The framework is sufficiently flexible, involving three primary areas of operation-academic, administrative, and student personnel-to provide for revision as the institution becomes more complex. The three primary areas of institutional operation are supplemented and supported by programs in development and university relations. The organization below the Board of Trustees is composed of the President, appointed by the Board of Trustees, and other chief administrative officers who report directly to him: Senior Vice President for Academic Affairs, Vice President for Development and Alumni Relations, Vice President for Financial Affairs; Vice President for Health Sciences; Vice President for Health Systems; Vice President for Research; and Vice President for Student Affairs. Under the present organization, the University comprises the Pat Capps Covey College of Allied Health Professions, College of Arts and Sciences, Mitchell College of Business, College of Education, College of Engineering, College of Medicine, College of Nursing, School of Computing, School of Continuing Education and Special Programs, and the Graduate School, each headed by an academic officer. The Dean of University Libraries operates in cooperation with the faculty and reports directly to the Senior Vice President for Academic Affairs and Vice President for Medical Affairs. Departments within colleges operate under the direction of departmental chairs who report directly to the deans of the colleges.

ACCREDITATIONS

The University of South Alabama is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award baccalaureate, masters, and doctorate degrees. 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 Alabama. In addition, the University of South Alabama has programs accredited by the following organizations: Engineering Accreditation Commission of ABET, http:/www.abet.org: B.S. programs in Chemical Engineering, Civil Engineering, Electrical Engineering, and Mechanical Engineering are accredited by the Engineering Accreditation Commission of ABET. Association for the Advancement of Collegiate Schools of Business, American Chemical Society Committee on Professional Training, Committee on Accreditation for Respiratory Care, American Medical Association Council on Medical Education, Accreditation Council for Occupational Therapy Education, Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association, American Speech-Language and Hearing Association: CAA, Association of American Medical Colleges, Computer Sciences Accreditation Commission, Computer Science, Information Systems, and Information Technology are accredited by the CAC of ABET, and Council on Social Work Education, Joint Review Committee on Education in Radiologic Technology, National Association of Schools of Music, National Council for Accreditation of Teacher Education, Commission of Collegiate Nursing Education, National Association of Schools of Art and Design. Accreditation Association for Ambulatory Health Care, Inc., Accreditation Review Commission on Education for the Physician Assistant, Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions, Council on Academic Accreditation, and Council on Social Work Education.

POLICY OF NON-DISCRIMINATION

The University of South Alabama and its colleges and subdivisions follow a policy of nondiscrimination on the basis of race, sex (including pregnancy), sexual orientation, religion, color, national origin, age, or genetic information in admission policies and practices, educational programs, activities, and employment practices according to Title IX of the Education Amendments of 1972. The University of South Alabama does not discriminate in its student and employment practices in violation of any applicable laws. The University of South Alabama is an Equal Opportunity/Equal Access educational institution. The University of South Alabama does not discriminate on the basis of disability. No otherwise qualified person with a disability, solely on the basis of such disability, will be excluded from participation in, be denied the benefits of, or be subjected to discrimination in the administration of any educational program or activity including admission or access thereto or in treatment or employment therein by the University of South Alabama.

COMPLIANCE WITH 1973 REHABILITATION ACT (SECTION 504) AND THE AMERICANS WITH DISABILITIES ACT OF 1990

The University of South Alabama complies with Section 504 of the Rehabilitation ACT of 1973 and the ADA of 1990 as amended. Any questions relating to the accessibility should be directed to the Manager, Special Student Services, Student Center, Room 270, (251) 460-7212.

UNIVERSITY LIBRARIES

The need for authoritative information is critical for student success at the University of South Alabama. The University Libraries provide the resources and services necessary to obtain, understand, and think critically about information, whether it is located physically in one of the libraries, or available electronically in a licensed database. The computer network not only provides bibliographic information about the collections of the University Libraries through SOUTHcat, but also provides access to licensed full-text article services, periodical indexes and abstracts, eBooks, and electronic reference sources. The book, journal, microform, and audiovisual collections provide students with copyrighted information not yet available through the Internet. All University librarians hold Master of Library Science degrees, specialize in particular fields of study, and are available to assist patrons with their academic research.

The Libraries of the University of South Alabama consist of the:

- Marx Library, the general library on the main campus
- Charles M. Baugh Biomedical Library, main campus adjacent to the College of Medicine
  - Children's & Women's Hospital Library, on Center Street in midtown Mobile
  - USA Medical Center Library, on Fillingim Street
- Mitchell College of Business Learning Resource Center
- Doy Leale McCall Rare Book and Manuscript Library, at the USA Springhill Campus (SHAC)

Library services and a librarian are also available at the:

- USA Baldwin County Campus

The Marx Library houses a Federal Depository Library; an Instructional Media Center (IMC) with educational materials such as videotapes, DVDs, CDs; audiovisual viewing and listening rooms; a computer lab; an auditorium and classrooms available for reservations; two art galleries featuring student/faculty and regional artists, traveling statewide shows, and special displays. Reference, inter-library loan, photocopying, and other services are also available.

UNIVERSITY OF SOUTH ALABAMA BALDWIN COUNTY

Director: Cynthia L. Wilson (251) 928-8133
Librarian: Angela Rand
Home Page:
http://www.southalabama.edu/usabc
E-mail: usabc@southalabama.edu

The University of South Alabama Baldwin County (USABC) was established as a campus of the University in August, 1984, to offer higher education in one of the fastest growing and most diverse counties in Alabama. USABC offers upper-level (junior and senior) undergraduate courses, graduate courses, andnon-credit programs. The campus is in downtown Fairhope. The administration building is located at 10 North Summit Street and the classroom complex is at the corner of Summit Street and St. James Place; and the College of Nursing building at 161 N. Summit Street.

Academic offerings include courses leading to Bachelor's degrees in the Interdisciplinary Studies, Communication-Public Relations Track, Criminal Justice, Elementary Education and Nursing Accelerated BSN Track. Courses in business, education, and liberal arts are offered each semester which can be used as credit in a variety of degree programs. Faculty who teach these courses are hired by the University's academic divisions.

Computer services are provided for students and faculty. Classrooms have internet access and audio-visual equipment. The administration building contains a computer laboratory and computers are available in the building's lobby for use during business and class hours.

Credit courses are offered during the day and the evening in Fairhope. Most evening courses meet once per week and day time courses meet in a variety of formats. USABC students are eligible for on-line courses scheduled by the academic departments. Check the USABC web site, http://www.southalabama.edu/usabc for the complete schedule of courses for each semester.

Printed materials for admission, academic programs, financial aid and student services are available in the administration building. Counseling services and some academic advising are available, by appointment, on the campus.

USABC supports the University's mission of public service by working cooperatively with community organizations. The Fairhope Film Series, held in the USABC Performance Center, is available to the public. USABC cosponsors Leadership Baldwin County which is open to adults in the county. Special events are held on the USABC campus throughout the year.

USABC is growing both in the number of students and the academic courses offered. USABC is committed to providing the same high-quality educational experiences in Baldwin County that are provided on the main campus of the University of South Alabama.

DEPARTMENTS OF INSTRUCTION AND DEGREES CONFERRED

Pat Capps Covey College of Allied Health Professions
Biomedical Sciences
Emergency Medical Services
Speech Pathology and Audiology
Occupational Therapy
Physical Therapy
Physician Assistant Studies
Professional Health Sciences
Radiologic Sciences
Cardiorespiratory Care

College of Arts and Sciences
Air Force Studies
Biology
Chemistry
Communication
Dramatic Arts
Earth Sciences
- Geography
- Geology
- Meteorology

English
Foreign Languages and Literatures
History
Interdisciplinary Programs
- African-American Studies
- Gender Studies
- Gerontology
- International Studies

Marine Sciences
Mathematics and Statistics
Military Science
Museum Studies
Music
Philosophy
Physics
Political Science and Criminal Justice
Psychology
Public Administration
Sociology, Anthropology and Social Work
Visual Arts

Mitchell College of Business
Accounting
Economics and Finance
Management
Marketing

College of Education
Health, Physical Education and Leisure Studies
Leadership and Teacher Education
Professional Studies

College of Engineering
Chemical Engineering
Civil Engineering
Electrical and Computer Engineering
Mechanical Engineering

Graduate School

College of Medicine
Biochemistry and Molecular Biology
Cancer Biology
Cell Biology and Neuroscience
Comparative Medicine
Microbiology and Immunology
Pharmacology
Physiology
(For Doctor of Medicine see separate Bulletin)

College of Nursing
Adult Health Nursing
Community/Mental Health Nursing
Maternal/Child Health Nursing

School of Continuing Education and Special Programs
Center for Continuing Education and Conference Services
Interdisciplinary Studies
Career Planning
Developmental Studies
English As A Second Language
International Programs and Development

School of Computing
Computer and Information Sciences
Computer Science
Information Systems
Information Technology

Interdisciplinary Programs
Master of Science in Environmental Toxicology

Department of Cooperative Education

COURSES OF INSTRUCTION ABBREVIATIONS

ACC	Accounting
AED	Art Education
AFR	African-American Studies
AHN	Adult Health Nursing
AN	Anthropology
AIS	Adult Interdisciplinary Studies
ARH	Art History
ARS	Studio Art
AS	Air Force Studies
AUD	Audiology, Doctor of
BCH	Biochemistry
BLY	Biology
BMD	Biomedical Sciences
BUS	Business
CAS	College of Arts and Sciences
CA	Communication
CBN	Cell Biology and Neuroscience
CCP	Clinical/Counseling Psychology
CE	Civil Engineering
CED	Counselor Education
CH	Chemistry
CHE	Chemical Engineering
CIS	Computer & Information Sciences
CJ	Criminal Justice
CLA	Classics
CMN	Community/Mental Health Nursing
COE	Alternating Cooperative Education
COE	Internship Cooperative Education
COE	Parallel Cooperative Education
CP	Career Planning
CRC	Cardiorespiratory Care
CSC	Computer Science
CSD	Communication Sciences and Disorders
DRA	Dramatic Arts
DS	Developmental Studies
ECO	Economics
EDF	Educational Foundations
EDL	Educational Leadership
EDM	Educational Media
EDU	Teacher Education
EE	Electrical and Computer Engineering
EEC	Elementary/Early Childhood Education
EG	Engineering
EH	English
ELT	English Language Teaching
EMS	Emergency Medical Services
EPY	Educational Psychology
ES	Earth Sciences
ESL	English as a Second Language
EXT	Environmental Toxicology
FIN	Finance
GEO	Geography
GIS	Graduate Interdisciplinary Studies
GRN	Gerontology
GS	Gender Studies
GY	Geology
HI	Health Informatics
HON	Honors
HPE	Health, Physical Education
HS	Health and Safety
HSC	Health Sciences
HY	History
IDE	Interdepartmental Education
IDL	Interdisciplinary Basic Medical Science
IDS	Interdisciplinary Studies: A & S
IS	International Studies
ISC	Information Systems
ISD	Instructional Systems Design
IST	Interdisciplinary Studies Traditional
ITE	Information Technology
LAS	Language Arts and Skills
LG	Languages
LGS	Lesser Taught Languages
LS	Leisure Studies
LTE	Teacher Leader Education
MA	Mathematics
MAS	Marine Sciences
MCN	Maternal/Child Health Nursing
ME	Mechanical Engineering
MET	Meteorology
MGT	Management
MIC	Microbiology and Immunology
MKT	Marketing
MS	Military Science
MTH	Mathematics for College
MUA	Applied Music (Group A)
MUB	Applied Music (Group B)
MUM	Museum Studies
MUE	Music Education
MUL	Music Literature
MUO	Musical Organizations
MUS	Music Studio
MUT	Music Theory
NU	Nursing
OT	Occupational Therapy
PA	Physician Assistant Studies
PE	Physical Education
PH	Physics
PHA	Pharmacology
PHL	Philosophy
PHS	Physiology
PSC	Political Science
PSY	Psychology
PT	Physical Therapy
RAD	Radiologic Sciences
RDG	College Reading
RED	Reading Instruction
REL	Religion
SED	Secondary Education
SHS	Speech and Hearing Sciences
SLP	Speech-Language Pathology
SPE	Special Education

ST Statistics
SW Social Work
SY Sociology

DEGREES CONFERRED

Pat Capps Covey College of Allied Health Professions
Bachelor of Science in Biomedical Sciences
Bachelor of Science in Cardiorespiratory Sciences
Bachelor of Science in Emergency Medical Services
Bachelor of Science in Professional Health Sciences
Bachelor of Science in Radiologic Sciences
Bachelor of Science in Speech and Hearing Sciences
Master of Science in Occupational Therapy
Master of Health Science (Physician Assistant Studies)
Master of Science in Speech - Language Pathology
Doctor of Audiology
Doctor of Philosophy (Communication Sciences and Disorders)
Doctor of Physical Therapy

College of Arts and Sciences
Bachelor of Arts
Bachelor of Fine Arts
Bachelor of Music
Bachelor of Science
Bachelor of Social Work
Master of Arts
(Communication)
(English)
(History)
(Sociology)
Master of Public Administration
Master of Science
(Biological Sciences)
(Marine Sciences)
(Mathematics)
(Psychology)
Doctor of Philosophy
(Marine Sciences)

Mitchell College of Business
Bachelor of Science in Business Administration
Master of Accounting
Master of Business Administration

School of Computing
Bachelor of Science in Computer Science
Bachelor of Science in Information Systems
Bachelor of Science in Information Technology
Master of Science in Computer and Information Sciences

School of Continuing Education and Special Programs
Bachelor of Arts
Bachelor of Science

College of Education
Master of Education
Master of Science
Educational Specialist
Doctor of Philosophy
(Instructional Design and Development)

College of Engineering
Bachelor of Science in Chemical Engineering
Bachelor of Science in Civil Engineering
Bachelor of Science in Computer Engineering
Bachelor of Science in Electrical Engineering
Bachelor of Science in Mechanical Engineering
Master of Science in Chemical Engineering
Master of Science in Civil Engineering
Master of Science in Electrical Engineering
Master of Science in Mechanical Engineering

Graduate School
Interdisciplinary Master of Science in Environmental Toxicology
Interdisciplinary Doctor of Philosophy in Clinical and Counseling Psychology

College of Medicine
Doctor of Philosophy
(Basic Medical Sciences)

College of Nursing
Bachelor of Science in Nursing
Master of Science in Nursing
Doctor of Nursing Practice

All degrees are conferred at the commencement exercises in May and December.

ADMISSIONS/ENROLLMENT SERVICES

The University of South Alabama welcomes applications from all individuals whose preparations and abilities give them reasonable chance of success in its programs. Admission recognizes both the university's commitment to excellence and its role as an urban institution. The University of South Alabama does not discriminate on the basis of age, sex, race, color, religion or national origin. These provisions also apply to disabled individuals pursuant to current federal and state regulations subject to reasonable standards of admission and employment.

ADMISSION TO THE UNIVERSITY

The Office of Admissions processes all applications for admission to undergraduate and graduate programs at the University. Inquiries about admission should be addressed to the Director of Admissions, Meisler Hall Suite 2500, University of South Alabama, Mobile, Alabama 36688-0002, or telephoned to (251) 460-6141, toll-free number at (800) 872-5247, or e-mail at admiss@southalabama.edu. Information is also available via a link on the University's Home Page on the World Wide Web: http://www.southalabama.edu/admissions/.

Application for Admission

Students applying for admission to the University of South Alabama are required to file an application for admission with the $45 nonrefundable processing fee (online fee $35) by the deadlines noted. The application is available on the Admissions web site via a link from http://www.southalabama.edu/admissions/appdeadline.html. Note: The University reserves the right to change fees without prior notice, as deemed necessary by the Board of Trustees.

Deadlines, Transcripts, and Test Scores

Students are urged to apply for admission well before their intended semester of entry. Scholarships and other financial aid and housing are more likely to be available to the qualified student who applies early. All undergraduate applications, including the required official documents, must be received no later than July 15 for fall semester, December 1 for spring semester, and May 1 for summer semester. Documents received by the deadline are guaranteed to be processed before new student orientation and registration. Deadlines for applications and supporting documents for international students are earlier than the deadlines for U.S. Citizens. Refer to the "International Students" section for details. Scholarship deadlines are significantly earlier and published in the "Financial Aid" section of the **Bulletin**.

All documents required for admission review (transcripts, test scores, or letters of recommendation) must be official, i.e., mailed from the home institution or testing agency directly to the Office of Admissions by the deadline. These documents become the property of the University of South Alabama. The applicant is responsible for making certain that the admission application, processing fee, and all required documents are received by the University by the appropriate deadline.

First Time Freshmen must submit an official high school transcript showing grades earned and courses pursued. (A final official high school transcript showing the date of graduation is required for those who apply before the end of their senior year.) In addition, First-Time freshmen applicants must submit official college entrance examination scores-either the result of the ACT or the Scholastic Assessment Test (SAT).

High school students should take the test in the spring of the junior year or early in their senior year so test results will reach the University in ample time for admission review. Applicants must have the scores sent directly to the University from the testing agency by listing the University's code number as a recipient when registering for the examination (ACT code is 0059; SAT code is 1880) or by completing a score request form from the testing agency.

In some instances, the Director of Admissions may require the applicant to submit a recommendation from the high school counselor or principal.

High school graduates must submit test scores if their semester of matriculation is within five years of high school graduation or if

they have not reached the age of 23. If applying for admission five years after graduation, applicants who have not taken the ACT or SAT need not sit for the examination and may apply under the Adult Special Freshman Admissions category. (See "Adult Special Admission" section below).

REQUIREMENTS:

Regular admission status will be granted to students who:

1. Have earned a high school diploma and have completed a college preparatory curriculum consisting of the **Core Courses** listed below. Students having earned a regular Alabama High School Diploma or an Alabama High School Diploma with Advanced Academic Endorsement or equivalent will satisfy the core high school course requirements; and
2. Minimum ACT Composite of (20) SAT 940), high school GPA of at least 2.0 OR a minimum ACT Composite of 19 (SAT 900), high school GPA of at least a 2.5.

Core High School Course Requirements

Curriculum Area	Units	Courses
English	4	
Mathematics	3	Must include Algebra I, Algebra II and one unit of either Geometry, Trigonometry or Calculus.
Science	3	At least two of the sciences must include labs.
Social Science	3	
Advanced Electives	3	Courses chosen from any of the four core areas above and foreign language.
Total Core Units	**16**	

The Alabama High School Diploma with Advanced Endorsement meets all University of South Alabama core requirements. The Credit Based Diploma awarded by Alabama High Schools is accepted; however, students must meet all high school core requirements listed above.

Using the ACT established benchmarks for college readiness for guidance, certain classes at USA require minimal subscores on the ACT or SAT. If a detailed review of a student's subscores on the ACT or SAT reveal a need for additional college preparation in English, or reading, he/she will be required to take course(s) that address(es) any identified weaknesses before he/she can enroll in additional courses in associated subject areas.

CONDITIONAL FRESHMEN ADMISSION

Applicants who fail to meet regular admission requirements may be admitted if they have completed the Core Courses listed above in addition to satisfying one of the following.

1. Have earned a minimum 2.50 overall high school GPA and a score of 17 or 18 on the composite ACT (or equivalent scores on SAT).
2. Completed and satisfied academic certification requirements for the National Collegiate Athletic Association under Division I guidelines. (*This option is available to all freshmen applicants.*)

Students admitted in this Conditional Freshman category with identified academic deficiencies will be required to take course(s) to address these deficiencies. These prescribed courses must be completed within three semesters or 36 credit hours. The penalty for failure to meet this condition will be suspension for one semester, not including summer term. Approval by the Dean of the School of Continuing Education and Special Programs is required as part of the readmission process. Upon readmission, students will have one semester to complete their special courses requirement.

Admission Appeal Procedure

Applicants who fail to meet admission requirements as listed above and who believe that they have extenuating circumstances that might justify a different decision may contact the Admissions Office for procedures to seek additional consideration.

NEW STUDENT ORIENTATION

Southbound Orientation provides an introduction to the academic, service, and social areas of the University of South Alabama. This mandatory program is offered at the beginning of each semester and prior to class registration. Details are sent to all new students prior to registration. Further information may be obtained from the Office of New Student Orientation, 2500 Meisler Hall, Mobile, AL 36688-0002, telephone (251) 460-7093.

SPECIAL PROGRAMS

Adult Special Freshman Admission

are students who graduated from high school at least five years prior to the semester of entry or who have reached the age of 23, and did not sit for the college entrance examinations (ACT or SAT).

Academic Requirements: Applicants who do not satisfy the requirements for traditional admission may be admitted if satisfactory evidence is provided that they have the ability to successfully pursue the courses in which they wish to enroll.

Documents Required: Adult Special Freshman Admission applicants must submit an official high school transcript for admission consideration. Applicants for admission as Adult Special Freshman students should be high school graduates whose semester of entry to the university is at least five years since high school graduation or are at least 23 years of age.

GED First Time Freshmen Admission

are students at least 17 years of age who took the General Education Development (GED) test and did not graduate from high school.

Academic Requirements: Applicants are granted admission based on adequate performance on high school level General Education Development (GED) test. Students taking the test prior to January 2014, must score an average of at least a 500 or a 50, if taken before January 2002. Student taking the GED beginning January 2014 must score at least a 170 in each subject area.

Documents Required: GED First Time Freshman applicants must submit an official copy of their General Educational Development (high school level) test results.

Both Adult Special Freshman Admission and GED First Time Freshman students are considered degree-seeking students and are subject to all academic regulations.

Freshmen with Previous Credits

are students who attended another collegiate institution prior to high school graduation.

Academic Requirements: Applicants must satisfy the requirements for First-Time Freshmen applicants and must have earned at least a "C" (2.0) average on all previous collegiate work attempted. The grade-point average used is that computed by the Office of Admissions.

Documents Required: Freshmen with Previous Credits applicants must submit all the documents required for First-Time Freshmen as well as an official transcript from each college attended prior to high school graduation. An evaluation of transfer credits will be completed and mailed to students prior to the semester of entry.

Early Admission applicants

are students who have completed the junior year of high school and wish to enroll prior to high school graduation.

Academic Requirements: Applicants must be recommended by the high school counselor, have:

1. a 3.5 minimum high school GPA, as computed by the USA Office of Admissions;
2. scored at least a 28 composite on the ACT (or 1250 SAT scores);
3. completed the junior year of high school; and
4. and be approved by the Director of Admissions.

Documents Required: Early Admission applicants must submit an official high school transcript showing grades through the junior year, official ACT or SAT scores and a letter of recommendation from the school guidance counselor.

Accelerated College Enrollment Program (ACEP): A limited number of high school seniors from Mobile County, and Baldwin County, Alabama, are offered the opportunity to take one free course at the University during the senior year of high school. The course can be used to satisfy degree requirements at USA, or can be transferred to other institutions.

Academic Requirements: Applicants must be recommended by the high school counselor, have earned at least a "B" (3.0 on a 4.0 scale) average in academic subjects, have scored at least 25 composite on the ACT (1130 SAT),

completed the junior year of high school, and be approved by the Director of Admissions.

Documents Required: ACEP applicants must submit an official high school transcript showing grades through the junior year, official ACT or SAT scores and a letter of recommendation from the school guidance counselor. Interested students should contact USA Admissions for application deadlines and information.

If ACEP students wish to pursue a degree, they must complete and submit a new application and supporting documents to the Office of Admissions.

College of Medicine Early Acceptance Program (EAP): Qualified high school seniors are selected for acceptance to the University and to the University of South Alabama College of Medicine. Candidates selected for the program enter the Health Pre-Professions Program at USA; their curriculum will include core requirements for the selected baccalaureate program and prerequisites for matriculation in medical school. Students participating in the College of Medicine Early Acceptance Program must meet program requirements during their tenure as undergraduates to continue in the program. Upon successful completion of the baccalaureate degree and EAP requirements, students enter the University of South Alabama College of Medicine.

To be considered for the COMEAP, high school seniors must complete freshman application procedures, have earned a minimum high school grade-point average of 3.5 based on a 4.0 system as computed by USA, submit an ACT score of at least 28 composite (or 1250 SAT), and must have demonstrated leadership qualities and motivation toward the study of medicine. All documents must be submitted by December 15 of their senior year in high school to be considered. For questions and applications, contact USA Admissions, 2500 Meisler Hall, Mobile, AL 36688-0002 or call (800) 872-5247 or (251) 460-6141.

Physical Therapy Early Acceptance Program (PTEAP): The Department of Physical Therapy Early Acceptance Program offers a selected number of talented high school seniors a position in the University of South Alabama Department of Physical Therapy first year class after completion of the pre-requisite requirements of the program and their USA undergraduate degree.

Minimum Qualifications for Initial Consideration: 28 ACT Composite (results of one administration; scores are not mixed from multiple tests), or 1250 SAT score (we do not use SAT Subject Tests), and a 3.5 GPA as computed by USA Admissions.

Deadline for Application: December 15 of the senior year in high school

Procedures to Apply for the Early Acceptance Program: For consideration to this program, all of the following MUST be received in the USA Office of Admissions by the stated deadline.

1. Completed application for admission, submitted with the $35.00 application fee;
2. Official high school transcript, showing grades through the junior year, mailed from the high school directly to the USA Office of Admissions;
3. Official ACT or SAT scores; mailed directly from the testing agency to the USA Office of Admissions (Note: USA's ACT Code: 0059; SAT Code: 1880);
4. Completed application for the Early Acceptance Program. Click here to print the application for the Early Admission Acceptance Program.
5. Resume (one page only; additional pages will not be reviewed);
6. Personal statement of no more than 300 words on the topic as designated by the department. (Topic will change each year)

NOTE: Letters of recommendation are not required for the PTEAP program and will not be included in the applicant's profile.

Selection Process:

1. The Selection Committee will meet shortly after the stated deadline. The Committee will select up to 25 students to invite for initial interview.
2. Required interview. Date: TBA. The interview will take place in early to mid spring of the senior year in high school and will be held on USA's campus in the Health Sciences Center.
3. The five most highly ranked of those interviewed will be selected to participate in the program.
4. Preference is given to applicants from Alabama and our service areas in Florida and Mississippi.

The Program:

Candidates selected for the PTEAP program will receive an acceptance letter from the University of South Alabama and a conditional acceptance to the Department of Physical Therapy. The students will enter the Pre-Physical Therapy Program at the University of South Alabama. The curriculum will include core requirements for the selected baccalaureate program and prerequisites for matriculation in the physical therapy program.

Students in the PTEAP must:

1. sign and adhere to the departmental Early Acceptance Program contract, including withdrawal of the acceptance if the student is involved in any academic misconduct.
2. take all prerequisite courses at USA, unless otherwise approved in advance by the Chair of the Admissions Committee of the Department of Physical Therapy.
3. maintain a minimum overall grade-point average of 3.5 on a 4.0 scale during undergraduate studies at USA.
4. submit an application to PTCAS and the supplemental application to the USA PT Department in the fall of the senior year at USA.
5. complete required science course work with only eight credits of required science course work remaining to complete after application to the physical therapy program
6. take the Graduate Record Exam (GRE) and receive a minimum total score of 290.

PTEAP students will be required to:

1. Participate in observation of 50 hours of physical therapy clinical practice by December 1 of the senior year at USA
2. Participate in community and campus service project and/or attend cultural and scholarly events
3. Be an active participant in the USA Pre-PT club by attending meetings/activities each year during undergraduate studies at USA

At the end of each spring semester, all DPTEAP students will be reviewed by the Pre-PT Advisor to determine if academic requirements have been met.

Students participating in the program must enter the University of South Alabama Physical Therapy professional program in the fall following completion of the baccalaureate degree. Students not completing the baccalaureate degree within four years can appeal, in writing, to the department faculty for permission to delay their admission by up to two years.

Honors Program: See "Honors Program".

COLLEGE COURSE CREDIT RECEIVED BY TESTING OR OTHER SOURCES

English Composition I Exemption: Students who score a minimum ACT English score of 27 or SAT verbal score of 550 will be exempt from taking English 101. Official scores should be mailed to the Office of Admissions for exemption to be granted.

Advanced Placement (AP) Credit: Students participating in the Advanced Placement Program of the College Entrance Examination Board (CEEB) will be granted University credit as indicated below.

AP Course	USA Course	Score	Hrs.
Studio Art: 2-D Design	ARS Elective	3	3 hrs
Studio Art: 3-D Design	ARS Elective	3	3 hrs
Studio Art-Drawing	ARS Elective	3	3 hrs
Art History	ARH 100	3	3 hrs
Biology	BLY 121/121L & BLY 122/122L	3	8 hrs
Chemistry	CH 131/131L	4	4 hrs
Chemistry	CH 131/131L & CH 132/132L	5	8 hrs
Microeconomics	ECO 215	3	3 hrs
Macroeconomics	ECO 216	3	3 hrs
Language & Composition	EH 101	4	3 hrs
Human Geography	GEO 114	3	3 hrs
American Gov't	PSC 130	4	3 hrs
Comparative Gov't	PSC 250	4	3 hrs
U.S. History	HY 135/136	3	6 hrs
European History	HY 101/102	3	6 hrs
Calculus AB	MA 125	3	4 hrs
Calculus BC	MA 126	3	4 hrs
Statistics	ST 210	3	3 hrs
Music Theory	MUT Elective	3	3 hrs
Music Listening & Lit	MUL Elective	3	3 hrs
Physics B	PH 114/114L	4	5 hrs
Physics B	PH 114/114L & PH 115/115L	5	10 hrs
Physics C Mechanics	PH 201/201L	4	4 hrs
Physics C Electricity & Magnetism	PH 202/202L	4	4 hrs
Computer Science A	CIS 120/121	3	8 hrs
Psychology	PSY 120	3	3 hrs

Foreign Language AP is reviewed by the Department of Foreign Languages and Literature.

International Baccalaureate Program (IB): Students participating in the International Baccalaureate Program (IB) will be granted credit by the University of South Alabama to those who have achieved a score of "5" or higher

on the International Baccalaureate Program examinations. Individual academic disciplines will determine if a higher score is required in a particular course(s). IB Credit with a grade of at least "5" will be awarded as follows:

IB Discipline*	IB Exam Score	USA Credit
Art		
Social Anthropology	5	AN 100 (3 Semester Hours)
Biology	5	BLY 101 and BLY 102, or BLY 121 and BLY 122 (8 Semester Hours)
Chemistry (Standard Level)	5	CH 101 (4 Semester Hours)
Chemistry (Higher Level)	5	CH 131, CH 131L, CH 132, and CH 132L (8 Semester Hours)
Computer Science	5	Credit determined by the School of Computing
Drama	5	DRA 110 (3 Semester Hours)
Economics	5	ECO 300 (3 Semester Hours)
English	5	If student completes IB degree: EH 101 and EH 102 (6 Semester Hours) If student fails to complete IB degree: EH 101 (3 Semester Hours)
Foreign Languages	5	6 Semester Hours of credit in corresponding Freshman Language Sequence: French: LG 111 and LG 112 German: LG 151 and LG 152 Latin: LG 101 and LG 102 Russian: LG 171 and LG 172 Spanish: LG 131 and LG 132 Chinese: LGS 121 and LGS 122 Arabic: LGS 106 and LGS 107 Modern Greek: LGS 141 and LGS 142 Japanese: LGS 101 and LGS 102
Geography	5	GEO 114 and GEO 115 (6 Semester Hours)
History (Higher Level only)	5	HY 102 (3 Semester Hours)
Information Technology in a Global Society (Standard Level)	5	(3 Semester Hours Credit) Accept credit for CIS 110 or CIS 150 according to major.
Mathematics (Standard Level)	5	MA 115 (4 Semester Hours)
Mathematics (Standard Level)	6-7	MA 115 and MA 125 (8 Semester Hours)
Mathematics (Higher Level)	5	MA 125 and ST 210 (7 Semester Hours)
Mathematics (Higher Level)	6-7	MA 125 and MA 126 (8 Semester Hours)
Music	5	MUL 235 (2 Semester Hours)
Music	6-7	MUL 235 (2 Semester Hours) and will be considered for additional credit in MUL 236 (2 Semester Hours). Students scoring 6 or 7 on this IB exam should contact Department Chair to request credit for MUL 236.
Philosophy	5	PHL 110 (3 Semester Hours)
Physics	5	PH 104 (4 semester Hours)
Psychology	5	PSY 120 (3 Semester Hours)

* All exams Standard Level unless indicated otherwise.

CLEP: A student can receive up to 30 semester hours of credit from the General Examinations and certain Subject Examinations of the College Level Examination Program (CLEP) as shown below. Official CLEP scores mailed directly from the CLEP division of the Educational Testing Service are required before credit will be awarded.

CLEP Exam USA Credit Awarded	Hours Awarded	CLEP Score Required
American Government PSC 130	3 hrs	50
General Biology BLY 121/BLY 122	8 hrs	50
Calculus MA 125/MA 126	8 hrs	50
Precalculus MA 115	4 hrs	50
General Chemistry CH 131/CH 132	8 hrs	50
Into to Psychology PSY 120	3 hrs	50
Intro to Accounting ACC 211	3 hrs	50
Intro to Business Law MGT 310	3 hrs	50
Intro to Macroeconomics ECO 216	3 hrs	50
Intro to Microeconomics ECO 215	3 hrs	50
Intro to Marketing MKT 320	3 hrs	50
Intro to Sociology SY 109	3 hrs	50
Human Growth and Development PSY 250	3 hrs	50
U.S. History I: Early Colonizations to 1877 HY 135	3 hrs	50
U.S. History II: 1865 to Present HY 136	3 hrs	50
Western Civilization I: Ancient Near East to 1648 HY 101	3 hrs	50
Western Civilization II: 1648 to Present HY 102	3 hrs	50
College Composition EH 101/EH 102	6 hrs	50
American Literature with Essay EH 225 and EH 226	6 hrs	50
English Literature with Essay EH 215 and EH 216	6 hrs	50
Humanities-General Fine Arts and Lit Elect	6 hrs	50
College Mathematics Math Electives	8 hrs	50
Natural Sciences-General Bio & Nat Science Elect	8 hrs	50
Social Science & History Soc Science & Hist Elect	6 hrs	50

Computer Science and Foreign Language CLEP credit are awarded based on USA departmental recommendations. The University reserves the right to change the CLEP minimum scores and credit awarded based on recommendations by the College Board and University research.

Credit by Examination: A student may receive credit for a course by passing a locally prepared examination and by paying appropriate fees. (See "Credit by Examination".)

Military Service/ROTC Credit: A student may receive Military Science or Aerospace Science placement credit for prior military service or Junior ROTC training. Contact the Department of Military Science or the Department of Aerospace Studies for details.

The Prior Learning Assessment Center: housed in the Interdisciplinary Studies department, will serve as a central location where potential and enrolled USA students can obtain information and advising on the assessment options available for earning USA credit for prior learning. The center will also be the primary academic unit responsible for the coordination and administration of prior learning assessment by portfolio.

UNDERGRADUATE TRANSFER ADMISSIONS

Transfer students *have attended a regionally accredited college or university after high school graduation, regardless of the time spent in attendance or credit earned.*

Academic Requirements: Applicants are granted unconditional admission if they have earned a cumulative average of at least "C" (2.00) on all work attempted. Under certain conditions, a

student with less than the requisite 2.00 average, who shows promise of success may be granted probationary admission. (Note: The grade-point average used is that computed by the University of South Alabama.) Applicants must be eligible to attend the institution in which they were last enrolled.

Documents Required: Transfer student applicants must make certain that official transcripts of all courses for which they have been registered at other colleges or universities are sent directly to the University from each home institution. Students must report colleges where registration was completed even though no credit was earned. *Prior enrollment information will be verified by National Student Clearinghouse.*

Applicants who have attempted fewer than 30 semester hours or 40 quarter hours of college work must submit college transcripts and high school transcripts and ACT or SAT scores.

Transfer of Credit: The Office of Admissions evaluates all credits to determine the number transferable to the University of South Alabama. Such transferred credit will be applied, after evaluation, to the specific program of the student. The final program evaluation requires approval by the Dean of the College in which the student is accepted or by the Dean's designated representative. Credits transferable to the University may or may not be applicable, in whole or in part, to a specific program. Transfer students are urged to review all the requirements for a degree as specified in the Academic Policies and Procedures section of the **Bulletin**.

No credit is given for college-level General Education Development tests, or for courses evaluated as non-credit or remedial at this institution. No more than a combined total of 32 semester hours of credit will be allowed for credit received through the College Level Examination Program (CLEP), Advanced Placement Program (AP), credit by examination, correspondence courses, military service school courses, and other approved non-collegiate-sponsored programs as recommended by the American Council on Education.

Only one half of the credit hours required for a degree may be transferred from a community college. Courses offered by this University with a course number of 300 or higher will not be accepted as a transfer from a junior college unless approved by the appropriate college dean.

A transfer student from a collegiate institution not accredited by the appropriate regional association may request an evaluation of transfer credits from the student's academic dean after completing one year (32 semester hours) of work at the University of South Alabama. No degree credit will be accepted by the College of Education from any collegiate institution unless that institution has regional accreditation.

Transfer Credit for English Composition: No credit is given for course work in English Composition in which the grade is below a "C".

TRANSFER CREDIT FROM COMMUNITY/JUNIOR COLLEGES

No more than 64 semester hours of transfer credit from junior colleges will be accepted. No degree credit will be granted for courses that are identified at the 300 and 400 levels in the University of South Alabama curriculum unless approved by the appropriate college dean.

No credit will be awarded for technical and vocational courses. Courses not generally accepted from a junior/community college may be considered for transfer credit on a selective basis. Such courses must be approved for degree credit by the student's academic dean based upon the recommendation of the appropriate department chair.

University of South Alabama students at any level of progress toward a degree are restricted, in terms of junior college transfer credit, only by the first and second items above.

Alabama Articulation Program (STARS)

The Alabama Articulation Program (also called STARS - Statewide Articulation Reporting System) is a web-based articulation and transfer planning system designed to inform students who attend Alabama Community Colleges about degree requirements, course equivalents, and other transfer information pertaining to specific majors at each state funded four-year institution. STARS provides students, counselors, and educators with accurate information upon which transfer decisions can be made. STARS is the information link between the state's public two-year and four-year institutions, and can prevent the loss of course credit hours, can provide direction for the scheduling of course work, and can ease the transition from one institution to another. Students who are interested in obtaining a "Transfer Guide" should visit the University of South Alabama Transfer Assistance web site at: http://www.southalabama.edu/transfer/ or contact: University of South Alabama Office of Admissions, 2500 Meisler Hall, Mobile, Alabama 36688-0002, (251)460-6141 or (800)872-5247.

TRANSFER CREDIT FROM MILITARY SERVICE SCHOOLS

Military service-school courses will be evaluated with reference to the recommendation of the American Council on Education when official credentials have been presented by the student to the Office of Admissions for new students or to the Office of the Registrar for returning or currently enrolled students. Such recommendations, however, are not binding upon the University. In no instance, however, may any of the hours of credit be substituted for specific courses, but they may be substituted for electives.

Students who have successfully completed basic training in the armed forces may receive four semester hours of elective credit and exemption from P.E. by presenting a DD214, DD295, a copy of a Community College of the Air Force transcript, or a certificate of training to the Office of the Registrar for currently enrolled or former students, or to the Office of Admissions for new students.

The Office of Veterans Affairs is located in Room 2300 of the Meisler Hall Building on the main campus of the University to facilitate veterans' programs and to provide counseling and other veterans' services. (See "Student Activities Section.")

UNDERGRADUATE CREDIT FROM FOREIGN INSTITUTIONS:

See "International Student section".

SPECIAL CATEGORY STUDENTS

Transient students *are visiting students from other colleges/universities and who wish to attend the University for one term and return to the home institution.*

Academic Requirements: Students must be in good standing at the current institution and have the approval of their registrar or dean to enroll at USA.

A transient student must accept full responsibility in meeting course prerequisites and having the necessary preparation to take the course or courses desired.

Enrollment as a transient student in no way implies future admission as a regular student to the University of South Alabama.

Documents Required: Transient applicants must request the registrar or dean of the college or university in which they are currently enrolled to complete the University's Transient Form or write a letter of good standing for the applicant and mail it directly to the University.

If the student should decide to remain in transient status for more than one term the student must submit the University's Transient Student Form and a Readmission Application (available from the Registrar's Office) by the specified deadline (see "How to Apply for Re-admission" section of the **Bulletin**) each semester. Should a transient student decide to transfer to the University of South Alabama, the student would be required to apply in the same manner as a transfer student and submit complete transcripts from each college or university attended.

Audit students *wish to take courses, but not receive credit.*

Academic Requirements: Students are admissible if a completed application for admission and the $35 application fee are submitted to the Office of Admissions by the published deadlines. No other documentation is required. Audit students pay the same tuition and fees as credit students. Audit students are not required to submit documents with their application for admission.

NOTE: Transient, Unclassified and Audit students are not eligible to be considered for financial aid since they are not enrolled in degree-seeking programs.

Unclassified applicants *are students who have earned at least a baccalaureate degree and wish to take additional undergraduate courses, but not for degree purposes.*

Academic Requirements: Applicants are admissible if an official transcript showing evidence of the baccalaureate, master's or doctoral degree is received. Note that unclassified students are eligible to enroll in undergraduate courses only and are not working toward a degree. Students seeking a second undergraduate degree should apply as Transfer students.

Documents Required: Unclassified students submit an official transcript showing their earned baccalaureate, master's, or doctoral degree.

INTERNATIONAL STUDENT ADMISSIONS

The Office of International Services at the University of South Alabama provides special services and programs for non-U.S. Citizens and is responsible for the processing of applications for admission submitted by non-citizens. The following are the specific requirements needed by the applicants.

REQUIREMENTS FOR ADMISSION
Application Deadlines

All necessary documents must be received by the established deadline as indicated below for the semester the student wishes to enter. Applications completed after the deadline will be considered for the following term, unless otherwise requested by the student.

Deadlines

Outside the United States:
Fall-July 1 Spring-November 1
Summer-April 1

Within the United States:
Fall-July 15 Spring-December 1
Summer-May 1

All documents submitted as part of the application process become the property of the University of South Alabama and will not be copied for or released to the student or any other institution.

Undergraduate Applicants

1. International Application for Admission - The International Application for Admission must be completed and signed by the applicant. A nonrefundable $35.00 application fee, payable through a U.S. bank, must accompany the application. Applications received without the $35.00 processing fee will not be processed.

2. Academic Records - Complete and certified academic records of all secondary and post-secondary education attempted must be submitted. Whenever possible, the records must be forwarded directly from the issuing institution to the University of South Alabama. Copies must be certified by an official of the government or school (e.g., registrar or dean). Notarized copies are not accepted.

3. English Proficiency

A. TOEFL - Nonimmigrant applicants, whose native language is not English, must submit a score of 173 (61 on newly formatted Internet-based TOEFL exam) or above on the Test of English as a Foreign Language (TOEFL) for admission. Applicants who hold a baccalaureate or graduate degree from a regionally accredited United States institution are exempt. Students transferring from postsecondary institutions within the United States are exempt, subject to the following conditions:

1) transfer credits total at least 96 quarter hours (64 semester hours); and
2) completion of English Composition I with grade of "C" or above.

The exempted transfer students ARE subject to the proficiency examination discussed below.

In addition the TOEFL may be substituted with the following:

1) SATI Verbal score of 510
2) ACT English score of 19
3) Ordinary/Advanced Level English examinations from the United Kingdom with a score of "A", "B" or "C/A-E".
4) A minimum IELTS score of 5.5.

B. English Proficiency - Additionally, all international students with TOEFL scores between 150 (52 on newly formatted Internet-based TOEFL exam) and 170 (60 on newly formatted on-line TOEFL exam) are conditionally admitted to the University of South Alabama and placed directly into the Department of English as a Second Language and assigned an ESL advisor. All students in this category must take the English Placement Examination and depending on their performance, a determination will be made as to how many ESL courses each student will be required to complete.

C. English Proficiency Examination - All international students, regardless of TOEFL score, must sit for the English Proficiency Examination during the International Student Orientation with the following exceptions. Students holding J-1 visas and those holding baccalaureate or graduate degrees from regionally accredited United States postsecondary institutions are exempt. Permanent Residents who submit transcripts from regionally accredited United States secondary or postsecondary institutions with at least two full years of course work are also exempt. All international transfer students must take the exam.

4. Standardized Tests - Permanent residents of the U.S. must submit an acceptable score on the ACT or SAT examination, unless they have one year or more of documented postsecondary education or graduated from high school 5 or more years previously, or apply on the basis of the GED. Those attending on nonimmigrant visas are not required to submit these tests for admissions unless required by the major department.

5. Financial Statement - Non-immigrants must provide proof that sufficient finances are available to undertake their entire course of study.

6. Photograph - All applicants must submit two recent passport size photographs.

Notification

Students are notified of admissions decisions as soon as all required documents are received. The I-20 or DS-2019 form is mailed to students with the letter of admission.

Students wishing to postpone their arrival to a later semester must notify the Office of International Services in writing. If an I-20 or DS-2019 form has been mailed to the student, the complete form must be returned to the University before a new form is issued.

Transfer Credit from Foreign Institutions - Students transferring to the University from foreign postsecondary institutions must submit a detailed course syllabus from which to evaluate transfer credit. Advanced Placement credit is available from a number of worldwide sources: contact the Office of International Services for details. Students may secure a professional evaluation of academic credentials at their own expense. Course-by-course professional evaluation is required of transfer students accepted into the College of Education and students applying to the professional component of any program in the Pat Capps Covey College of Allied Health Professions.

(See the section below entitled "Additional Information for all International Students".)

Graduate Applicants

1. International Application for Admission - The International Application for Admission must be completed and signed by the applicant. A nonrefundable $35.00 application fee, payable through a U.S. Bank, must accompany the application. Applications received without the $35.00 application fee will not be processed.

2. Academic Records - Complete and certified academic records of all secondary and post-secondary education attempted must be submitted. Please note consolidated marksheets are not accepted. Whenever possible, the records must be forwarded directly from the issuing institution to the University of South Alabama. Copies must be certified by an official of the government or school (e.g., registrar or dean). Notarized copies are not accepted.

3. English Proficiency

A. TOEFL - Nonimmigrant applicants, whose native language is not English, must submit a score of 197 (71) or above on the Test of English as a Second Language (TOEFL) for admission. (Specific programs may have more stringent English proficiency requirements.)

B. English Proficiency Examination - All international applicants, regardless of TOEFL score, must sit for the English Proficiency Examination during the International Student Orientation. Non-immigrant applicants exempt from the TOEFL requirement are exempt from the English Proficiency Examination, as well. English as a Second Language course work may be recommended or required for graduate applicants.

4. Standardized Tests - Standardized test requirements for the various academic programs are listed in the appropriate sections of the **Bulletin**. All test scores must be official documents sent directly from the testing service which administered the examination.

5. Recommendation Letters - Two original letters of recommendation are required of all nonimmigrant applicants. The letters should be written by persons familiar with the applicant's academic qualifications and ability to undertake the proposed course of study.

6. Financial Statement - Non immigrants must provide proof that sufficient finances are available to undertake their entire course of study. Applicants for graduate assistantships should contact the appropriate department directly for information and assistantship applications.

7. Narrative Statement of Purpose - A narrative Statement of Purpose written by applicant is required. Three original letters of recommendation written by persons familiar with the applicant's academic qualifications and ability to undertake the proposed course of study are also required.

Notification: Students are notified of the Graduate Dean's admission decision as soon as all required documents are received and the Graduate Dean has received a recommendation from the appropriate graduate program. The I-20 or DS-2019 form is mailed to students with the letter of admission.

Students wishing to postpone their arrival to a later semester must notify the Office of International Services in writing. Students who have previously attended USA and who did not register for the semester in which they were accepted, but who wish to register for the **same** graduate program in the **same** academic year must update their admissions through the Office of International Services. First-time students who did not register for the semester for which they were accepted but who wish to register for the same graduate program in the same academic year must submit written requests to update their applications to the Office of International Services. The address is given at the end of this section. If an I-20 or DS-2019 form has been mailed, the complete form must be returned to the University before a new form is issued.

Additional Information for all International Students Nonimmigrant and International Student Fees - All international students with nonimmigrant visas are considered nonresidents for tuition purposes and will be assessed a nonresident fee and an international student fee each semester. Permanent residents may qualify for instate tuition rates.

Deposits - A tuition and living expenses deposit may be required of a student before an I-20 or DS-2019 is issued. This decision is based upon exchange regulations and fee receipt history of specific countries.

Orientation - New international students are required to participate in an orientation program prior to their first semester at the University. The orientation program welcomes students to the University, introduces them to staff and students, and familiarizes them with academic procedures and the community.

Medical Insurance - The University requires all international students on non-immigrant visas to maintain medical insurance coverage. Students must purchase the University's international student health insurance policy at registration.

Address inquiries and questions to:
Office of International Services
2200 Meisler Hall
University of South Alabama
Mobile, Alabama 36688-0002
(251) 460-6050
(251) 414-8213 FAX
E-mail: internationalservices@southalabama.edu
http://www.southalabama.edu/intnatsrv

READMISSION TO THE UNIVERSITY

Students who have been previously enrolled in the University of South Alabama, and who have failed to attend for one term should comply with the following:

How to Apply for Readmission

An applicant should request the appropriate application from the Registrar's Office. The readmission application, including all required credentials, should be filed with the Registrar's Office by the published deadlines found at http://www.southalabama.edu/registrar/readmission.htm. Readmission applications do not have to pay another processing fee.

Requirements for Readmission

An applicant must be eligible to return to the University of South Alabama on the basis of a previous academic record at this institution. If the student has attended any college or university subsequent to last enrollment at the University of South Alabama, the student must also have the required transfer average or higher (as computed by the University of South Alabama, Registrar's Office) on work attempted, and must be in good standing and eligible to return to the last institution attended.

NONRESIDENT AND RESIDENCY RECLASSIFICATION

NONRESIDENT FEE POLICY

A nonresident fee is charged for those students who are nonresident students. All non-resident students, including undergraduate, graduate and medical students, are required to pay the nonresident fee.

Residents of Escambia and Santa Rosa counties in Florida, and George, Greene, Harrison, Jackson, Perry and Stone counties in Mississippi are considered "Service Area Residents" and will not be charged out-of-state fees. Students are required to submit documents to substantiate their residency in these counties.

The classification of students, as resident or nonresident, are determined in accordance with the following policy and definitions:

1. **A resident student is a student who**:
   (a) has an intention to remain in the state of Alabama or the Service Area (see #4 below for definition of Service Area) indefinitely,
   (b) has a specific address or location within the state of Alabama or the Service Area as his/her residence (not a residence hall),
   (c) possesses more substantial connections with the state of Alabama or Service Area for the sole purpose of obtaining an education, and
   (d) is not a "minor." However, a student who, at the time of registration, is a "minor" may obtain resident status based upon the student's "supporting person."

   "Minor." An individual who, because of age, lacks the capacity under Alabama law. Under current law, this means a single individual under 19 years of age and a married individual under 18 years of age, but excludes an individual whose disabilities of nonage have been removed by a court of competent jurisdiction for a reason other than establishing a legal residence in Alabama.

   "Supporting Person." Either or both of the parents of the student, if the parents are living together, or if the parents are divorced or living separately, then either of the parent having legal custody or, if different, the parent providing the greater amount of financial support, which may also include court-ordered responsibility for educational expenses; if both supporting parents are deceased or if neither has legal custody, "supporting person" shall mean, in the following order: the legal custodian of the student, the guardian, and the conservator.
2. **A Student may also be considered a resident student if he/she**:
   (a) is a full-time employee of the University of South Alabama or the spouse of such an employee,
   (b) can verify full-time permanent employment within the state of Alabama or Service Area, or is the spouse of such an employee, and will commence said employment with 90 days of registration at the University of South Alabama,
   (c) is a member, or spouse of a member, of the United States military on full-time active duty stationed in Alabama or the Service Area,
   (d) is employed as a graduate assistant or fellow by the University of South Alabama or Service Area,
   (e) is an accredited member or spouse of an accredited member of the a consular staff assigned to duties in Alabama or Service Area, or
   (f) was enrolled during the Spring Quarter 1996 at the University of South Alabama and classified as a resident for tuition purposes, and maintains continuous enrollment every semester, excluding summer.
3. **All other students not classified as resident students under paragraphs 1 and 2 shall be deemed to be non-resident students for purposes of this policy.**
4. **The following counties in the states of Florida and Mississippi shall be defined as the University of South Alabama Service Area. Florida: Escambia, Santa Rosa. Mississippi: George, Greene, Harrison, Jackson, Perry, Stone**.

APPLYING FOR RESIDENCY RECLASSIFICATION

A nonresident student may apply in writing for reclassification prior to any subsequent registration. In determining whether a student is in fact a resident student, the student or "supporting person" must declare, on the University of South Alabama Application for Residency Reclassification, an intention to remain in the state of Alabama or Service Area.

In addition, the following criteria must also be met (if the student is basing his/her residency on a "supporting person," that party must provide the following information):

A. A specific address or location within the State of Alabama or Service Area as the student's residence.

B. Possession of more substantial connections with the state of Alabama than with any other state which may be shown by providing the following:

1. **Required connections**
   (a) Voter Registration in Alabama or the Service Area or Alien Registration Card
   (b) Address shown on one of the following:
      (1) Selective Service registration
      (2) Auto title registration
      (3) Insurance policies
      (4) Last Will and Testament
      (5) Hunting/fishing license
      (6) Stock and bond registration
      (7) Annuities/retirement plans
      (8) Driver's license (or official non-driver identification card)

2. **In addition, three of the following will support proof of substantial connection; however, consideration will be given to any documents submitted**:
   (a) Graduation from an Alabama or Service Area high school
   (b) Payment of Alabama or Service Area income taxes a resident
   (c) Ownership of a residence or real property in the Alabama or Service Area (include proof of ad valorem taxes paid)
   (d) Full-time employment in Alabama or Service Area (notarized letter from employer required)
   (e) Spouse/parent/child residing in Alabama or Service Area
   (f) Previously lived in Alabama or Service Area
   (g) Possession of an Alabama or Service license to do business or practice a profession in the state or service area
   (h) Ownership of personal property in Alabama or Service Area, payment of taxes on property, possession of Alabama or Service are license plate
   (i) Maintenance of checking account, savings account, safety deposit box, or investment account
   (j) Membership in religious, professional, business, civic, or social organizations in Alabama or Service Area (*provide letter on organization letterhead from organization officer or membership documentation)*

TUITION AND STUDENT FEES

BASIC FEES

This schedule includes the basic fees required each semester of all students enrolled at the University. Since personal expenses including books, supplies, and other living expenses vary, no attempt is made to estimate those costs. The University reserves the right to change fees, as deemed necessary by the University Board of Trustees, without prior notice.

The 2014-2015 Detailed Tuition and Fee Schedule will be available in July at http:/www.southalabama.edu/studentaccounting/tuition.html.

The 2013-2014 Detailed Tuition and Fee Schedule is included below to help you begin to plan for your expenses.

Basic Fees:

Registration Fee (non-refundable) 0-14 hours (undergraduate)	150.00

For **Undergraduate** courses taken in the following colleges:

	Per semester hr In-State	Per semester hr Out-of-State
College of Arts and Sciences College of Education School of Computing School of Continuing Education	277.00	544.00
Pat Capps Covey College of Allied Health Mitchell College of Business College of Nursing	292.00	584.00
College of Engineering	296.00	596.00

Note: Undergraduate students enrolled in less than 15 hours will be assessed a $150.00 Registration fee.

For **Graduate** courses taken in the following colleges:

	Per semester hr In-State	Per semester hr Out-of-State
College of Arts and Sciences College of Education School of Computing School of Continuing Education	374.00	748.00
Pat Capps Covey College of Allied Health Mitchell College of Business College of Nursing	394.00	788.00
College of Engineering	398.00	796.00

Web Course Credit Hour Rate For Tuition and Fees

For **Undergraduate** courses taken in the following colleges:

	Per semester hr In-State	Per semester hr Out-of-State
College of Arts and Sciences College of Education School of Computing School of Continuing Education	365.00	
Pat Capps Covey College of Allied Health Mitchell College of Business College of Nursing	379.00	
College of Engineering	384.00	

For **Graduate** courses taken in the following colleges:

	Per semester hr In-State	Per semester hr Out-of-State
College of Arts and Sciences College of Education School of Computing School of Continuing Education	444.00	
Pat Capps Covey College of Allied Health Mitchell College of Business College of Nursing	465.00	
College of Engineering	469.00	

Nonresident Fees are waived for graduate assistants.

Students taking both online and on-campus courses are subject to additional on-campus fees including non-resident fees.

Estimated costs (example only)
Full-time commuting students:
Course Fees of typical undergraduate student based upon 2013-2014:

	Semester	Year
Taking 15 credit hr	$4,155.00	$8,310.00
Registration Fees	-0-	-0-
	$4,155.00	$8,310.00

Full-time resident students:
Course fees for typical undergraduate student based upon 2013-2014:

	Semester	Year
Taking 15 credit hrs	$4,155.00	$8,310.00
Registration Fees	-0-	-0-
Delta Suite Residence	1,835.00	3,670.00
Jag Meal Plan	1,595.00	3,190.00
	$7,585.00	$15,170.00

DEPARTMENTAL FEES

These fees are charged on a semester basis to students who enroll in certain courses; see *Schedule of Classes* for detailed information.

All students enrolled in courses utilizing university computing facilities will be charged a fee. The amount of the fee ($15.00 or $22.00) will be based on the planned level of computer utilization as defined by individual departments.

MISCELLANEOUS FEES

These fees are charged on a semester, yearly, or one-time basis or when certain conditions are present:

Application Fee (one-time, non-refundable fee)	$45.00
College-Level Examination Recording Fee	10.00
Credit-by-Examination Fee (plus usual course fee)	30.00
Document FAX Fee (non-refundable)	
Domestic	10.00
International	15.00
Duplicate Diploma	25.00
Educational Testing Service Fee	15.00
Graduation Application Fee	50.00
Graduation Re-evaluation Fee	25.00
International Student Fee	100.00
Late Registration Fee (nonrefundable)	50.00
Late Payment Fee (nonrefundable)	50.00
Orientation Fee (one-time, non-refundable)	100.00

Physical Therapy Application	50.00
Photo ID Fee (non-refundable, good for five years)	10.00
Professional Liability Coverage (per academic year, non-refundable)	
Fall	12.00
Spring	12.00
Summer	1.00
Reinstatement Fee	100.00
Returned Check Fee	15.00
Transcript Fee (per transcript)	8.00
Web Hybrid and Web Blended Classes	35.00

ROOM AND BOARD

The University offers a variety of residence hall accommodations and meal plan options. Students living in the residence halls are required to purchase a meal plan. The charges shown below are for one semester. The room rates are subject to change without notice by the University Board of Trustees.

Residence Hall Fees - Revised June 2013

Room Type	Residence Hall	Community	Semester Room Rate* per person
ROOMS for TWO			
Room for Two	Delta 3-5	Delta	$1,835.00/Sem
Room for Two	Epsilon 1	Epsilon	$2,030.00/Sem
Room for Two	Epsilon 2	Epsilon	$1,835.00/Sem
Room for Two	New Hall	New Hall	$2,300.00/Sem
Large Room for 2/3	Delta 3-5	Delta	$1,835.00/Sem
SUITE-STYLE for TWO			
Suite-Syle for Two	Gamma 0-4	Beta/Gamma	$2,470.00/Sem
Suite-Syle for Two	Stokes Hall	Stokes Hall	$2,600.00/Sem
APARTMENT STYLE for TWO or FOUR			
Beta Apartment for Four	Beta 1-5	Beta/Gamma	$1,835.00/Sem
B/G Studio Apt. for Two	Beta 1-5 & Gamma 5-9	Beta/Gamma	$2,030.00/Sem
Gamma Apt. for Two	Gamma 5-9	Beta/Gamma	$2,600.00/Sem
Delta Room for 2/3 with Kitchenette	Delta 6	Epsilon	$2,030.00/Sem
PRIVATE (limited availability)			
Private Room	Delta 3-5	Delta	$2,195.00/Sem
Large Private Room	Delta 3-5	Delta	$2,470.00/Sem
Private Room with Kitchenette	Delta 6	Epsilon	$2,470.00/Sem
Private Room**	Gamma 0-4	Beta/Gamma	$2,470.00/Sem
Private Apartment**	Beta 4 & Gamma 5-9	Beta/Gamma	$2,600.00/Sem
FRATERNITY and SORORITY HOUSING			
Room for Two	All except Sigma Chi	Fraternity & Sorority	$1,157.00/Sem
Large Private room	All except Sigma Chi	Fraternity & Sorority	$2,174.00/Sem
Sigma Chi Private Room	Sigma Chi	Fraternity & Sorority	$1,795.00/Sem

*All rates are subject to change. Rent rates include campus post office box, electric, water/sewer, heat/air, expanded basic cable TV, Ethernet and Wireless internet access, garbage service, pest control, 24/7 maintenance response service, and unlimited access to laundry facilities.

**Students must be registered with Student Disability Services.

Board Plans

Information on the Board Plans is available through Campus Dining, located in the Student Center, (251) 460-6296. See Housing and Residence Life or additional information.

PAYMENT POLICIES

These are the University of South Alabama's payment policies effective Fall Semester 2014. Payment can be made via cash, check, or money order, Visa, Mastercard, Discover or American Express card. Student payments can be made online on PAWS with your credit card. Payment Drop Boxes are located at Meisler Hall, the lobby of the College of Education and in front of the University Bookstore. (No Cash Please.) The Office of Student Accounting is open Monday-Friday 8:00 AM - 5:00 PM.

PLEASE SEE
http://www.southalabama.edu/studentaccounting/financialcalendar.html
FOR SUMMER SEMESTER PAYMENT DEADLINES.

Students with awarded financial aid and approved participants in the USA Credit Union Tuition Payment Plan will be excluded from the **August 4, 2014** deadline for Fall Semester 2014 and **December 9, 2014** deadline for Spring Semester 2015.

2014 - 2015 Payment Policy Summary

A 15% payment of all tuition and fees, including housing and meals, is required by the following dates to hold class schedules:

- Fall 2014 - August 4, 2014
- Spring 2015 - December 9, 2014

Full payment is due:

- Fall 2014 - August 22, 2014 on campus payments, or online (PAWS) by August 24, 2014.
- Spring 2015 - January 16, 2015 campus payments, or January 19, 2015 online (PAWS).

Class cancellations will occur on the following dates:

- Fall 2014
  - 1st cancellation - August 5, 2014, if 15% of all tuition and fees, including housing and meals is not paid;
  - 2nd cancellation - August 25, 2014, if account is not paid in full.
- Spring 2015
  - 1st cancellation - December 10, 2014, if 15% of all tuition and fees, including housing and meals is not paid;
  - 2nd cancellation - January 20, 2015, if account is not paid in full.

Reinstatement Period

- Fall 2014: August 26-29, 2014
- Spring 2015: January 21-26, 2015

Reinstatement period for students whose registration was cancelled.
Note: Notification of times and location will be delivered via e-mail and postal service.
Students who are reinstated will be required to pay the balance of their tuition, fees, housing and meals plus $100 reinstatement fee, $50 late registration fee and a $50 late payment fee.

PLEASE SEE
http://www.southalabama.edu/studentaccounting/financialcalendar.html
FOR SUMMER SEMESTER PAYMENT DEADLINES.

FINANCIAL DATES AND DEADLINES

Fall Semester 2013

April 7 - Registration Begins

August 4 -15% of all tuition and fees, including housing and meals is due for all students registering between April 7, 2014 and August 4, 2014. Please refer to the 15% payment calculator online on PAWS.

August 5 - Registration schedule cancelled if 15% payment is not received by the August 4, 2014, deadline. **STUDENTS WILL BE GIVEN THE OPPORTUNITY TO RE-REGISTER FOR CLASSES**. However, if a student's classes are cancelled, there is no guarantee the courses will remain available.

August 11 - Financial Aid Bookstore charges begin

August 21 - Deadline for electronic direct deposit (EDD) enrollment

August 18 - Classes begin
100% refund period on dropped courses and complete withdrawals.

August 20 - Financial Aid Bookstore charges end

August 21 - Last day to enroll in the USA Credit Union Tuition Payment Plan for Fall Semester

August 22 - Balance of tuition and fees, including housing and meals is due in full for students paying on campus (Office of Student Accounting or Payment Drop Boxes)

August 24 - Balance of tuition and fees, including housing and meals is due in full for students paying on online (PAWS)

August 25 - 50% refund period begins on dropped courses and complete withdrawals.

August 25 - Registration schedules cancelled for students not paid in full by August 24, 2014 deadline.

August 27 - Financial Aid refunds begin

August 26 - 29 - Reinstatement period for students whose registration was cancelled. **Note**: Notification times and location will be delivered via e-mail and postal service. **Students who are reinstated will be required to pay the balance of their tuition, fees, housing and meals plus $100 reinstatement fee, $50 late registration fee and a $50 late payment fee**.

August 31 - No refunds after this date

Spring Semester 2015

October 13 - Registration begins

December 9 - 15% of all tuition and fees, including housing and meals is due for all students registering between October 13, 2014 and December 9, 2014. Please refer to the 15% payment calculator online on PAWS.

December 10 - Registration schedule cancelled if at least 15% payment is not received by the December 9, 2014, deadline. **STUDENTS WILL BE GIVEN THE OPPORTUNITY TO RE-REGISTER FOR CLASSES**. However, if a student's classes are cancelled, there is no guarantee the courses will remain available.

January 7 - Financial Aid Bookstore charges begin

January 15 - Deadline for electronic direct deposit (EDD) enrollment

January 12 - Classes begin
100% refund period begins on dropped courses and complete withdrawals.

January 14 - Financial Aid Bookstore charges end

January 15 - Last day to enroll in the USA Credit Union Tuition Payment Plan for Spring Semester

January 16 - Balance of tuition and fees, including housing and meals is due in full for students

paying on campus (Office of Student Accounting or Payment Drop Boxes)

January 22 - Financial Aid refunds begin

January 19 - 50% refund period begins on dropped courses and complete withdrawals.

January 20 - Registration schedules cancelled for students not paid in full by January 19, 2015 deadline.

January 21-26 - Reinstatement period for students whose registration was cancelled. **Note**: Notification times and location will be delivered via e-mail and postal service. **Students who are reinstated will be required to pay the balance of their tuition, fees, housing and meals plus $100 reinstatement fee, $50 late registration fee and a $50 late payment fee**.

January 25 - No refunds after this date

USA Federal Credit Union Payment Plan:

The University of South Alabama Credit Union is offering USA students a low cost plan for financing 100% of tuition, fees, housing, and meal plans with equal payments over *four months* during the semester, subject to credit approval. A book allowance of $350 is also offered. To qualify for this plan, a student must meet the Credit Union eligibility requirements. The last day to apply for the USA Federal Credit Union Tuition Payment Plan is August 22, 2013, for Fall Semester 2013 and January 16, 2014, for Spring Semester 2014.

The finance fee is anticipated to be 12% Annual Percentage Rate (APR), although this rate is subject to change. In order to qualify for this tuition loan, a student must join the USA Federal Credit Union by depositing $25 into a share account. This amount will be returned to the student when the student no longer wishes to belong to the USA Credit Union.

Financial Aid Refunds:

Financial Aid refunds will be distributed after Drop/Add. The Office of Student Accounting will review eligibility after the third day of class and process the refunds within 10 business days. Refunds will continue to be processed via direct deposit and checks.

For more detailed information, please see the Schedule of Classes for fall semester. Remember, if you are a financial aid recipient, be sure to apply early and complete your file timely. Enrollment Services will be happy to direct students to the proper office, should assistance be needed.

Charging Privileges at the USA Bookstore (for Financial Aid Recipients Only):

Students who have been awarded financial aid may now charge their books at the USA Bookstore immediately. Students will no longer need to wait until their financial aid balance is returned to them to buy books. If a student has been awarded financial aid by USA's Office of Financial Aid and has excess funds after all tuition, fees, meals, and housing have been paid, he or she may charge up to $750 (or the available balance, whichever is less) of books at the USA Bookstore. The Bookstore will have the available amount at checkout. Bookstore charges will be placed on the student's account and covered by the financial aid disbursement. **Bookstore charges will run from August 11-20, 2014 for Fall Semester 2014, January 7-14, 2015 for Spring Semester 2015**.

UNIVERSITY WITHDRAWALS AND REFUNDS

A student who withdraws from one or more courses may request a refund on course fees only. The refund period is the first two weeks of the semester.

Withdrawal Date	Percent of Fees Refunded
First week of classes	100%
Second week of classes	50%

For complete withdrawals, other fees are also proportionately refunded, except those listed as nonrefundable The actual dates for withdrawals are shown in the University Calendar section of this **Bulletin**.

Application fees and registration fees (including the late-registration or late-payment fees) are nonrefundable fees.

A student called for military service during the school term should consult the Office of Student Accounting regarding refunds of fees.

Meal plan refunds are given in accordance with the University's refund policy for Complete Withdrawals:

Withdrawal Date	Percent of Fees Refunded
Within first week of classes	100%
Within second week of classes	50%

FEDERAL FINANCIAL AID RECIPIENT WITHDRAWALS AND REFUNDS

Return of Federal Financial Aid Refunds

When a student completely withdraws from school, a portion of Federal Financial Aid grant or loan funds, except for Federal Work-Study earnings, must be returned to the applicable federal program(s).

The refund is based on the concept of "earned" and "unearned" federal financial aid and how it relates to the percentage of time the student was enrolled. The percentage of enrollment completed determines the percentage of earned aid.

For example, if a student attends 25 days of a 100-day term, the percentage of earned aid is 25%; and therefore, 75% of the unearned aid, up to the total of institutional charges, will be returned to the federal financial aid programs. Institutional charges consist of tuition, fees and campus housing (excluding Hillsdale).

In some circumstances, a student may need to repay a portion of the unearned aid. This repayment would not be more than one-half of the grant monies initially received. The student will be notified by Financial Aid if he/she owes a federal repayment.

NOTE: If your Title IV Financial Aid refund is greater than the posted University refund at the time of your withdrawal, you will owe the difference to the University. The Office of Student Accounting will notify you of the amount due.

If a student completely withdraws after completing 60% of the term, then it is assumed that the student has earned 100% of his/her federal aid award, and no funds will be returned to the federal programs.

For an example of the proposed Return of Title IV Funds Worksheet, please see either the Office of Student Accounting or the Financial Aid Office located in Meisler Hall.

DELINQUENT/UNPAID ACCOUNTS

In the event of an unpaid balance of any nature on the student's account (including any unpaid check returned by a bank) the following services will be withheld until the balance is paid in full:

- Enrollment for subsequent terms
- Transcripts, including any for transfer of college credits
- Grades, including viewing on PAWS
- Diploma

If it is necessary to refer an unpaid account to an outside collection agency, any costs and fees of collection (up to 34% of the debt) will be added to the student's account, and the account will be reported to the credit bureaus. If legal action is required to collect the account, attorney fees will be added to the amount due.

OFFSET OF FUNDS

If a student's University account has an outstanding balance due and the University has in its possession any funds payable to the student (from payments or credits applied to the student's account, payroll checks, and/or any other source, except federal financial aid awards), the University reserves the right to withhold the funds necessary to clear the student's outstanding balance and to cover any collection costs incurred. Once those amounts are paid, any remaining funds are paid to the student.

CHECK-CASHING SERVICE

Checks drawn on out-of-town banks to a maximum of $25.00 may be cashed at the Office of Student Accounting by presenting a valid I.D. card. A $15.00 charge will be made on each returned check not paid by the bank. Checks are not cashed for students during the last two weeks of classes each semester.

FINANCIAL AID

PURPOSE

The University of South Alabama subscribes to the principle that the purpose of financial aid is to provide assistance to students who, for lack of funds, would otherwise be unable to attend college. Financial aid is awarded according to each individual's need in relation to college costs. Awards may include loans and part-time employment, and may be offered to a student singly or in various combinations. The University's financial aid staff is dedicated to the principle that each student must receive personal attention with complete confidentiality. Every effort is made to provide financial counseling by experienced, considerate personnel.

Inquiries about financial aid should be addressed to the Office of Financial Aid, 1200 Meisler Hall, University of South Alabama, Mobile, Alabama 36688-0002, telephone (800) 305-6828 or e-mail: finaid@southalabama.edu.

APPLYING FOR FINANCIAL AID

Complete the Free Application for Federal Student Aid at www.fafsa.ed.gov. Be sure to list the University of South Alabama in Section H. The University's Federal ID number is 001057. By listing the University of South Alabama, and completing the Free Application correctly, USA should receive this financial aid information automatically. Upon receipt of this data, notification will be sent via e-mail of additional forms needed by the Financial Aid Office.

Additionally, students whose applications are selected for verification will be asked to submit information such as tax transcripts (the student's and parents'), verification of untaxed income, and other necessary documents to support the application.

When all required application information is submitted to the Financial Aid Office, the student's file is reviewed and evaluated to determine eligibility for financial assistance. Students are notified of their financial aid award via their university e-mail address.
Awards will not be made until all documents are received and the information on the application has been verified.

Financial aid awards are tentative pending receipt of funds by the University from local, state, or federal sources, and can be reduced mid-year if appropriations are cut.

APPLICATION DEADLINES

Financial aid is awarded on a continuing basis until funds are exhausted. Students who submit all required application data early and correctly will receive priority for financial aid funding. Note: Scholarship deadlines are much earlier. See the appropriate section for details.

DISBURSEMENT OF FINANCIAL AID

During Registration: Financial aid awards are held at the University and paid to students during the registration process at the rate of one-half (½) per semester.

Aid eligibility is determined at the end of the official Drop/Add days. Adding classes after that date will not increase a student's aid eligibility.

All aid except Federal College Work-Study will be applied to institutional charges. If the financial aid does not cover costs, the student may make up the difference with a personal check or credit card. If the award is more than institutional charges, the excess funds will be disbursed to the student by the Office of Student Accounting. Excess proceeds from the Parent Loan to Undergraduate Students will be refunded to the student. Students whose financial aid has not been received by the University should be prepared to meet the required costs of tuition and fees at registration.

During the Semester: Should a student fail to complete their financial aid application in a timely manner, there may be a delay in receiving financial aid funds.

ADMISSION

To be considered for financial aid, a student must be accepted for admission. A student must be classified as a degree seeking student in an eligible program and an eligible major to be eligible for financial aid. Students who are admitted or re-admitted as non-degree, unclassified, transient, or audit students are not eligible to receive financial aid. Courses only required for your degree program can be used to determine enrollment status.

CITIZENSHIP

For all programs, an applicant must be a citizen of the United States or in the United States for other than temporary purposes.

RENEWABILITY

The Free Application for Federal Student Aid or the Renewal Free Application for Federal Student Aid must be filed each year. Other forms as determined by the University are required depending upon changing Federal legislation, regulations, and available funds.
Students are eligible to continue receiving financial aid as long as they meet the academic policies of the University. Students must also meet the conditions of satisfactory progress as defined in the current University Bulletin.

GRANTS

Federal Pell Grant

The Federal Pell Grant is a federally funded financial aid program that usually does not have to be repaid. It is designed to help undergraduate students (students who have not earned a first bachelor's degree) pay for their college education. Undergraduates must apply for a Federal Pell Grant to be considered for other types of financial assistance.

The Department of Education uses a standard formula, passed into law by Congress, to evaluate the information students report on the Free Application for Federal Student Aid.
The amount of Federal Pell Grant a student may receive is based on financial eligibility, the cost of attendance at USA, enrollment status (full-time, three-quarter time, half-time, or less-than-half-time), and the level of federal funding.

Students apply for a Federal Pell Grant by completing the Free Application for Federal Student Aid. Applicants will receive a Student Aid Report (SAR) in the mail. Students should read all parts of the SAR to verify the information is correct. Contact the Financial Aid Office if any information is incorrect.

Federal SEOG

The Federal Supplemental Educational Opportunity Grant (FSEOG) provides funds to students who have extreme financial need as determined by the Free Application for Federal Student Aid. Federal SEOG is gift aid and usually does not have to be repaid.

Only undergraduate students are eligible to apply for the Federal SEOG program, and since funds in this program are limited, priority is given to students who have the greatest financial need and receive a Federal Pell Grant. The amount of the Federal Supplemental Educational Opportunity Grant depends on the student's need and the amount of funds allocated to the University and the availability of those funds.

Alabama Student Assistance Program

Alabama Student Assistance Program (ASAP) is gift aid awarded to eligible Alabama residents seeking a first undergraduate degree. Students must meet general eligibility requirements including demonstrating financial need. Funds are awarded only to students who are Federal Pell Grant recipients.

The amount of ASAP awards depends on the student's need and the amount of funds allocated to the University and the availability of those funds.

Federal College Work Study

This program provides part-time employment to students who have financial need. A variety of jobs are available on and off the University campus, and the student's work schedule is coordinated with their class schedule.

Both graduate and undergraduate students are eligible for the College Work Study program, and because of limited funds, priority is given to full-time students.

All Work Study awards are based on financial need of the student and the availability of funds. Generally, students work approximately fifteen hours per week during the semester. Students' paychecks are issued every two weeks by the Payroll Office.

Student Assistance Program

Part-time employment is available to students through individual departments or colleges. Contact departments directly regarding work possibilities.

Cooperative Education

Full-time and part-time employment directly related to students' major fields of study is available to students having completed at least two semesters of academic work. Contact the Career Services Center for further information.

Off-Campus Employment

Announcements of part-time job openings in the Mobile area are posted on the Financial Aid web site at http://www.southalabama.edu/finaid.

You must be enrolled at USA to access those job listings.

LOANS

Federal Perkins Loan

The Federal Perkins Loan is a long-term, 5% interest student loan for both graduate and undergraduate students. Interest does not begin to accrue and payments are not made until the student ceases to be enrolled at least half-time. Funds are awarded based on the financial need of the student and the availability of funds. You must attend at least half-time to be eligible for the funds.

Undergraduates may borrow up to $4000 each year of study to a total of $20,000. Students in a program of 4 years or longer who have not achieved third-year status are limited to an aggregate maximum of $8000. Graduates may borrow $6000 each year to a total of $40,000, including the amount borrowed as an undergraduate. Awards are made based on appropriations from Federal sources.

Repayment usually begins nine months after enrollment ends, and the minimum monthly payment is $40. Of course, the more a student borrows, the greater the monthly payment.

Sample Repayment Plan for Perkins Loan (5%)

Loan Amt	Monthly Payments	# of Pay-ments	Total Interest Paid	Total Amt Paid
1,000	40.00	26	58.00	1,058.00
1,500	40.00	56	136.00	1,636.00
3,000	41.82	120	818.40	3,818.40
4,000	42.43	120	1,091.60	5,091.60
5,000	53.03	120	1,363.60	6,363.60
6,000	63.64	120	1,636.20	7,636.80
10,000	106.07	120	1,636.80	12,728.40
12,000	127.28	120	2,728.40	15,273.60
15,000	159.09	120	3,273.60	19,090.80
18,000	190.91	120	4,090.80	22,909.20

Federal Direct Loans

Federal Direct loans are low interest loans that undergraduates, graduates and parents of dependent undergraduates may obtain from the federal government. They include the Federal Subsidized Direct Loan, the Federal Unsubsidized Direct Loan and the Federal PLUS Loan. These loan programs were created by Congress to help all eligible students and parents, with and without financial need, pay for the student's educational expenses.

Federal Direct Loans

The type of Federal Direct Loan a student may borrow is based mainly on the student's demonstrated need. Demonstrated need is the student's cost of attendance minus the **expected family contribution**, which is calculated from the information submitted on the Free Application for Federal Student Aid (FASFSA), minus other aid. The subsidized Federal Direct Loan is awarded to undergraduate students with demonstrated need and the federal government pays the interest while the student is in school. The unsubsidized Federal Direct Loan is awarded to students without demonstrated need and the student borrower pays the interest while in school and during the grace period; however, the student may defer the interest payment until the end of the grace period. Undergraduate students may receive a combination of both loans depending on their eligibility of need versus no-need and their dependency status. Some independent students are eligible to borrow additional unsubsidized Federal Direct Loan funds despite their demonstrated need.

Federal Direct Loan Limits:
Dependent Undergraduates:

- Freshmen may borrow up to $5,500 per year.
- Sophomores may borrow up to $6,500 per year.
- Juniors and Seniors may borrow up to $7,500 per year.
- The maximum that all undergraduates my borrow for all years is $31,000 (not to exceed $23,000 in subsidized).

Independent Undergraduates:

- Freshmen may borrow up to $9,500 per year. (Not to exceed $3,500 in subsidized)
- Sophomores may borrow up to $10,500 per year. (Not to exceed $4,500 in subsidized)
- Juniors and Seniors may borrow up to $12,500 per year. (Not to exceed $5,500 in subsidized)
- The maximum that all undergraduates may borrow for all years is $57,500. (Not to exceed $23,000 in subsidized)

Graduate Students:

- Graduate students may borrow up to $20,500 per years.
- The maximum that all graduate students may borrow is $138,500.

Remember, the amount a student may borrow is limited to financial eligibility. Also, Federal Direct loans may be subject to a 1% guarantee fee.

The minimum Federal Direct Loan payment is $50 per month, and repayment usually begins six (6) months after students drop below half-time status.

Appropriate Monthly Repayment Schedule

Loan Amt	Monthly Payments	# of Pay-ments	Total Interest Paid	Total Amt Paid
1,000	50.00	22	76.87	1,076.87
1,500	50.00	34	179.19	1,679.19
2,000	50.00	47	333.94	2,333.94
2,500	50.00	62	555.12	3,051.12
3,000	50.00	77	843.97	3,843.97
3,500	50.00	95	1,230.30	4,730.30
4,000	50.00	115	1,735.12	5,735.12
5,000	66.66	120	2,279.66	7,279.66
7,500	91.00	120	3,419.48	10,919.48
10,000	121.33	120	4,559.31	14,559.31

Federal Direct PLUS Loan Program for Undergraduate Students

This program allows parents to borrow up to the cost of attendance, less other financial aid at a fixed rate of 7.9%, and a credit check is required. The repayment period begins on the day the loan is fully disbursed, with the first installment due to the lender within 60 days of that date.

A student must attend at least half-time to be eligible for the funds.

Federal Direct Graduate PLUS Loan

Graduate PLUS loans are federally sponsored loans for students attending graduate school. With a Grad PLUS loan, you may borrow up to the full cost of your education, less other financial aid received including Federal Direct loans. The current fixed interest rate is 7.9% and a credit check is required.

Teacher Education Assistance for College and Higher Education (TEACH)

Conditional grants of up to $4,000 per year to students who intend to teach in a public or private elementary or secondary school that serves students from low-income families.

In exchange for receiving a TEACH Grant, you must agree to serve as a full-time teacher in a high-need field in a public or private elementary or secondary school that serves low-income students (see below for more information on high-need fields and schools serving low-income students).

As a recipient of a TEACH Grant, you must teach for at least four academic years within eight calendar years of completing the program of study for which you received a TEACH Grant.

To receive a TEACH Grant you must meet the following criteria:

- The Free Application for Federal Student Aid (FAFSA) must have been filed for the application year and USA must have the results of the FAFSA.
- Be a U.S. citizen or eligible non-citizen.
- Attend full-time each term (at least 12 hours for undergraduate and at least 6 hours for graduate)
- If an undergraduate student: (pursuing their first bachelor's degree)
- Be enrolled in teacher candidacy in an eligible USA major. Contact the Advising Office in the College of Education for eligible majors. Meet and maintain a cumulative USA GPA of at least a 3.25.
- If a graduate student:
  Be enrolled in an eligible USA major. Contact the Advising Office in the College of Education for eligible majors. Meet and maintain a cumulative USA GPA of at least a 3.25.

If you receive a TEACH Grant but do not complete the required teaching service, you will be required to repay the grants as a Federal Direct Unsubsidized Loan, with interest charged from the date of each TEACH Grant disbursement.

STUDENT RIGHTS

Students Have The Right to Know:

1) The names of organizations which accredit and license the University; 2) about the University's programs, instruction, laboratories, physical facilities, and faculty; 3) the cost of attending the University and its refund policy; 4) the type of financial assistance offered by the University from federal, state, local, and private programs; 5) who the financial aid personnel are and the location of the Financial Aid Office; 6) what the procedures and deadlines are for applying for financial aid; 7) how the University selects its financial aid recipients; 8) how the University determines financial need; 9) how much financial need has been met; 10) how

financial aid is received; 11) about each type of financial assistance offered; 12) information about all student loans offered; 13) the kind of Work-Study jobs offered, hours, duties, rate, and frequency of pay; 14) when and how financial aid awards are adjusted; 15) about special facilities for the handicapped; and 16) the University's Satisfactory Progress Policy.

Consumer Complaint Procedures

Students and prospective students should be aware that, should they have concerns or complaints related to the management or conduct of the Title IV financial assistance programs or to misleading or inappropriate advertising and promotion of the institution's educational programs, this institution has a complaint procedure. To the extent possible, students must seek a resolution of such matters through the institution's internal complaint procedure before involving others. Students with complaints should contact the Office of the Associate Vice President for Enrollment Services at (251) 460-6494. Should the institution not be able to resolve the problem, you may contact the Department of Education Ombudsman at 1 (202) 401-4498 or toll free at 1 (877) 557-2575.

STUDENT RESPONSIBILITIES

Students Have The Responsibility To:

Review and consider all information about the University before enrolling. Pay special attention to the application for financial aid, complete it accurately, submit it on time and to the right place. Know all deadlines for applying for aid and meet them. Provide all required documentation, corrections, and/or information requested by the Financial Aid Office. Notify the University of any information that has changed since the financial aid application was submitted. Read, understand, and keep copies of all forms. Repay any student loans borrowed. Perform an entrance and exit interview. Notify the Financial Aid Office of a change in name, address, or enrollment status (half-time, full-time, three-quarter-time). Satisfactorily perform the work agreed upon in a College Work-Study job. Understand the University's refund policy.

STUDENT LOAN COUNSELING

Entrance Interview

Students receiving the Federal Direct Loan for the first time at USA must have a counseling session before receiving their student loan check. During the counseling session, students will be informed of their rights and responsibilities as borrowers, advised on the consequences of excessive borrowing and of defaulting on a student loan, and given tips on money management. Perform the interview via the Internet at http://www.studentloans.gov for Federal Direct Loans. Student Accounting will notify all Perkins Loan recipients of entrance material.

Exit Interview

Students who received a Federal Direct Student Loan or Federal Perkins Loan while attending USA must perform an exit interview before leaving the University through graduation, withdrawal, or transfer. Perform the interview via the Internet at http:www.studentloans.gov for Federal Direct Loans. Student Accounting will notify all Perkins Loan recipients of exit material.

OVER AWARDS

Definition

When students receive federal funds, their financial need is established according to federal guidelines. Students may not receive more financial assistance than their cost of attendance. This occasionally occurs when students receive funds from other sources after the Financial Aid Office issues a financial aid award. This situation is called an over award.

Solution

When over awards occur, the Financial Aid Office is required to adjust the financial aid the student has been awarded. Students may be required to repay some of the funds they have already received.

Prevention

To prevent over awards, students should take the following steps:

- Notify the Financial Aid Office of any assistance from outside sources not listed on the award letter such as scholarships, ROTC, etc.
- List all sources of financial assistance on the University Financial Aid Resource Form.
- Check with the Financial Aid Office before applying for financial assistance from other sources.

FEDERAL FINANCIAL AID RECIPIENT WITHDRAWALS AND REFUNDS

Return of Federal Financial Aid Refunds

When a student completely withdraws from school, a portion of Federal Financial Aid grant or loan funds, except for Federal Work-Study earnings, must be returned to the applicable federal program(s).

The refund is based on the concept of 'earned' and 'unearned' federal financial aid. How it relates to the percentage of enrollment completed determines the percentage of earned aid.

For example, if a student attends 25 days of a 100 day term, the percentage of earned aid is 25%; therefore, 75% of the unearned aid, up to the total of institutional charges, will be returned to the federal financial aid programs. Institutional charges consist of tuition, fees, and campus housing (excluding Hillsdale), and mandatory meal plans.

In some circumstances, a student may need to repay a portion of the unearned aid. This repayment would not be more than 1/2 of the grant monies initially received. The student will be notified if they owe a federal repayment.

NOTE: If your Title IV Financial Aid refund is greater than the posted University refund at the time of your withdrawal, you will owe the difference to the University. The Office of Student Accounting will notify you of the amount due.

If a student completely withdraws after completing 60% of the term, then it is assumed that the student has earned 100% of their federal aid award, and no funds will be returned to the federal programs.

For an example of the proposed Return of Title IV Funds Worksheet, please see either the Office of Student Accounting or the Financial Aid Office located in Meisler Hall.

SATISFACTORY ACADEMIC PROGRESS POLICY

Federal regulations require the University to establish a satisfactory academic process policy which applicants for financial aid must meet. The policy must have a grade-point average standard, a pace of progression component, and an overall time frame component. A student must maintain satisfactory academic progress, regardless of whether the student was a previous recipient of financial aid.

Grade-Point Average - After attending four terms of post-secondary education, a minimum of a cumulative 2.0 GPA must be maintained. GPA's from transfer colleges will not factor into your cumulative GPA.

Pace of Progression - A student's cumulative hours passed must be at least 67% of the cumulative hours attempted, as defined by the Office of Records. For example, a student enrolling in 12 hours per semester for two (2) semesters would be required to pass 16 hours. A student enrolled in 6 hours per semester for 4 semesters would be required to pass 16 hours. This component is evaluated at the time of each application and prior to disbursement each term.

Overall Time Frame - Students are no longer eligible to receive Title IV Federal financial aid (this includes undergraduate loans) after attempting 180 hours. Transfer hours are included in the total hours attempted. This component is evaluated each term.

Grades - Courses with non-assigned grades, including withdrawals, are considered in determination of the percentage of hours completed toward the degree. Refer to this University **Bulletin** for the regulations concerning the effect on cumulative hours passed on cumulative hours attempted. Acceptable grades are: "A", "B", "C", "D", "E", "S", "P". Unacceptable grades are: "F", "U", "I", "X", "WD", "AU", "UA", "N". All of these grades are considered in evaluating the quantitative, qualitative, and overall time-frame components.

Grade Replacement - Satisfactory Academic Progress for federal aid is separate from USA's Grade Replacement Policy. Changes in your cumulative GPA and/or deficient hours earned due to grade replacement will not be taken into account in your financial aid suspension, appeal, or reinstatement until you have completed the class(es).

Transfer Students - Students transferring to the University are assumed to be maintaining satisfactory progress. Hours transferred from prior schools will be considered in establishing the class standing for grade-level requirements, and Pace of Progression. Grade-point averages (GPAs) from transfer credits will not factor into your cumulative GPA at USA.

Second Bachelors Degree/Dual Degree - Students seeking a second undergraduate/dual degree will be permitted to enroll in up to eight full-time equivalent semesters beyond the first bachelor's degree.

Graduate Students - The University's academic standards for graduate students are the grade-point average standard for this policy. The Pace of Progression component is defined as passing 67% of all hours attempted. The overall time frame is defined as 10 full-time equivalent semesters.

Doctoral Students - The University's academic standards for doctoral students are the grade-point average standard for this policy. The Pace of Progression component is defined as passing 67% of all hours attempted. The overall time frame is defined as 20 full-time equivalent semesters including graduate work.

Academic Bankruptcy - Credit hours earned prior to declaring academic bankruptcy will be counted in all components of Satisfactory Academic Progress. Bankruptcy will not clear an academic progress problem for federal aid purposes.

Courses with non-assigned grades including withdrawals are considered in the determination of the percentage of hours completed toward the degree.

Acceptable grades are: A, B, C, D, E, S, P. Unacceptable grades are: F, F*, U, I, X, WD, AU, UA, N.

All terms of attendance are reviewed including terms no federal financial was received.

Credit hours earned prior to declaring academic bankruptcy will be counted in all academic progress components.

If a student repeats classes previously taken and passed, their percentage earned could be negatively affected.

Satisfactory Academic Progress Policy is separate from the Grade Replacement Policy. Changes in your cumulative GPA and/or deficient hours due to grade forgiveness will not be taken into account in your financial suspension or appeal until you have completed the class.

If students fail to meet any one of the four academic standard components, they will lose their eligibility for federal financial aid funds.

College of Medicine - The academic regulations in the *COM Bulletin* describe the satisfactory progress requirements for a student enrolled in the College of Medicine.

Appeals - Students may appeal a decision of non-compliance using the following procedure: In order to appeal the loss of eligibility for financial aid because of failure to make satisfactory progress under the quantitative, qualitative, or time-frame components, the following appeal procedure has been established. It is imperative that you follow the procedure precisely as outlined below.

1. Complete 12 consecutive credit hours at USA, that are required for your degree, with no final grades less than a "C" **without the use of federal funds. The 12 hours may be taken all at once or over more than one semester. After the 12 hours have been completed, the student would then need to submit a typed or e-mailed letter of appeal. The Office of Financial Aid would review the request to determine if aid will or will not be restored in a probationary status**.
2. Or, submit a typed or written appeal letter to the Office of Financial Aid if the failure to maintain Satisfactory Academic Progress was due to **extenuating circumstances**. (ex: a significant injury or illness of the student or death of immediate family member). Attach documentation to support your letter and be sure to explain what change has occurred allowing you to correct your academic deficiencies. Submitting an appeal letter does not guarantee that financial aid will be reinstated. **Results of your financial aid appeal letter can be viewed at http://paws.southalabama.edu under "Academic Progress" within 14 business days**.
3. Or, make up any hour deficiency and/or attain the required cumulative GPA of 2.0 **without the use of federal funds**. Once completed, submit written notification to the Office of Financial Aid.

Reinstatement - Students who lose financial aid eligibility because of a failure to maintain satisfactory progress towards a degree may reapply for financial aid after clearing the deficiency or attaining the minimum GPA.

USA EDUCATION/STUDY ABROAD

Students wishing to use their financial aid program for study abroad opportunities should contact their financial aid advisor and the USA Office of International Education. Financial aid may be available based on student eligibility and certification of the program through the USA Office of International Education in collaboration with the USA Financial Aid Office.

SCHOLARSHIPS

Students receiving University scholarships will have the award credited to their tuition and fees due each semester. Any balance from scholarships should be used to pay for associated academic costs such as books at the USA Bookstore, USA Housing and USA Food Service.

Students desiring to apply for College or Departmental scholarships should consult the appropriate Department Chairs for application procedures.

Presidential Scholarship recipients must maintain a 3.00 minimum cumulative grade-point average and earn a total of 30 semester hours during the academic year (fall and spring semesters) for the scholarship to be renewed for subsequent years. Repeating a course for which a student has already earned credit will not contribute additional credit hours toward satisfying the 30 semester earned hour required for scholarship renewal. If a student does not meet the renewal requirements for the scholarship at the end of each spring semester, the student may enroll at their own expense at USA during the summer semester to make up any deficiency. The scholarship will be forfeited if the student does not meet the renewal requirements at the end of the summer semester. Students must also meet any other requirements outlined in the scholarship award letter.

Abraham Mitchell Business, Presidential and Bay Area Scholarships are awarded beginning late January each year to students who have completed the admissions process by the December 1 priority deadline. A special scholarship application is required. Students are encouraged to apply early as funds are limited to accepted students.

Abraham Mitchell Business Scholars Program - $11,000 per year. Qualifications: Candidates must have a minimum ACT Composite score of 28 (or comparable SAT), minimum 3.5 high school grade-point average as computed by USA Admissions, and major in the Mitchell College of Business. Preference is given to Mobile County and State of Alabama residents. The scholarship deadline is December 1 of each year. Scholarships are awarded to students who are graduating from high school and entering USA as freshmen. All students who meet the minimum qualifications and who have completed the admissions process will be considered.

Honors Program Scholarships - Students admitted to the USA Honors Program may receive a four-year honors scholarship. Contact the Honors Program Director, (251) 461-1637, for application procedures and deadline dates and more information about this prestigious program. Information is also available on the USA Honors web page at www.southalabama.edu/honors.

Presidential, Bay Area, and Community College Transfer Scholarships

Presidential - $11,000 per year. Qualifications: Candidates must have a minimum ACT composite score of 33 (or comparable SAT) and a 3.5 minimum high school GPA, as computed by the USA Office of Admissions, to be considered. Entering freshmen only.

Presidential - $9,000 per year. Qualifications: Candidates must have a minimum ACT composite score of 32 (or comparable SAT) and a 3.5 minimum high school GPA, as computed by the USA Office of Admissions to be considered. Entering freshmen only.

Presidential - $8,000 per year. Qualifications: Candidates must have a minimum ACT composite score of 30 - 31 (or comparable SAT) and a 3.5 minimum high school GPA, as computed by the USA Office of Admissions, to be considered. Entering freshmen only.

Presidential - $5,000 per year. Qualifications: Candidates must have a minimum ACT composite score of 28 - 29 (or comparable SAT) and a 3.5 minimum high school GPA, as computed by the USA Office of Admissions to be considered. Entering freshmen only.

Presidential - $3,500 per year. Qualifications: Candidates must have an ACT composite score of 24-27 (or comparable SAT) and a 3.0 minimum high school GPA, as computed by the USA Office of Admissions, to be considered. Entering freshmen only.

Bay Area Scholarships - $1,500 for Freshman year. Qualifications: ACT Composite score of 21-23 (or comparable SAT), minimum high school grade-point average of 3.0 as computed by the USA Office of Admissions, and residence in Mobile or Baldwin counties in Alabama. Entering freshmen only.

Community College Transfer - $1,000 per year. Qualifications: The award is based on the cumulative GPA earned at the two year institution as computed by the USA Office of Admissions. Application: No separate application is required. Candidates should be accepted for admission by May 1. Awards are made in mid-summer.

Other Named Scholarships

Magnes Scholarship - $2,000 per year. Qualifications: Candidates must have a minimum ACT composite score of 20, a high school GPA of 3.0 as computed by the USA Office of Admissions, be a resident of Mobile County and major in Business. Scholarships are awarded to students who are graduating from high school and entering USA as freshmen. Applicants must also apply for financial aid and demonstrate financial need.

Performance (Athletic, Music, Theater Arts) - The award amount varies. Qualifications: Selection is based on the individual's ability. Applications: Contact the individual departments - Athletics (251) 460-7121, Music (251) 460-6136, Theater Arts (251) 460-6305.

ACM Scholarship - An annual scholarship given to an outstanding student in the School of Computing. Contact the School for more information, (251) 460-6390.

Jared Adkins Physics Scholarship - $500 awarded for the fall semester to a sophomore or junior physics major. Selection criteria will include overall academic standing, academic standing in physics courses, extra-curricular activities and may include financial need. Contact the Department of Physics for more information, (251) 460-6224.

AHEPA Scholarship for Study in Greece - Provided by the American Hellenic Educational Progressive Association, this scholarship is granted to outstanding students who wish to pursue their study of the Greek language in Greece. Contact the Foreign Language Department for further details, (251) 460-6291.

Mary Ahn Nursing Scholarship - Annual scholarship awarded to an outstanding Nursing major. Contact the College of Nursing for more details, (251) 445-9400.

Air Force ROTC Scholarships - Cover the costs of tuition, fees, and a reimbursable book allowance, plus a subsistence allowance of up to $500 per month for the academic year. Four-year and three-year scholarships are available to pre-freshmen having applied before December 1 of their senior year in high school. Scholarships are also provided to in-college freshmen and sophomores, paying up to full tuition, subsistence allowance plus $900 per year for books and fees. All students selected to enter AS 301/401 will receive a stipend starting at $450 per month. This allowance is tax free and is in addition to any other assistance that the student may receive. Furthermore, selected Air Force ROTC students who live in the USA dormitories may receive a reimbursement for their dormitory cost. Also, pending your academic major, you may qualify for an 'Express Scholarship". This scholarship will provide up to 100% tuition reimbursement, subsistence allowance and $900 for books and fees per year; to find more information about the degrees required, visit www.afrotc.com.

Applications and further information may be obtained from the Air Force Studies Department, (251) 460-7211.

Alumni Freshmen Leadership Scholarships - Four (4) one-year $2,500 scholarships to entering freshmen. Qualifications: Candidates must have a minimum ACT composite score of 24, a 3.0 cumulative grade-point average, and demonstrate achievement in academics and leadership activities within the school and community. Applications are mailed in January by the Office of Alumni Affairs to all accepted freshmen who meet the minimum qualifications or are available by request. Contact Office of Alumni Affairs (251) 460-7084.

Alumni Book Scholarship - Two (2) $500 book scholarships to a full-time sophomore, junior, or senior at the University. Qualifications: Candidates must have completed a minimum of 20 hours at the University with a minimum 3.0 cumulative grade-point average. Academics, activities, and leadership are considered in awarding the Alumni Book Scholarship, as well as financial need. Applications are available in January. Contact the Office of Alumni Affairs (251) 460-7084.

Army ROTC Scholarships - Cover the costs of tuition, fees, and a flat-rate book allowance plus a subsistence allowance of up to $500 per month for the academic year. Four-year scholarships are available to pre-freshmen having applied during the fall of their senior year in high school. Two and three-year scholarships are available to eligible students, and current enrollment in the R.O.T.C. program is not a prerequisite. Students who are selected to enter the advanced program, MS 301-303 and MS 401-403, will receive up to $500 per month subsistence for up to 10 months per year. This allowance is tax free and is in addition to any other assistance that the student may receive. Applications and further information may be obtained from the Military Science Department, (251) 460-6341.

Alabama Power Company Engineering Scholarship - Two $4,000 annual scholarships to sophomore Electrical Engineering students that are Alabama residents based on academic standing. Contact the College of Engineering for more information, (251) 460-6140.

Alpha Epsilon Delta - T. G. Jackson Pre-professional Scholarship - This scholarship was originated by AED alums. Alabama Zeta chapter of Alpha Epsilon Delta announces a prestigious scholarship program. The AED/T. G. Jackson Scholarship is an annual, non-renewable scholarship awarded to an outstanding junior or senior, and an AED National member. The recipient must be enrolled as a full-time student each semester (15 hours) and maintain at least a 3.5 grade-point average for fall semester to receive the scholarship in spring semester. Applications may be obtained from the Health Preprofessional Advisor.

The Ammons Student Leadership Endowed Scholarship - Available to a student who has achieved sophomore, junior, or senior class status and holds a GPA of 2.5 or higher. The scholarship is based on academic achievement, community involvement, and involvement and leadership on the University campus. Application forms available from Paula Duke, Barbara Chirvanian and Lisa Kavanaugh and must be submitted no later than April 1.

Earl P. Andrews Scholarship - Awarded annually to a disadvantaged sophomore, junior, or senior majoring in Arts and Sciences. Contact the College of Arts and Sciences for application information, (251) 460-6280.

Art Scholarship - Awarded to a deserving Art major. Contact the Department of Visual Art, (251) 460-6335.

Amanda Baker Scholarship - Awarded to a deserving student majoring in Nursing. Contact the College of Nursing for details, (251) 445-9400.

Les and Alleen Barnett Endowed Scholarship - The Barnett's established this scholarship to support an incoming freshman in the School of Computing. Students need to have a GPA of 3.0 or higher to apply for this scholarship. Preference will be given to residents of Mobile County and residents of Alabama. Preference will be given to a student who minors in business or pursues the concentration of health informatics. All SoC endowed scholarships are subject to available funding. Contact the SoC for more information, (251) 460-6390.

Mike Bartels Percussion Scholarship - This scholarship was established in honor of percussionist Mike Bartels, a graduate of McGill-Toolen High School and student at USA. Awards range from $250 to $550 per year and are available to majors and non-majors. The recipient(s) must be enrolled in applied percussion, participate in the percussion ensemble, carry a 12 credit hour load and maintain a cumulative grade-point average of 2.0 or higher. There is no application form for this scholarship as outstanding percussionists are identified by the faculty and recommended to the Department Chair on an annual basis. Contact the Department of Music, (251) 460-6136.

Dr. Graciella Blanco Scholarship - An endowed scholarship awarded annually to an outstanding Spanish student. Contact the Department of Foreign Languages and Literatures for details, (251) 460-6291.

Dr. Victorino S. Blanco Mathematics Scholarship - An endowed $500 scholarship awarded annually to the outstanding undergraduate senior Mathematics and Statistics major. Contact the Department of Mathematics and Statistics for details, (251) 460-6264, http://www.southalabama.edu/mathstat/.

Jeremy Blanton Memorial Scholarship - A scholarship awarded spring semester to an outstanding student who has completed the Freshman year. Criteria based on academic achievement and financial need. Contact the Office of Enrollment Services. (251) 460-6494.

Boise Engineering Scholarship - Given annually to a continuing Engineering student. Based on academic excellence and financial need. Contact the College of Engineering for more information. (251) 460-6140.

Ed Bunnell Scholarship - A $500 annual scholarship awarded to deserving AIS students.

(More than one scholarship is usually available.) Contact Department of Adult Interdisciplinary Studies for further details, (251) 460-6263.

James and Ivel Caldwell Scholarship - An endowed scholarship awarded in the spring semester to a student in the College of Arts and Sciences to participate in a study abroad program. For information, contact the Director of the International Studies Program, (251) 460-7161.

Canoe Crew of 1988 Scholarship - Given annually to a deserving Civil Engineering junior or senior. Contact Civil Engineering for further details. (251) 460-6174.

Chemistry Scholarship - The Chemistry Department has scholarship funds available to award up to four scholarships on an annual basis. The awarding of the scholarships to two sophomore and two junior students is preferred but not required. Awards will consist of $1,500 tuition credit and will be distributed on an annual basis. Provided a satisfactory level of academic performance is met and the availability of funds exists, the scholarships will support the award recipients through their fourth year. In order to qualify, students must be declared Chemistry majors beginning their sophomore or junior years as determined by the Chemistry Department, have a minimum 3.0 GPA (overall and major, as computed by the Chemistry department), and be enrolled full time. Two letters of recommendation and a positive interview upon submission of a completed application form are also required. Completed applications are due on or before the first Friday in October. Inquires should be directed to the Chemistry Department Office, (251) 460-6181.

Chester Piano Scholarship - This scholarship is named in honor of Dr. John Chester, a pianist who taught at USA in the 1960's. Awards range from $300 to $500 per year and are available to majors and non-majors. The recipient(s) must be enrolled in applied piano, carry a 12 credit hour load and maintain a cumulative grade-point average of 2.0 or higher. There is no application form for this scholarship as outstanding pianists are identified by the keyboard faculty and recommended to the Department Chair on an annual basis. Contact the Department of Music, (251) 460-6136.

Chevron Engineering Scholarship - Two $1,500 annual scholarships for Chemical Engineering juniors or seniors. Two $1,500 annual scholarships for Mechanical Engineering juniors or seniors. Two $1,000 annual scholarships for Electrical Engineering juniors or seniors. One $500 annual scholarship to a member of the Society of Women Engineering Society. Based upon academic excellence. Contact the Chemical Engineering department (251) 460-6160, Mechanical Engineering department at (251) 460-6168, or the Electrical Engineering department (251) 460-6117.

Children of Alumni Scholarship - One (1) year $2,500 scholarship awarded to a child of an alumnus of the University. Qualifications: full-time sophomore, junior or senior at USA. Must have completed 20 hours at USA with a minimum cumulative grade-point average of 2.5. Parent or guardian must be a dues-paying/ active status USA Alumni Association member at time of scholarship application submission. Academics, activities and leadership are considered in awarding the scholarship. Applications are available in January. Contact the Office of Alumni Affairs (251) 460-7084.

Children of Employee Scholarship - A $1,000 scholarship awarded annually to children of University employees. Scholarships will be awarded for the academic year and are available to unmarried dependents of employees who are eligible for the University's Education Benefit Plan as outlined in Section 8.2 of the Staff Employee Handbook. Application deadline is April 1. Scholarships are available to incoming freshmen, transfer students, former and current full-time undergraduate USA students. All applicants must be eligible for registration or accepted for admission. For more information, contact the Office of Enrollment Services, (251) 460-6494.

College of Education Scholarship - Awarded annually to a full time senior in the College of Education who plans to teach. Contact the College of Education for more information, (251) 380-2738.

Computing Excellence Endowed Scholarship - This scholarship was established by businesses and individuals who want to see the SoC grow in student enrollment through the growth of Shelby Hall. The scholarship(s) will be awarded to freshmen coming into the School of Computing with a composite ACT of 22 or higher and a high school GPA of 3.0 or higher. All SoC endowed scholarships are subject to available funding. Contact the SoC for more information, (251) 460-6390.

Contractor's Licensing Board - Awarded annually to a deserving graduate student majoring in Civil Engineering who is a resident of the state of Alabama. Contact the College of Engineering at (251) 460-6140.

Danny T. Conway Memorial Award - A $500 scholarship awarded annually to an upper class student based on academic acting excellence. Contact the Department of Dramatic Arts for further details, (251) 460-6305

Felicia Cooley Award - Provided by Spanish alumna Felicia Cooley, this scholarship is granted to a high-achieving Spanish major who is completing his or her intermediate level of study. The scholarship is to be used solely toward study abroad. Contact the Foreign Language Department for further details, (251) 460-6291.

Patsy Capps Covey Biomedical Sciences Scholarship - Awarded to a junior or senior majoring in Biomedical Sciences who has demonstrated need, academic competence, and has participated in BMD extracurricular activities and/or service. Contact Biomedical Sciences for more information, (251) 445-9265.

Roy J. Daigle/Kathryn A. Gradle Endowed Scholarship - The scholarship(s) will be awarded to sophomore, junior, or senior Information Systems majors with a composite ACT of 28 or higher and a high school and college GPA of 3.0 or higher. All SoC endowed scholarships are subject to available funding. Contact SoC for more information, (251) 460-6390.

Alfred F. Delchamps Scholarship - Awarded to an outstanding junior or senior student in Education. All aid applicants are considered. Contact the College of Education for more information, (251) 380-2738.

Lloyd Dendinger Memorial Scholarship - Named after a former faculty member in the English Department, the scholarship provides a $100 annual award for an outstanding graduate student essay in American literature. Contact the English Department, (251) 460-6146.

Desk and Derrick Club Award in Geology/ Geography - A $500 annual award to a deserving junior or senior Geology/Geography student. Contact the Earth Sciences Department for further details, (251) 460-6381.

Douglas Engineering Scholarship - Awarded annually to a deserving engineering student. Based on academic excellence and financial need. Contact the College of Engineering for more information. (251) 460-6140.

Patricia Lane Dyess Scholarship - An endowed scholarship awarded annually to an outstanding upper-level Foreign Language student. Based on academic excellence and financial need. Contact the Foreign Language Department for further details, (251) 460-6291.

Jack Edwards Scholarship - Awarded to an outstanding junior or senior student in political science. All aid applicants are considered.

English Department Endowed Scholarship - Provides an annual award of $500 to an outstanding second-year graduate student who is nominated by the faculty. Contact the English Department, (251) 460-6146.

Evonik Industries Scholarship - Awarded annually to a deserving junior student majoring in Engineering. Contact the College of Engineering at (251) 460-6140 for more information.

John W. Faggard Memorial Scholarship in Geology - $500 annual scholarship awarded to a student majoring in Geology. Contact the Department of Earth Sciences for more information, (251) 460-6381.

Marjorie Faircloth Speech Pathology Scholarship - A $500 annual scholarship awarded to a deserving student majoring in Speech Pathology. Contact the Department of Speech Pathology for further information, (251) 380-2600.

David and Wei Feinstein Endowed Scholarships for SoC - The Feinstein's have sponsored this scholarship for an incoming freshman in the School of Computing. Qualified students must have a high school GPA of 3.0 or higher, a composite ACT score of 28 or higher, and a teacher's letter of recommendation. All SoC endowed scholarships are subject to available funding. Contact the SoC for more information, (251) 460-6390.

Wayne and Katherine Fuller Scholarship - Awarded annually to a junior or senior student and a U.S. citizen. Preference is giving to a non-traditional student who is in the Coop program or interning. Contact the College of Engineering at (251) 460-6140 for more information.

French Language Scholarship - Awarded annually to an outstanding French student. Contact the Foreign Language Department for further details, (251) 460-6291.

Walter Gault Scholarship - Awarded annually to a Physical Therapy student. Contact the Department of Physical Therapy for more information, (251) 434-3575.

Sue Ellen Gerrells/R. Eugene Jackson Award - An endowed award annually presented to an upper class drama major who excels in overall academics and has an outstanding record of achievement in theatre. Contact the Department of Dramatic Arts for more information, (251) 460-6305.

Dr. Erwin Goessling Foreign Language Scholarship - An endowed scholarship awarded annually to an outstanding student majoring in German. Contact the Foreign Language Department for further details, (251) 460-6291.

William Crawford Gorgas Chapter of the American War Mother's Scholarship - An annual grant awarded to a deserving son or daughter of a war veteran. All aid applicants are considered.

Joseph Hadley Memorial Scholarship in Education - Awarded annually to an outstanding and deserving student in the College of Education. Contact the College of Education for further information, (251) 380-2738.

Ted Huddleston Memorial Scholarship - Awarded annually to a rising sophomore or junior student majoring in Chemical Engineering who exhibits academic excellence. Contact the College of Engineering at (251) 460-6140 for more information.

Sue Houston Hanlein Scholarship for Piano - Award ranges from $1,500 to $1,750 per semester and is available to qualified pianists who are majoring in music. The recipient must be enrolled in applied piano and maintain a cumulative GPA of 2.0 or higher. Awarded by the piano faculty. Contact the Music Department for more details, (251) 460-6136.

Michael S. Hanna Endowed Communication Scholarship Fund - The Michael S. Hanna Endowed Communication Scholarship is awarded to a junior or senior level student with a declared major in communication. Demonstrated financial need is required and the minimum GPA is 3.0. Students should submit the Family Educational Rights and Privacy Act (FERPA) form, two letters of recommendation (1 faculty and 1 professional/personal), application form, and an essay (750 words or less) explaining their leadership qualities, community and campus involvement, and career goals. Only completed applications will be considered. For further information, contact Ms. Nadia Bush in the Department of Communication.

B. Keith Harrison Scholarship - Awarded annually to a deserving student majoring in Chemical Engineering. Contact the College of Engineering at (251) 460-6140 for more information.

Neil and Laura Henderson Endowed Scholarship - The Henderson scholarships will be awarded annually to one student from each class within the School of Computing. Students must have a GPA of 3.0 or higher to be considered for this award. Preference will be given to students with two letters of recommendation from faculty members. All SoC endowed scholarships are subject to available funding. Contact the SoC for more information, (251) 460-6390.

R. L. & Annie M. Hill Nursing Scholarship - Awarded to a deserving student majoring in Nursing. Contact the College of Nursing for details, (251) 445-9400.

Bobby Holmes Scholarship - Poet and writer Bobby Holmes was student editor of the journal Negative Capability. Donated by his parents and friends in his memory, the Bobby Holmes Scholarship provides a yearly award for the Editor-in-Chief of Oracle. Dr. Larry Holmes, Bobby's father, was a history professor at USA. Contact the English Department for further details, (251) 460-6146.

The Williams-Philips-Van Hook Endowed Scholarship - This scholarship is for students in Chemistry or College of Nursing who have completed a minimum of two semesters of study in Chemistry or Nursing with preference given to Chemistry students. In the case that no Chemistry students apply for the scholarship, College of Nursing students will be considered. Interviews for the scholarship are conducted by the Chemistry Scholarship Committee, and selection is based on students' ability to articulate principles of Chemistry (emphasis on teaching chemistry, nursing chemistry, food chemistry, public information chemistry or polymer chemistry). Students should have a minimal C average overall. Application forms are due to the Chemistry chair by April 1 of each year, and candidate selection is made no later than May 1. Application should include proof of grade-point average. Inquires should be directed to the Chemistry Department, (251) 460-6181.

Malcolm R. Howell Endowed Scholarship in Education Fund - Awarded annually to a College of Education student at the University of South Alabama studying to become a teacher. Contact College of Education for more information, (251) 380-2738.

T.G. Jackson Endowed Scholarship - This scholarship is an annual award given in memory of long-time Chemistry professor, Dr. T.G. Jackson. Applicants must be a declared Chemistry major, with preference given to Health Pre-professional students. This award is paid to the student for one year only and is given to a different student each year.

Ralph Jones Memorial Scholarship - Awarded annually to a full time senior in the College of Education who plans to teach. Selection is based on academic performance and financial need. Contact the College of Education for more information, (251) 380-2738.

Martin Luther King Scholarship - A scholarship in the name of Dr. Martin Luther King, Jr. has been established to assist returning African-American students with their educational pursuits. Scholarship applications will be mailed to full-time returning, African-American undergraduates, who have a minimum cumulative grade-point average of 2.80, and has completed a minimum of 30 South Alabama hours, during the month of July. Scholarship recipients will be chosen by a Selection Committee in August to receive a non-renewable award of $500.00 each to be disbursed Fall Semester For further information you may call the Office of Multicultural Student Affairs at 251.460.6895.

John W. Laidlaw Music Scholarship - Laidlaw Scholarships are available to outstanding students in all areas of music study and range from $2,500 to $3,500 annually. They are intended primarily for music majors but can be awarded to non-majors. For consideration, all students must audition and have a cumulative GPA of 3.0 or higher. Laidlaw scholarships are renewable provided that the recipient carries a 12 credit hour load, participates satisfactorily in the ensemble(s) for which the scholarship was awarded and maintain a cumulative grade-point average of 3.0 or higher. Contact the Music Department for further details, (251) 460-6136.

Jim and Diana Laier Scholarship - Awarded annually to a deserving graduate student majoring in Civil Engineering with a GPA of 3.5 or higher. Contact the College of Engineering at (251) 460-6140 for more information.

Regina Little Scholarship - Awarded to a deserving student majoring in Nursing. Contact the College of Nursing for details, (251) 445-9400.

Mary Lou Littleton Endowed Scholarship - $2,000 awarded annually to a second-year Radiography student. Contact the Department of Radiologic Sciences for further information (251) 434-3456.

LSAMP Scholarship - The LSAMP scholarship provides stipends, mentoring and research opportunities to underrepresented minorities in STEM fields who intend to ultimately pursue graduate careers in their field. Requirements: Applicants must be incoming freshmen or incoming transfer students in their first semester at USA; they must major in science, technology, engineering or math fields. Their cumulative GPA from high school must be 3.0 or better (on a 4.0 scale). Applicants must demonstrate that they have taken at least three years of science and math courses in high school. Finally, students must be African American, Hispanic or Native American. Since LSAMP is a NSF program, students intending to go into the medical fields after graduation are not eligible for this particular scholarship. For more details please contact Dr. Steadman.

MACE/Raburn Engineering Scholarship - Two $1,500 annual scholarships to Engineering students. Based on academic excellence and financial need. Contact the College of Engineering for more information. (251) 460-6140.

McCoy-Archambault Physical Therapy Scholarship - Awarded to a student completing the first year of the professional component of the Physical Therapy program. Contact the Department of Physical Therapy for more information, (251) 434-3575.

Charles R. McGlothren, Jr. Scholarship - A $1,000 annual scholarship awarded to a deserving student majoring in Philosophy. Contact the Philosophy Department for further details, (251) 460-6248.

Jean McIver Scholarship - Named after twenty-year faculty veteran, Dr. Jean McIver, the scholarship awards $500 annually to an outstanding undergraduate English major or African American Studies minor. Contact the Department of English, (251) 460-6146.

Patricia W. McRaney Memorial Scholarship - Awarded annually by the Federated Junior Woman's Club to an outstanding junior majoring in Special Education. All aid applicants are considered.

Reece and Rose Miller Engineering Scholarship - A $1500 scholarship given annually to a deserving Engineering student. Based on academic excellence and financial need. Contact the College of Engineering for more information. (251) 460-6140.

Sushila Mishra Memorial Scholarship in Mathematics/Statistics - A $500 annual scholarship awarded to an outstanding junior or senior majoring in Mathematics and Statistics. Contact the Department of Mathematics and Statistics for details, (251) 460-6264, http://www.southalabama.edu/mathstat/.

John Stark Mobile Oilmen's Association Scholarship - Two $600 annual scholarship for students majoring in Chemical Engineering. Contact that department for further details, (251) 460-6160.

Warren Nicholson Scholarship - Awarded annually to a deserving undergraduate student majoring in Electrical. Contact the College of Engineering at (251)460-6140 for more information.

Joseph Olsen Scholarship - Awarded annually to a rising senior in Civil Engineering student with a concentration to Geotechnical Engineering and a member of ASCE. Contact the College of Engineering at (251) 460-6140 for more information.

Mobile Women in Construction Scholarship - Awarded annually to a deserving junior or senior Engineering major. All aid applicants are considered. Contact the Civil Engineering department for more information, (251) 460-6174.

Music Scholarship - Music Scholarships range from $200 to $1,000 per semester and are available to majors and non majors in the keyboard, voice and instrumental areas. They require an audition and are renewable provided that the recipient carries a 12 credit hour load, participates satisfactorily in the area(s) for which the scholarship was awarded and maintains a cumulative grade-point average of 2.0 or higher. Contact the Music Department for further details, (251) 460-6136.

Chris Nash Memorial Scholarship - $500 annual scholarship is awarded to an outstanding student majoring in Mathematics and Statistics. Contact the Department of Mathematics and Statistics for details, (251) 460-6264, http://www.southalabama.edu/mathstat/.

Shirley Dean Panus Physical Therapy Scholarship - Awarded to an outstanding physical therapy student. Contact the Department of Physical Therapy for further information, (251) 445-9330.

Earl O. Parish and Elizabeth Osenton Parish Memorial Scholarship - Awarded annually to a deserving incoming Engineering student. Based on academic excellence and financial need. Contact the College of Engineering at (251) 460-6140 for more information.

Passau Exchange Scholarship - Awarded annually to an upper-level German student to study on the USA-Universitat Passau Exchange Program in Germany. Contact the Foreign Language Department for further details, (251) 460-6291.

Physics Department Promising Student Award - The Physics Department Promising Student Award will be granted from the department's endowed chair funds. The one-time award shall be up to $500 with the exact amount to be determined by the Physics faculty. It is awarded to a full-time physics major in good academic standing, in their sophomore or junior year. Contact the Department of Physics for more information, (251) 460-6224.

Physics Faculty Honors Fellowship - In-state tuition and fees up to 16 credit hours per semester for up to 4 semesters. Qualifications: Awarded to outstanding Physics majors at the University of South Alabama with a minimum cumulative 3.0 GPA who have completed the calculus-based introductory physics sequence (PH 201 and PH 202) based on academic merit. Selection will be based upon the math/science GPA (as computed by the Physics department), recommendation of physics instructors, and recommendation of the Physics faculty. For more information contact the Physics department, (251) 460-6224.

Margaret Pol Stock Award - An endowed scholarship awarded annually to an outstanding upper-level Foreign Language student. Based on academic excellence and interest in two languages. Contact the Foreign Language Department for further details, (251) 460-6291.

Presser Scholarship - The $4,000 Presser Scholarship is awarded by the music faculty to a rising senior music major for a period of two consecutive semesters. The criteria for the award are musicianship, scholarship and contribution to the department. There is no application form for this scholarship as students must be nominated by a faculty member for consideration. As the name implies, this scholarship is made available to the Department through the kind support of the Presser Foundation of Bryn Mawr, Pennsylvania. Contact the Music Department for further details, (251) 460-6136.

Laura Christine Prine Memorial Scholarship - Awarded annually to a female student majoring in Chemical Engineering and a U.S. citizen and/or permanent resident of U.S. and have a 3.0 or above GPA. Contact the College of Engineering at (251) 460-6140 for more information.

Radiologic Sciences Scholarship - $1,000 awarded annually to a second-year Radiography student. Contact the Department of Radiologic Sciences for further information, (251) 445-9346.

Radiologic Sciences, Radiation Therapy Scholarship - $700 awarded annually to a senior Radiation Therapy student. Contact the Department of Radiologic Sciences for further information, (251) 445-9346.

Katherine Lawrence Richardson Scholarship - Awarded annually to an outstanding senior majoring in English or in Secondary Education with a concentration in English. Contact the Department of English for details, (251) 460-6146.

Russian Language Scholarship - Awarded annually to an outstanding Russian student. Contact the Foreign Language Department for further details, (251) 460-6291.

Comer Scarborough Scholarship - Awarded periodically by the Mobile Chapter of the Phi Delta Kappa Fraternity to a major in Education planning to teach in Mobile.

Albert Schweitzer Memorial Scholarship - Up to $2500 awarded annually to a rising sophomore, junior, or senior majoring in Arts and Sciences and who has exemplified the ideals of Albert Schweitzer through community service. Contact the College of Arts and Sciences for application information, (251) 460-6280.

SoC Advisory Board Endowed Scholarship - Funds to support this scholarship were given by local business representatives to support an incoming freshman to the School of Computing. Students need to have a composite score of 22 or higher on their ACT and a high school GPA of 3.0 or higher to qualify for this scholarship. All SoC endowed scholarships are subject to available funding. Contact the SoC for more information, (251) 460-6390.

SoC Sponsored Scholarships - The School of Computing awards scholarships in amounts ranging up to $5,000 to students entering the School as first time freshmen or transfers. Each year over $50,000 in School scholarships are awarded. Contact the SoC for more information, (251) 460-6390.

Shelley Memorial Scholarship - Donated by President and Mrs. Gordon Moulton in honor of her mother, this annual scholarship awards $400 to one graduate and one undergraduate student for excellence in poetry writing. Scholarships will be awarded fall semester to an undergraduate and a graduate student for creative writing. Applicant must be full-time, have taken one poetry course prior to apply, and have 2.5 or above GPA. Contact the English Department for further details, (251) 460-6146.

Sigma Theta Tau Scholarship - Awarded to recognize outstanding scholarship by qualified nurses and nursing students. This award of $250 is available to undergraduate and graduate nursing students. Application is made in the College of Nursing, (251) 445-9400.

Hooker/Kubik Slovak Scholarship - Awarded annually to a student (age 22 or older with a J-IVISA) from the Kosice, Slovakia area. Based on academics, references, and leadership. For further information, contact the Office of International Services, (251) 460-6050.

Robert Snell Scholarship - Two $1,500 scholarships will be available to students who have reached Junior standing and are majoring in the Department of Visual Arts. This is a

need based scholarship requiring a 3.0 GPA. The scholarship is awarded in the spring and is not renewable. Portfolio and transcripts are required. Contact the Department of Visual Arts for further details, (251) 460-6335.

Ron and Gail Stallworth Scholarship - A $500 annual scholarship is given to a deserving student in Chemical Engineering. Contact Chemical Engineering for further details. (251) 460-6160.

Dr. Patricia Stephens Memorial Scholarship - $450 awarded annually to a graduate student for the best essay in Renaissance and/or 17th or 18th century studies in even years, and for a non-designated area of study in odd years. Donated in 2000 by Ms. Lana Silverthorn. Contact the English Department for further details, (251) 460-6146.

Steve and Angelia Stokes Scholarship - Two Fiction Awards (one graduate and one undergraduate) and two Poetry Awards (one graduate and one undergraduate) to be given spring semester, $1,000 per award. Applicant must be full-time, have taken one poetry course prior to applying, and have 2.5 or above GPA. Contact the English Department for more information, (251) 460-6146.

G. M. Tomasso Scholarship - Awarded to a deserving student majoring in Nursing. Contact the College of Nursing for details, (251) 434-3410.

Myrtice Tyson Memorial Scholarship - Awarded to one female student/criminal justice major who plans a career in Law Enforcement. Submit your letter of interest to the Myrtice Tyson Memorial Scholarship Awards Committee, Department of Political Science and Criminal Justice, describing your career interest in law enforcement. Contact the Department of Political Science and Criminal Justice for more information, (251) 460-7161.

USA Foundation Anthropology Scholarship - Awarded annually to two rising junior or senior Anthropology majors. Selection is based on GPA, academic performance, and an essay on career goals. Contact the Department of Anthropology for more information, (251) 460-6347.

USA Foundation Physics Scholarship - In-state tuition and fees for up to 8 credit hours per semester will be applied toward academic-year tuition and fee expenses. The scholarship may be renewed a maximum of two additional years. Contact the Department of Physics for more information, (251) 460-6224.

USA Foundation Sociology Scholarship - Awarded annually to two rising junior or senior Sociology majors. Selection is based on GPA, academic performance, and an essay on career goals. Contact the Department of Sociology for more information, (251) 460-6347.

Frederick Palmer Whiddon Liberal Arts Scholarship - Available to any student enrolled in the College of Arts and Sciences as a degree seeking student. Contact the College of Arts and Sciences for application information, (251) 460-6280.

Eleanor and Jere Woolsey HBAA Scholarship - Awarded annually to a student majoring in Civil Engineering. Preference to children of the Home Builders Association of Alabama. Contact the College of Engineering at 9251) 460-4160.

Volkert Endowed Scholarship - Awarded annually to a full time student majoring in Civil Engineering and have 3.0 or above GPA. Contact the College of Engineering at (251) 460-6140 for more information.

Wierzbicki-Salter Endowed Scholarship - This scholarship is for Chemistry majors only. Applicants must be declared Chemistry major of sophomore or higher standing with an excellent academic record. Previous recipients are eligible for said scholarship in the following years, assuming above criteria is met.

Dennis and Marianne Wilkins Endowed Scholarship - Incoming freshmen entering the School of Computer and Information Sciences must have a composite ACT score of 26 or higher and a GPA of 3.5 or higher to be considered. All SoC endowed scholarships are subject to available funding. Contact the SoC for more information, (251) 460-6390.

STUDENT AFFAIRS AND STUDENT SERVICES

The Division of Student Affairs is responsible for that part of the student's total educational experience which takes place outside the formal classroom program. Among its concerns are housing, student center, student activities, recreation, student organizations, programs, disciplinary actions, disabled student services, community service, personal counseling, multicultural affairs, testing services, food services, bookstore, and University Police. Through such activities as the Student Government Association, the students are given a responsible voice in the governance of the University.

(See Student Handbook, *The Lowdown* http://www.southalabama.edu/lowdown/).

Students also participate as members of some University-wide committees as well as on committees within the colleges of the University.

STUDENT LIFE

The University of South Alabama, is committed to providing services and creating a supportive campus environment which fosters engagement, academic success, and personal development within a diverse community of learners.

STUDENT CENTER

The newly renovated Student Center supports the University mission by providing quality programs, facilities, and services that create a community that encourages involvement, development and personal and academic growth. The Student Center is truly the center of it all on campus.

Located in the building are lounge areas, the Student ID Office, a computer lab, office that support student engagement, dining and other student life areas. Eight meeting rooms, a ballroom, and audio-visual equipment are available at no charge to student organizations, and administrative and academic departments. Individuals and outside organizations may reserve space and equipment for a fee.

Reservations for any space in or around the Student Center may be made in Student Center Services, Monday through Friday, 8:00 a.m. - 5:00 p.m. at (251) 460-6077 or http://www.southalabama.edu/studentcenter/.

CAMPUS RECREATION

The Campus Recreation Department offers a wide variety of recreational opportunities for the entire University community. Campus Recreation accommodates many styles of participation, including intramural team and individual competition in a variety of sports and activities. Open recreational opportunities, fitness programs, outdoor recreation activities, aquatics, and sports clubs are offered. Student groups may use recreational facilities and equipment for social activities approved by the Campus Recreation Department. The continuing goal of the recreation program is to provide activities that offer optimum benefits of enjoyment, health, social interaction, and sportsmanship to participants.

Our state-of-the art Student Recreation Center is an impressive facility that contributes greatly to student life on campus. Within the Student Recreation Center, one will find a wide array of recreational and fitness facilities. The 116,000 square foot complex contains a cardio exercise room and a weight room with selectorized machines, plate loaded machines, and free weights. Also, within the Center are three basketball courts, an indoor soccer court, four racquetball courts, two multipurpose rooms for activities such as martial arts and fitness classes, and a track. A 35' high rock climbing wall offers challenges and excitement to climbing enthusiasts. An outdoor heated swimming pool and an indoor heated swimming pool are included as part of the complex. There is also an outdoor heated spa. In addition, saunas are located in both the men's and women's locker rooms. After a good workout, patrons can enjoy refreshments from the smoothie bar and sit on the deck overlooking the courtyard containing beautiful heritage oak trees. For members of the Student Recreation Center who have children, there is a children's play zone.

Located next to the Student Recreation Center is the Outdoor Adventures cabin. The Outdoor Adventures program offers a variety of activities including canoeing, kayaking and hiking. Also housed in our Outdoor Adventures cabin is our Jag Bike rental program. Students can rent a bike to use on campus on a semester basis. We offer minor repairs of personally owned bikes free of charge. Owner must provide the needed parts for repairs.

The Intramural Sports Complex consists of six multipurpose playing fields. These lighted fields are used throughout the year for intramural games and practices. One of the fields is designated for use by sports clubs.

The SGA Sports Complex, supervised and maintained by the Department of Campus Recreation, is available for use by university members throughout the year. A pavilion, sand volleyball courts, horseshoe pits, and barbecue grills make this area a great spot for fun and entertainment.

The Glenn Sebastian Nature Trail is available for those who like to walk or jog through the woods. This is both beautiful and educational.

Other services offered at the Student Recreation Center include chair massage therapy, weekly opportunities to meet with a physician to ask medically related questions; and body fat and blood pressure readings.

All members of our university community are encouraged to take advantage of the wonderful opportunities for fun and fitness offered through the Department of Campus Recreation. For further information, please visit our web page or call (251) 460-6065.

COUNSELING AND TESTING SERVICES

Counseling And Testing Services strives to facilitate the academic, emotional, social, and career development of students. It offers individual, relationship, and group counseling for all interested students and conducts outreach educational programs. Counseling services are provided free and confidentially by a staff composed of Licensed Professional Counselors. Students having mental health and/or relationship problems are invited to take advantage of this campus resource.

The Substance Abuse Program is another facet of the Counseling and Testing Services department. This program provides the USA community with counseling, educational, and prevention programs related specifically to substance abuse. The primary goals of the Substance Abuse Program are to increase knowledge and awareness of alcohol and other drug issues and to decrease the harmful consequences associated with high risk drinking and/or illegal drug use.

Counseling and Testing Services serves as a regional testing center for various national testing organizations. Testing services are provided for USA students as well as non-students. Fees for testing services vary according to the types of tests administered.

Counseling and Testing Services is located in 326 Alpha Hall East at 555 University Blvd. For further information about any of these services, contact our office at (251) 460-7051 or go on-line to www.southalabama.edu/counseling.

DISABILITY SERVICES

The University offers special services to students with disabilities. Students requesting services must submit documentation regarding the disability to the Office of Student Disability Services prior to receiving services. Reasonable accommodations are offered in accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Amendments Act of 2008. The Office of Student Disability Services is located at 5828 Old Shell Road, (251) 460-7212.

DRUG AND ALCOHOL POLICY

The University does not permit the possession, consumption, or distribution of alcohol by an individual on any of its campuses and in any of its facilities without prior approval. The possession, consumption, and/or distribution of illegal substances are forbidden. Violation of either policy is subject to both University administrative action and criminal prosecution. See *The Lowdown* http://www.southalabama.edu/lowdown/ for a full description of the policy.

MULTICULTURAL STUDENT AFFAIRS

The Office of Multicultural Student Affairs is committed to providing programming for cultural awareness, coordinate efforts to increase the retention of minority students, encourage minority students to participate in all aspects of campus life, and provide leadership development for aspiring student leaders. For further information or assistance contact (251) 460-6895 or visit http://southalabama.edu/OMSA/.

UNIVERSITY PROGRAMS

The Student Activities Board, Jaguar Productions, presents activities to serve the cultural, educational, recreational, and social interests of students. Those students who are directly involved have opportunities to exemplify creative thinking and leadership outside the classroom.

Jaguar Productions functions through committees, such as Talks & Topics, Comedy, Music, Movies, Special Events, Technical and Promotions. Students select, publicize and produce the events. All students are invited to join these committees. For more information, please call (251) 460-7144 or visit Jaguar Productions.

STUDENT CONDUCT

Students attending the University of South Alabama are accepted as responsible adults working with their faculty colleagues in search of knowledge. Rigid regulation of personal conduct will not be necessary since freedom as an objective of education is difficult without the actual existence of freedom.

Such freedom must be balanced by individual responsibility and respect for the rights, responsibilities, and freedom of others. Students, therefore, will be held accountable for their own decisions and actions. Failure to assume responsibility for actions that jeopardize the rights and freedoms of others or involve the integrity of the University will result in disciplinary review.

The University holds its students to high standards of academic excellence and similarly expects high standards of individual conduct. The Spirit of South Alabama was adopted by the Student Government Association as a basis for expectations from our students. Persistent violations of expected standards or established regulations will necessarily involve appropriate disciplinary action. The University reserves the right to deny admission or continued attendance to students whose decisions and actions are contrary to the purposes and procedures of the University. *The Lowdown*, the USA student handbook (http://www.southalabama.edu lowdown/), contains the Code of Student Conduct.

STUDENT ACADEMIC CONDUCT

The Student Academic Conduct Policy is presented in the USA student handbook, *The Lowdown*. Please refer to http://www.southalabama.edu/lowdown/.

STUDENT ACTIVITIES

Over 180 professional, departmental, special interest clubs, faith-based organizations, and honor societies are active at the University. These organizations represent a wide variety of disciplines and interests and provide an opportunity for every student to get involved. Any student group seeking recognition is encouraged to pick up application forms in the Office of Student Activities, Academic Support Center, (251) 460-7003 or online at http://www. southalabama.edu/studentactivities/.

EDUCATIONAL TALENT SEARCH

Educational Talent Search (E T S) is a federally funded program designed to encourage low income and first generation college students to consider post-secondary opportunities while they are in secondary schools. The program serves sixth (6th) through twelfth (12th) grade students. Participants must demonstrate a potential for academic success and have a desire to further their education. E T S is designed to improve academic performance, increase student motivation and facilitate transitions from one level of education to the next. The services offered are counseling techniques related to academic, career, vocational, and enrichment activities, study skills training, college preparation, financial aid and scholarship information, educational trips, and tutorial sessions. Tutorial services are conducted by students who are enrolled at the University. For more information, contact the Educational Talent Search Office, UCOM 5700, 251-380-2620.

PARKING SERVICES

Faculty, and staff purchase their parking permits at the Office of Student Accounting. Beginning the 2013/2014 academic year, faculty and staff will purchase their permits online.

Students are assessed a transportation fee which includes a parking permit. Students register for a parking permit at www.southalabama.edu/parking. Beginning the 2013/14 academic year, it is expected that all students will have their permit mailed to them. All students must park in the zone indicated by their permit between the hours of 7:00 a.m. to 1:45 p.m. Monday through Friday. Faculty/Staff (blue spaces) are off-limits for student use until 5:00 p.m.

Parking permits are required twenty-four (24) hours a day, seven (7) days a week. Parking permits must be displayed from the rear view mirror facing outward. Displaying it in any other location or in any other manner is considered a violation. Temporary Permits may be obtained from Parking Services, 290 Stadium Blvd.

UPWARD BOUND

Upward Bound is a federally funded, college preparatory program for high school students in Mobile County. The program provides academic counseling, tutorial support, cultural enrichment

activities, and academic courses offered during a six (6) week summer residential component. The primary goal of Upward Bound is to provide each participant with the necessary skills to successfully enter and complete a program of post-secondary education. USA students serve as tutors and residential counselors for the participants. For information, contact the Upward Bound Office, 5828 Old Shell Road, (251) 460-7322.

CULTURAL ACTIVITIES

The University and the community offer to students an opportunity to participate in a variety of cultural and recreational programs. Among them are concerts by symphonic and chamber organizations, choral groups and choirs, ballet and opera productions, theatre, art exhibits, film series, and lecture and discussion conferences. In many of these programs, students are urged to participate as performers. Special events are scheduled on the campus, and reduced rates for students are arranged for many civic programs.

UNIVERSITY POLICE

The University of South Alabama has its own University Police Force. The University of South Alabama Police Department's mission is to partner with the university community, so that we can provide a safe environment to learn, live, work, and play.

1. Educate the University community, which includes faculty, staff, and students, on crime prevention methods and techniques and encourage them to accept appropriate responsibility for their safety and security on campus.
2. Provide purpose-driven services to all segments of the university community while aggressively striving to maximize campus safety and minimize security risk factors.
3. Encourage and provide professional development opportunities for the Police Department.
4. Enforce state and federal statues, rules and regulations to ensure the safety of university faculty, staff, students, and guests.
5. Achieve this mission in the most efficient manner possible.

HOUSING AND RESIDENCE LIFE

A college education offers students the opportunities for advanced learning, interesting career options and meeting new people. An additional opportunity of the college experience is on-campus living where learning and personal growth take place in the community environment of the residence halls.

The University of South Alabama offers a wide range of facilities to meet the lifestyles of a diversified student body. The residence hall options available include suite style rooms, apartments, studio apartments, private rooms and private room with kitchenette. Some Greek organizations also offer on-campus housing leased from the University for their members.

All students accepted by the University will be sent residence hall information and a contract. Information is also available on the Housing and Residence Life web site at www.southalabama.edu/housing/. Assignments are made based on the order in which the contracts are received. Students and parents should be aware the required prepayment is due when the signed contract/application is submitted. Students under 19 years of age must have a parent or legal guardian co-sign their residence hall contract. The balance of the residence hall charge is due by the fifth day of classes.

RESIDENCE HALLS

Rooms For Two: All rooms in the Epsilon buildings are two-person rooms which open onto an interior hallway. Epsilon rooms have a vanity area, bathroom and are equipped with a small refrigerator. Most rooms in the Delta Area are two-person rooms which open onto an exterior walkway. The Delta rooms have a vanity area, bathroom and are equipped with a small refrigerator.

Private rooms: Private rooms are available in the Delta Area. Private rooms in Delta have the same amenities listed above for Rooms For Two.

Suite-Syle Rooms For Two: Located in the Gamma Area, these Rooms are composed of a bedroom for each resident with a shared-adjoining vanity area and bathroom. Each Room is equipped with a small refrigerator.

Room For Two with kitchenette: This type of room is available in the Delta 6 building and provides a vanity area, bathroom, and a kitchenette with a two-burner stove top, sink with disposal, microwave, and a small refrigerator. A limited number of these units are available as private rooms.

Two Bedroom Apartment: The Beta and Gamma Areas offer two-bedroom apartments with a living/dining space, vanity area, bathroom, kitchen with a range, sink with disposal, cabinets and a full size refrigerator. The two-bedroom apartments will accommodate two people or four people.

Studio Apartments For Two: Studio apartments are available in the Beta and Gamma buildings. These apartments consist of a shared living/sleeping space, vanity area, bathroom, kitchen with a range, sink with disposal, cabinets and a full-size refrigerator.

Private EAP rooms and Apartments: A limited number of private rooms and apartments are available to students who qualify under the Americans with Disabilities Act. Students must be registered with the Special Student Services Office to qualify for this type space.

Stokes Hall: This Building features two Suite-Style rooms with a shared adjoining bathroom. Each room is equipped with a private vanity area and small refrigerator.

New Residence Hall: A 350 bed traditional residence hall with Rooms For Two that open to an interior hallway. Each room contains a private vanity, bathroom, and equipped with a small refrigerator.

Greek Housing: Accommodations in the Greek halls are Two persons Rooms with a vanity area and a bathroom. Each Greek house is equipped with Internet Service and a laundry facility that is included in the cost of the room. Occupancy, in the Greek Area, is limited to members of the individual organizations who have houses on campus. Greek Area residents are subject to the same contract required of all residence hall students.

Living Learning Communities (LLC): For those interested in participating, living learning communities will be included in Stokes, New Hall, and Epsilon Halls. A living learning community is a group of students with shared interests who live in the same residential area. National research shows that students in a living learning community report a more positive social life and higher levels of student-faculty interaction (National Survey of Student Engagement Annual Report 2007). USA is working to increase student success by developing communities of learners. Members of the community attend two or three classes together. One of these classes will be a first year experience course and the other will be a general education class. Students in living learning communities also enjoy participating in learning community activities outside of class. These include guest speakers and presentations or "field trips" related to a particular topic.

Furnishings and Amenities: All residence hall rooms are equipped with beds, closets, and dressers. All rooms are heated and air-conditioned through individual room units or through a central system. The apartments are also furnished with living room furniture and a dining table and chairs. Utilities, campus cable TV, unlimited use of the laundry, a high-speed internet and wireless connections, and a campus post office box are all included in the semester room charge. Each residence hall area has a common building or space that includes a TV room, laundry facilities and vending machines available for student use. The Dining Hall is located within the residence hall area and students are required to purchase a meal plan. For more information on meal plan requirements and cost, please contact Housing at (251) 460-6185 or Dining Services at (251) 460-6296. More detailed information on furnishings and amenities is available on the University web site at www.southalabama.edu/housing/.

Additional Residence Hall Information: All students are assigned based on the date their contract and prepayment are received in the Housing and Residence Life office. The residence hall contract provides housing for the entire academic year (fall and spring semesters) or from the initial date of the contract to the end of the academic year. Students may change rooms and/or areas after receiving appropriate authorization and when vacancies are available. A residence hall contract may be canceled **only** if the student fails to enroll, withdraws from the University, marries, participates in a co-op or intern program **outside the Mobile area**, or graduates from the University during the term of the contract. Documentation is required. Refer to the residence hall contract for more specific information. All students living in University Housing are required to have the Meningitis vaccine and provide the immunization record to the USA Student Health Center.

UNIVERSITY HOUSING AND RESIDENCE LIFE CONTACT INFORMATION

The information above has provided a general outline of the different styles of housing facilities owned and managed by the University of South Alabama. It is recommended that any student having questions concerning University residence hall housing should contact Housing

and Residence Life office at the address or appropriate telephone number listed below:
University of South Alabama, Housing and Residence Life, Mobile, AL 36688-0002
Residence Hall Information (251) 460-6185 or toll free (866) 872-0140
E-mail: housing@southalabama.edu
Housing and Residence Life web site:
http://www.southalabama.edu/housing/

OTHER ON-CAMPUS HOUSING OPTION

The Grove is a privately-owned and managed apartment complex located on the southwest end of the main campus. Residency, in The Grove is limited to upperclassmen. Students should be aware that the University Code of Conduct and the Residence Hall rules and policies apply to residents of The Grove. The Grove is not part of University Housing and Residence Life. For leasing information and all questions or concerns, contact The Grove management office at (251) 341-9412. Also see http://gogrove.com/#22.

DINING SERVICES

South Alabama Dining Services offers a wide variety of food and convenient services in different areas of the campus. These services are designed with the students' needs in mind and provide flexibility and convenience to meet the demanding schedule of our students.

The meal plan options for residence hall students offer quality food at a discounted price. The University has a mandatory meal plan policy for students that live on campus. Please visit http://www.southalabamadining.com and click on the meal plan tab to see the details of the mandatory meal plan policy. At this same link, detailed descriptions and requirements for all meal plan options is provided.

Other meal plan options are available for faculty, staff, and commuter students. These plans provide a discounted price over purchasing individual meals on each visit to the dining facility. In addition, faculty, staff, and commuter students can purchase *Dining* Dollars to use at any food service location on campus. *Dining* Dollars are added to the ID card and are deducted each time there is a food service transaction.

South Alabama Dining is also the official caterer on campus. A full catering guide is available at http://www.southalabamadining.com under the catering tab. Written approval to use an outside caterer must be obtained in advance from the Vice President for Student Affairs.

UNIVERSITY BOOKSTORE

Located on the main campus, the USA BOOKSTORE offers a wide range of products and services both on campus and online. New and used textbooks, as well as the supply materials necessary for all courses are available. In addition, a wide variety of reading materials from classics to current best sellers are offered.

An assortment of USA emblematic giftware and fashion sportswear is also offered.

Examples of many other products and services available in the BOOKSTORE are:

Calculators/Electronics
Class Rings
Computer Software/Supplies
Facsimile Service
Greeting Cards
Laptops/Printers
Office Products
Residence Hall Room Supplies
Soft Drinks/Snack Foods
Student Supplies
Test Preps/Study Aids
USA Apparel - JAGWEAR

Regular Store Hours: 8:00 a.m.-6:00 p.m., Monday and Tuesday. 8:00 a.m.-5:00 p.m., Wednesday, Thursday, and Friday. **"Rush" hours and summer hours will be posted at the BOOKSTORE entrance**.

VISA, MasterCard, Discover, American Express, and USA JAGCASH are accepted. For additional information please call (251) 460-7012, or visit our web site at: http://wwww.southalabama.edu/bookstore.

POST OFFICE

The University of South Alabama Post Office is essentially a Public Contract Station operating under U.S. Postal Service guidelines and a mail room operating under the University of South Alabama guidelines and procedures.

This Post Office is staffed with University of South Alabama employees, who are familiar with all areas of postal operations and are qualified to handle most tasks. Up-to-date domestic and international manuals are maintained and used for reference purposes. Window service consists of selling postal supplies and accepting letters, flats and parcels for mailing. Departmental mail pickup and delivery service is provided by means of an established route. The Campus Mail Room processes all departmental mail, domestic and foreign, except C.O.D., which must be handled with the U.S.P.S. The Campus Post Office accepts cash and checks only.

All students who live on campus are required to have a personal mail box to receive mail. Mail is not delivered to the Residence Hall Rooms. Residence Hall students need to activate their PO Box @ the Post Office and complete a short form. For additional information please call (251) 414-8191, or visit our web site at http://www.southalabama.edu/postoffice.

STUDENT INSURANCE

All students should have medical insurance. This information is available through Student Health Services. Students are encouraged to purchase this policy if they do not have medical insurance. For more information contact Student Health Services, (251) 460-7151.

AUXILIARY STUDENT SERVICES

JAGTRAN

The University of South Alabama's campus transportation, JagTran, was created to provide easy, safe, and efficient transportation for USA students, employees and visitors. Some JagTran vehicles run continuously throughout the day on the main campus. No tickets, money, or reservation are needed. Students will park their cars in color-coded lots, which they choose, and then walk or ride JagTran. For more information, visit http://www.southalabama.edu/jagtran.

INTERCOLLEGIATE ATHLETICS

Competing in both men's and women's sports on the intercollegiate level, the University's athletic program fulfills a vital role in giving the students a well-rounded environment of study and recreational entertainment. The University is an active member of the National Collegiate Athletic Association Division 1AAA. Teams are maintained yearly in baseball, basketball, cross country, golf, soccer, tennis, track, and volleyball. Governed by regulations set forth by the President of the University, the Director of Athletics, the NCAA, and the Sun Belt Conference, athletic participation and expansion is occurring as rapidly as facilities permit.

STUDENT HEALTH SERVICES

The Student Health Center is located on the first floor of the Health Services Building, Suite 1200. Services are provided to currently enrolled students by a team of fully licensed and board-certified providers. Hours of operations are Monday, Wednesday, and Friday 8:00 a.m. until 5:00 p.m. and Tuesday and Thursday 9:00 a.m. until 5:00 p.m. when classes are in session. During times when the University is closed for holidays periods, students should go to their private physicians or their local emergency rooms. The University is not responsible for any medical charges incurred after hours or when the University is not in session. It is highly recommended that students obtain health insurance for coverage beyond the scope of care at the Student Health Center or for services during holiday periods.

There are some nominal charges for medication and laboratory charges that payable at the time of service. It is advisable for students to call ahead at (251) 460-7151 and schedule an appointment to shorten their waiting time, however, students are welcome to walk-in for services, too.

Health and Prevention Education programs are also available and can be scheduled by calling Student Health. If students wish to participate directly in a peer health education program or the Student Health Advisory Council, they may inquire by calling Student Health on completing an application on-line at http://www.southalabama.edu/studenthealth/peeredu.html.

STUDENT MEDIA

The student newspaper *The Vanguard*, is distributed free to students and is under the direction of a Board comprised of representatives from the Student Government Association, *The Vanguard*, the faculty, media services, and public relations. The editor and business manager are selected from applications submitted by interested students.

OFFICE OF VETERANS AFFAIRS

The University of South Alabama is approved for the education of veterans, active duty members, and dependents of disabled veterans who are eligible for benefits under the Department of Veterans Affairs.

The Office of Veterans Affairs is located at 2300 Meisler hall on the main campus. the office provides services to all veterans and dependents of veterans. Students who wish to use veteran education benefits must contact the office of Veterans Affairs (251) 460-6230.

The University of South Alabama does not have a tuition/fees deferment policy. Tuition

and fees are due at the time of registration and are the responsibility of the student. Post 9/11 students my be the exception. Starting V. A. benefits or transferring them to USA may take up to eight weeks. Applicants are encouraged to contact the Office of Veterans Affairs as early as possible.

For information concerning 'Transfer Credit from Military Service School," see Admissions/ Enrollment Services Section.

MITCHELL CENTER

The Mitchell Center, home to the University of South Alabama Jaguars, which is located adjacent to the historical Jaguar Gymnasium, features a 10,000-seat arena and exceptional support space with state-of-the-art equipment. the Center is a multi-purpose facility that hosts major events such as graduation, convocation, concerts, sporting events, and a variety of family events. There is also space dedicated to classrooms, meeting rooms, private offices, Athletic Administration offices and the USA Coastal Weather Research Center. A "must see" for many tourists visiting the area, the Waterman Globe is located in the Grand Lobby of the Mitchell Center. This massive historic globe was originally installed in 1948 in the Waterman Building, in downtown Mobile. It was acquired by the University and installed in the Mitchell Center Grand Lobby to be shared with the community and its many visitors. For rental information call (251) 461-1632 or visit our web site at http://www.mitchellcenter.com.

TELECOMMUNICATIONS DEPARTMENT

USA Telecommunications Department is committed to providing high quality, cost effective services to the University Community.

Telecommunications is located off USA North Drive. As you approach the traffic circle on USA North Drive, we are the first building on your right. Hours are Monday through Friday, from 8:00 a.m. to 4:45 p.m. Our information number is (251) 460-7491 or if you are on campus, dial 6-7491.

LICENSING

As a program within the Public Relations Department, licensing serves as a support function to the University's overall mission which is: to protect the name and identifying marks of the University of South Alabama, also, to preserve the University's good name and reputation by insuring that products bearing its name or marks are good quality and reflect positively on the University, and to promote the University by stimulating public awareness and support of the University through use of its name and marks.

All items bearing the logo/marks of the University, must be ordered through companies that are officially licensed. A list of vendors is maintained by this office and can be provided if requested. This includes items that bear the log/ marks of the University that aren't for resale. A letter of request should be sent to the licensing department stating the nature of the use and that the product is being used internally along with the name and address of the licensed company so the royalty fee can be waived.

All royalty income received will be placed into a permanent endowment for scholarships. The proceeds from this endowment will be divided equally for use in undergraduate, graduate, and athletic scholarships.

For questions concerning the licensing program, please call (251) 460-6211

PUBLICATIONS

The Office of Publication Services is located in University Commons (UCOM) on the corner of University Boulevard and Old Shell Road. This department services the printing and copying needs of students, faculty, and staff on an individual, departmental, or organizational basis. Publication Services provides the latest techniques in composition, creative design and layout, camera work, and one to multicolor offset printing.

Publications Services also provides walk-in cash copy orders while you wait. All directional and informational signage, as well as, plaques and name tags are produced in our department. Large format printing can be created up to 60 inches wide. Lamination is also available for materials up to 42 inches wide.

The quality and effectiveness of a publication can be enhanced by consulting with staff artists early in the design stages. Consultation also allows Publication Services to share valuable timesaving and cost-effective tips with the customer.

Publication Services creates printed material tailored to meet specific needs, including newsletters, directories, handbooks, posters and flyers, stationery wall clings, gallery wraps, and more. For further information or to schedule an appointment, call (251) 380-2828.

CAREER SERVICES

USA Career Services, located in Meisler Hall, Suite 2100, assists students and alumni in all phases of career exploration, development, and job search strategies. USA Career Services is a comprehensive career services center. The **Career Exploration** component provides activities to assist in career exploration. The **Cooperative Education and Internship Program** helps students confirm career choices through experiential education. **Job Search and Graduate School** assistance is offered to students and alumni seeking information about career-related employment and entry into graduate or professional schools.

Career Exploration

Career Services guides students in determining career interests and selecting appropriate academic programs to reach career goals. The appropriate selection of a major can impact a student's desire to complete a college education and a student's success in college and the workplace. Career Advisors are trained to assist students in the various aspects of career and academic development. Among the many resources available to students are:

- One-on-one advising appointments with career advising staff.
- Career Library containing resources on career major exploration, job search skills, resume preparation, interviewing techniques, employer information, and more.
- Computer assisted career guidance programs and assessments.
- Hard copy and on-line access job postings.
- Occupational literature on numerous career fields including entrance requirements and projected employment outlook.
- Graduate and professional school information.

Cooperative Education and Internship Program

The Cooperative Education and Internship Program enables students to combine classroom studies with paid work experience related to their major field of study. **Undergraduate students** may apply at Career Services to enter the Cooperative Education Program when they have completed 12 credit hours, attained a cumulative grade-point average of 2.3 or above, and are classified as a full-time student upon commencement of participation in the program. Prior to the first work experience engineering students must complete two or three semester of study for a total of 24 credit hours toward the engineering degree and complete courses MA 125 and MA 126. The internship option requires the completion of 12 credit hours, a 2.0 GPA or above and sufficient time remaining before graduation to complete the internship. **Graduate students** may apply after they are accepted into a graduate program and must maintain the academic requirements of their department.

Option 1. Alternating Cooperative Education: Students rotate multiple semesters of full-time work with semesters of full-time school until graduation.

Option 2. Internship: Students work for various lengths of time depending upon the unique needs of the organization providing the experience. The option of receiving academic credit for this experience is approved through the academic department.

Option 3. Engineering Cooperative Education - The Five Year Plan: This program allows engineering students to gain one year of valuable engineering experience as they pursue their degree. The freshman year is spent as a full-time student at the university. During the sophomore and junior years, the student alternates semesters of full-time work with semesters of full-time school. The student returns to campus full-time for the senior year. Students are paid an excellent pre-professional salary during the work semesters. This program offers many advantages; interested students should consult with Career Services.

To remain in the Cooperative Education program students must maintain good academic standing; a cumulative grade-point average of 2.3 or above and comply with the policies and procedures of the employer and the Cooperative Education and Internship Program.

Job Search and Graduate School Assistance

Career Services offers many services to students seeking career-related employment or those planning to pursue graduate or professional school. Jaguar Job Link, an on-line career management system, allows students to seek and apply for jobs, publish resumes, and participate in on-campus interviews. Career Services also offers advising appointments, seminars, job search programs, and annual career expos and job fairs.

UNDERGRADUATE ACADEMIC POLICIES AND PROCEDURES

The University of South Alabama's academic policies and procedures provide the framework for the orderly conduct of its degree programs. They are intended to ensure a thorough and complete education for each of the University's graduates. Academic programs are administered through the Office of the Senior Vice President for Academic Affairs and the Office of the Vice President for Health Sciences.

GENERAL INFORMATION

UNIVERSITY E-MAIL

Each student admitted to the University of South Alabama is assigned a free, permanent, official University e-mail address (@jagmail.southalabama.edu). Most changes in University policies and official University correspondence will be transmitted via the student's official e-mail account. Instructors may also utilize this address to communicate with students. Students are responsible for regularly reading e-mail sent to this address. The official University e-mail address cannot be changed, but students may elect to have official mail forwarded to any other personal e-mail address. To activate your jagmail account, select that link on the University's PAWS web site at http://paws.southalabama.edu.

ACADEMIC TERMS AND CREDIT HOURS

The institutional process for assigning credit hours to courses is based on the minimum academic activity to achieve intended learning outcomes as verified by evidence of student achievement. For traditional classes, a credit hour consists of approximately one hour of classroom or direct faculty instruction and a minimum of two hours of out of class work each week for approximately fifteen weeks for one semester or the equivalent amount of work over a different amount of time for semesters of other durations. For classes offered in other formats leading to the award of academic credit, the equivalent amount of academic activity is required.

The University academic terms are two semesters (Fall and Spring) and a Summer term. Semesters normally consist of fifteen weeks of class followed by a final examination week. In some programs of study, courses may be scheduled for parts of terms different from a normal semester. Usually, one semester credit hour is awarded for each 50-minute lecture class per week or 2-3 hour laboratory or studio period.

Each hour of lecture usually requires two hours of outside preparation. Thus, a student carrying sixteen semester hours should be prepared to spend at least 48 hours in class and study per week.

STUDENT CLASSIFICATION

A student's classification is determined by the number of credits earned toward the degree. A student is classified as follows:

Freshman	0 - 29 semester hours
Sophomore	30 - 59 semester hours
Junior	60 - 89 semester hours
Senior	90 semester hours or more

FULL-TIME/PART-TIME ENROLLMENT STATUS

Undergraduate degree seeking students carrying twelve or more credit hours of work each term are considered full-time. However, students must carry at least sixteen hours each term (for eight semesters) to meet requirements for graduation in four academic years. Co-op students who alternate full-time enrollment with employment are considered full-time students for enrollment purposes. Students carrying six to eleven credit hours are considered half-time and students enrolled for one to five credit hours are considered less than half-time.

FULL LOAD OF COURSE WORK IN A SEMESTER

Permission of the student's academic dean is required to take more than 19 semester hours.

REGISTRATION

Registration (making course selections and enrolling in classes) occurs prior to the beginning of each term. All students obtain registration appointment times ("time tickets") and register utilizing USA's Personal Access Web System (PAWS) at http://paws.southalabama.edu. (See the University Registration Guide for additional information.)

Registration is not complete until all fees have been paid and all admissions documents and examinations furnished. Failure to satisfy any of the admission or registration requirements is sufficient cause for dropping a student from all classes. Enrollment status can be found in PAWS web site at http://paws.southalabama.edu.

COURSE NUMBERING SYSTEM

Course Number	
001-099	Remedial courses which do not carry credit toward graduation
100-199	Freshman
200-299	Sophomore
300-399	Junior
400-499	Senior
500-699	Graduate/Professional
700-799	Doctoral

ATTENDANCE AND ABSENCES

An individual student is responsible for attending the classes in which the student is officially enrolled. The quality of work will ordinarily suffer from excessive absences. At the beginning of classes, instructors must define their policy on absences, and all cases of illness and emergency shall be promptly reported and verified to the instructor. For excessive absences (two or three consecutive class meetings) due to illness, death in family, or family emergency, the Dean of Students' office should be advised. Absence notices will be sent to each instructor notifying him of the reason for and the approximate length of the absence. This notification does not constitute an excused absence.

Students receiving veterans' benefits are required to attend classes according to the regulations of the Veterans Administration.

All international students on F-1 visas must comply with attendance regulations as dictated by the Department of Justice, Immigration and Naturalization Services. They must remain students in good standing with at least twelve (12) hours per term.

Students attending authorized off-campus functions or required activities shall be excused by the responsible University official through the Office of Academic Affairs. In case of doubt, instructors may consult these lists in that office. Work missed as a result of these excused absences may be made up.

COMPUTER ACCESS REQUIREMENT

All students enrolled at the University of South Alabama are required to have access to personal computer. This may be achieved by individual ownership, access to a family machine when residing at home, sharing with a roomate, or other suitable arrangements not dependent on University public computer laboratories. Student personal computer access must include a current version of word processing software appropriate to college-level work, access to the Internet, and access to the university's e-mail system. Individual degree programs and specific courses may have additional requirements appropriate to curriculum needs.

STUDENT ACADEMIC SUCCESS AND RETENTION

The Office of Student Academic Success and Retention supports the mission of the University of South Alabama by offering, supporting, and assessing programs and services designed to improve student academic success, including but not limited to retention and graduation. Programs designed to improve student outcomes include first year experience courses, living learning communities, supplemental instruction, JagSuccess early alert program, and the JagPAL program. This office also collaborates with other programs designed to improve student academic success.

First Year Experience Courses

First Year Experience (FYE) courses are offered at universities and colleges across the world. USA currently offers FYE courses in the College of Arts and Sciences, the College of Engineering, the Mitchell College of Business, the School of Computing, and the College of Nursing. These courses include both general tools and skills to help students succeed in college as well as specific academic content related to a discipline or theme. Students are encouraged, and in some colleges required, to register for a FYE. Refer to colleges for specifications. If one is not available in their college, they are encouraged to register for CAS 100, the course offered by the College of Arts and Sciences.

Living Learning Communities

A Living Learning Community (LLC) is a group of students with shared interests who live in the same residential area. National research shows that students in a living learning community report a more positive social life and higher levels of student-faculty interaction. USA is working to increase student success by

fostering communities of learners. Members of the community attend two or three classes together. Generally, one of these classes is first year experience course and the other(s) meets a program requirement or is a general education class. Students in living learning communities also enjoy participating in learning community activities outside of class. These include guest speakers and presentations or "field trips" related to a particular topic.

Supplemental Instruction

Supplemental Instruction (SI) is an additional resource attached to courses that are generally more difficult for many students. It offers additional meeting time outside of class time where students enrolled in the class will learn from other successful students how best to prepare and learn in particular courses. For example, an SI student leader for a specific Chemistry class is a student that performed quite well in that course and is comfortable working with other students to help them prepare for the class. This resource is offered in selected classes for no additional fee.

JagSuccess

JagSuccess is an 'early alert' program that provides feedback to students in 100 and 200 level classes. Faculty members submit alerts that inform students who are not meeting expectations that they have attendance and/or performance problems. All faculty teaching 100 or 200 level sections are required to submit academic early alerts for those students having performance or attendance problems. These early alerts provide feedback for students in time for improve their attendance and/or performance and be successful in the course.

JagPALs

JagPALs or Peer Academic Leaders, is a peer mentoring program. JagPALs serve in a variety of capacities, including as SI leaders and FYE peer mentors. JagPALs offer an opportunity for successful, upper level students to give back to newer students at the university. It also allows new students to learn, from someone like themselves, how to be successful in college. Generally, mentors meet and interact with students in the FYE class or SI sessions, e-mail them during the week, and are available to share information on academics and student life. These mentors fill an important role as they help new students adjust to college and life at South. We value our peer leaders; if you are interested in serving as a peer leader in the future, please e-mail the Director of Student Academic Success and Retention at studentsuccess@southalabama.edu.

Faculty In Residence

The Faculty in Residence (FiR) program is the result of a partnership between Academic Affairs and Student Affairs. This initiative is designed to integrate academics into residential space. A FiR is a dynamic faculty member who is strongly supportive of undergraduate education and student success and lives in an apartment in a residence hall. The faculty member provides an academic voice in the residence hall and brings educational and social programming into the community. This provides opportunities for both students and faculty to increase engagement and interaction, and enrich the university experience.

UNIVERSITY WRITING CENTER

The University Writing Center, located in Alpha Hall East, provides assistance in writing to any student enrolled in classes on any of the University's campuses. Students work with writing consultants one-on-one in a relaxed, informal setting to improve their writing skills. The consulting schedule varies slightly from semester to semester, but information may be obtained by calling (251) 460-6480, or visit the web site at http://www.southalabama.edu/writing.

ACADEMIC ADVISORS

Before entering the university, students should study the curricula outlined to determine the program best suited to their interests and needs. Before registering, each student will select, tentatively at least, a curriculum. This decision will determine the academic unit in which the student will be advised. The designated academic advisor will counsel with the student regarding the proposed curriculum and choice of courses. This relationship continues as needed throughout the student's stay in the University, unless another advisor is assigned or the student selects a new program.

STUDENT RESPONSIBILITY

While the University of South Alabama will endeavor to provide timely and accurate advisement, it is the responsibility of the student to know and satisfy the degree requirements of the academic program.

DS AND ESL COURSES

Credits earned in the Developmental Studies Program or the Department of English as a Second Language cannot be used to satisfy University degree requirements.

PLACEMENT AND PROFICIENCY EXAMS:
Computer Skills and Mathematics

Technology Proficiency
Technology Use Requirement

All undergraduate students must have access to and training in the use of technology to enhance learning and appropriate to meeting the objectives of individual degree programs.

Each degree program will specify how their students will meet this requirement.

Mathematics Placement Exam

All incoming students must take the online Mathematics Placement Exam. The only exceptions to this policy are:

1. Students who have been admitted as Conditional Freshmen should not take the online Math Placement Exam. They must take the Math Placement Exam on campus during Orientation in the Department of Developmental Studies.
2. Students who transfer credit for MA 112 or higher with a grade C or better and who plan to take subsequent mathematics courses are not required to take the Math Placement Exam. Nevertheless, they are encouraged to take the exam to help evaluate their level of preparation.
3. Students who transfer credit for MA 110 or higher and who DO NOT plan to take any other mathematics courses are exempt from taking the Math Placement Exam. Note that MA 110 does not fulfill prerequisite requirements for any other mathematics or statistics course.

For students not subject to the three exceptions listed above, the Math Placement Exam and instructions are available online at http://mps.southalabama.edu/mps/. Calculators and other outside resources are not permitted during this exam. Students should complete the exam at least 48 hours prior to coming to campus for orientation. If the exam is not taken, students will be blocked from registering for all mathematics courses. Questions concerning the Math Placement Exam should be directed to the Math/Statistics Department (ILB 325, (251) 460-6264).

REQUIREMENTS FOR A BACHELOR'S DEGREE

To qualify for a baccalaureate degree a student must complete a minimum of 120 approved semester hours, meet the university's general education requirements, meet the requirements of the major, and meet any specific requirements of the college or school. Some colleges and schools also require a minor. Degree requirements in some academic programs may exceed 120 hours. Students should consult the individual college or school for more details.

I. GENERAL EDUCATION REQUIREMENTS

General Education Mission

The General Education Curriculum at USA helps students succeed intellectually in college, be prepared for their professional careers, be equipped for life-long learning, and become responsible citizens and leaders. To meet these goals in a dynamic world, General Education provides shared experiences for students to acquire foundational skills and knowledge, along with an appreciation of diverse perspectives and a broad intellectual context in which students can situate their specialized fields of study.

General Education Competencies and Student Learning Outcomes

Communication Skills:

- The student will demonstrate effective writing skills
- The student will demonstrate effective oral presentation skills.

Aesthetic and Critical Interpretations:

- The student will demonstrate a foundational knowledge of artistic and literary interpretations, and the student will demonstrate proficiency in basic interpretive skills.

Scientific Reasoning:

- The student will demonstrate a foundational knowledge of artistic and literary interpretations, and the student will demonstrate proficiency in basic interpretive skills.

Quantitative Reasoning:

- The student will demonstrate proficiency to quantitative reasoning and the use of mathematics.

Social Scientific Literacy:

- The student will demonstrate foundational knowledge of the social sciences.

Historical Perspectives:

- The student will demonstrate a foundational knowledge of historical perspective.

General Education Course Requirements

All students must fulfill the following general education requirements consisting of a minimum of 41 semester hours plus two designated writing courses. Specific degree program and college requirements may exceed any or all of the minimum general education requirements. Also, since specific course requirements in general education will vary from major to major, students must refer to the program section of the **Bulletin** for their major before enrolling in courses intended to satisfy general education requirements, as well as other program requirements. In addition, students should plan their degree program with an academic advisor. The general education requirements are:

Area I. Written Composition

EH 101 and 102 are required of all students, unless exempted. In addition, two designated writing (W) courses are required; with at least one course chosen from offerings in the student's major or minor. Courses carrying this required credit are identified in this University **Bulletin** by a (W) after the course title. EH 101 and EH 102 are prerequisites to writing courses.

Students must demonstrate general competence in writing by earning a "C" or better in EH 101 and a "C" or better in EH 102. Students may exempt the EH 101 requirement with an enhanced ACT English score of 27 or above; a recentered SAT score of 550 or above on the verbal portion. Students scoring a minimum of 50 on the CLEP English Examination may satisfy the EH 101, EH 102 requirement. A score of 4 or higher in the Advanced Placement Program may satisfy the EH 101 requirement. Students completing IB degree with an IB exam score of 5 or higher in English, may satisfy the EH 101, EH 102 requirement. Students failing to complete IB degree, but have an IB exam score of 5 or higher in English, may satisfy only EH 101 requirement.

NOTE: Credits earned in the Department of English as a Second Language or Developmental Studies will not be acceptable toward meeting writing competency requirements.

Area II. Humanities and Fine Arts

Requirements include at least 12 semester hours in humanities with a minimum of three semester hours in literature, and three semester hours in the arts, and the remaining semester hours from the humanities and fine arts. In addition to literature, disciplines in the humanities include, but are not limited to, philosophy, religious studies, speech*, foreign languages, art, music, theater, and dance.

Courses should be broad in scope and content rather than specific and should emphasize a global perspective. Courses in the arts should emphasize history and appreciation rather than performance. Examples in the humanities and fine arts include, but are not limited to, world literature, art history, music appreciation, comparative religions, and history or origins of dance.

***Students must complete one course that demonstrates competency in oral communication. Within the Colleges of Allied Health Professions, Arts and Sciences, Education and Nursing, the School of Computing, and the Departments of Civil Engineering, Electrical and Computer Engineering, Interdisciplinary Studies and Mechanical Engineering, students must complete CA 110 to satisfy the competency in oral communications requirement. Students majoring in the College of Business and the Department of Chemical and Biomolecular Engineering must meet the specific oral communication requirements of their major (see appropriate sections of this Bulletin for details.)**

Area III. Natural Sciences and Mathematics

Requirements include at least 11 semester hours with at least three semester hours in mathematics at the finite mathematics (MA 110) or precalculus algebra (MA 112) level or higher, and at least eight semester hours in the natural sciences which must include laboratory experiences. See MATHEMATICS PLACEMENT section.

Disciplines in the natural sciences include, but are not limited to, astronomy, biology, chemistry, geology, physical geography and physics.

Courses in the natural sciences should be broad in scope and content rather than specific to an aspect of a discipline, and may include interdisciplinary science courses. Courses in the natural sciences must include laboratory experiences which emphasize the scientific method.

Area IV. History, Social, and Behavioral Sciences

Requirements include twelve semester hours in history, social and behavioral sciences with at least six semester hours from among other disciplines in the social and behavioral science. Other disciplines include, but are not limited to, anthropology, economics, geography, political science, psychology, and sociology.

Courses should be broad in scope and content, include global or international perspectives, and must emphasize the methods of inquiry in the social sciences.

Students must complete a six semester hour sequence in literature or history.* Note that some majors specify the sequence and the requirements of the major should be referred to before deciding upon either a literature or history sequence. If the sequence selected is in literature, an additional three hours must be taken in any of the history, social science or behavioral science disciplines above.

*Students preparing to complete the BS degree in engineering are required to complete nine rather than 12 semester hours in the humanities and fine arts. Rather than the six hour sequence in history or literature they must demonstrate in-depth study in a particular discipline of the humanities and fine arts or history, social and behavioral sciences through completion of six semester hours in a particular discipline.

II. MAJOR REQUIREMENTS (Refer to the program section of the bulletin)

TECHNOLOGY USE REQUIREMENT

All undergraduate students must have access to and training in the use of technology to enhance learning and appropriate to meeting the objectives of individual degree programs.

Each degree program will specify how their students will meet this requirement.

PREREQUISITES

Students may not register for courses for which they do not have the prerequisites specified in the course descriptions. Any student who does so will be withdrawn by the Registrar, the student's dean, or the dean of the college in which the course is taught.

MINIMUM GRADE-POINT AVERAGE

A student must earn a minimum grade-point average (GPA) of 2.00 (an average grade of "C") based on all course work taken at the University of South Alabama. Students enrolled in the College of Education must have a minimum grade-point average of 2.20 (2.50 grade-point average for teacher certification). Grades in pass-fail (S/U) courses do not carry quality points and are not used in determining the grade-point average.

HOURS IN RESIDENCE/ RESIDENCY REQUIREMENT

A candidate for graduation must complete a minimum of 25 percent of the credit hours required for the degree through instruction offered by the University of South Alabama in upper-division course work (300 and 400 levels). Upon the recommendation of the dean of the appropriate college and approval of the Senior Vice President for Academic Affairs or Vice President for Health Sciences, other credit earned at USA may be substituted to meet the residency requirement. Up to 15 credit hours of study abroad courses may be used to satisfy USA upper-division course requirement. In such cases, up to 15 credit hours of lower-division courses may be used to help meet the requirement that a minimum of 25 percent of the credit hours required for the degree are accomplished through courses offered by USA. There is also a minimum number of semester hours that must be completed in the major and minor at the University of South Alabama: A minimum of 15 credit hours of courses at the 300/400 level in the major discipline must be completed at the University of South Alabama. If a minor is required in the particular degree program, 9 credit hours of courses in the minor must also be completed at the University of South Alabama.

Any deviation from these residency policies must be approved by the Senior Vice President for Academic Affairs or Vice President for Health Sciences. Students should consult the University **Bulletin** for additional regulations in each academic unit.

DOUBLE MAJOR

Undergraduate students may elect to fulfill the requirements for two majors concurrently. To do so, the student must declare a primary major and a secondary major on the Declaration of Program form that is filed with the Registrar's Office. The student's principal academic file will be maintained in the department of the

primary major. A second file should also be maintained in the department of the second major. Students who declare a double major must participate in academic advising in each major. Completion of a minor is not required of students completing two majors. Students who declare two majors from different colleges will be required to fulfill all requirements for each major and to fulfill all degree requirements, including those for general education, that apply in the college of the primary major. Students who complete requirements for two majors from different colleges will be awarded the degree granted by the college of the primary major, and transcripts will designate that both the primary and secondary majors were completed.

SECOND MAJOR

Students who have been awarded a bachelors degree at the University of South Alabama may return to study for a second major as an non-degree student (see *unclassified*). Such students must fulfill the following requirements to have a second major recorded on their academic record:

1. They must be enrolled in the college in which the major is administered.
2. They must meet all the requirements of the second major.
3. At least half the total number of hours required for the second major must be satisfactorily completed in residence at the University of South Alabama.
4. At least nine hours of the work in the second major satisfactorily completed in residence at the University of South Alabama must be in addition to work completed as part of the bachelor's degree.
5. The appropriate dean's office is responsible for notifying the Registrar's office of satisfactory completion of the second major.

When these requirements have been met, a notation will be entered on the student's record to indicate that the student has "completed work equivalent to a major in _____". Students completing a major equivalency in this fashion may not apply the additional course work toward a second bachelor's degree.

DUAL BACHELOR'S DEGREES

Students currently enrolled in a degree program, may pursue a dual degree. A dual degree differs from a double major in that the dual degree has additional requirements beyond those of a second major's as specified below. To earn a dual degree, students must fulfill the following requirements:

1. They must complete the appropriate form(s) in the Registrar's Office.
2. They must be enrolled in the college(s) in which both degrees are administered.
3. They must complete at least 150 total semester hours.
4. They must complete a course of study, approved by the appropriate dean, consisting of at least 30 credit hours in upper division course work in residence over and above the requirements for the first bachelor's degree including a recognized major program.
5. They must satisfy all degree requirements of the college(s) awarding each degree.
6. They must comply with all other University regulations.

SECOND BACHELOR'S DEGREE

Students who have been awarded a bachelor's degree from any institution may seek a second bachelor's degree. To earn a second bachelor's degree, students must fulfill the following requirements:

1. They must complete the appropriate form(s) in the Admissions Office or Registrar's Office if a former USA student.
2. They must be enrolled in the college in which the second degree is administered.
3. They must complete a course of study, consisting of at least 30 credit hours in upper division course work in residence over and above the requirements for the first bachelor's degree, including a recognized major program.
4. They must satisfy all degree requirements of the college awarding the second degree.
5. They must comply with all other University regulations.

Students returning for a second degree in the College of Arts and Sciences must meet the requirements for a second major and meet the University requirements for a second degree. Students seeking a second degree in the area of the minor used for their first degree must have an additional minor.

GRADUATE STUDY FOR ADVANCED UNDERGRADUATES

With permission of the department chair and appropriate director of graduate studies, a student who has completed 91 semester hours with a "B" (3.0) average may register for graduate courses, provided the total load does not exceed 12 hours. This policy is extended to provide an opportunity for well-prepared undergraduates who meet two Graduate School Regular admission criteria: minimum GPA and sufficient undergraduate course work in the major subject to qualify for graduate study in the involved discipline.

The same course may not be counted both for undergraduate and graduate credit. The graduate course may only count toward a degree in graduate school if and when the student is admitted to the graduate school, provided such course was not used to satisfy requirements for the undergraduate degree, was taken no more than five years prior to the completion of the graduate degree, and the course is approved for credit by the graduate advisor.

ADDING OR DROPPING COURSES

Students may drop courses, using PAWS (the student on-line self-service system), without penalty provided the withdrawal occurs within the time limits listed in the official calendar. See procedures for withdrawals below. Course drops may also be submitted in person to the Registrar's Office. The grade of "F*" or "U*" is recorded for a course abandoned without an official withdrawal. Students who withdraw from a course after the last day for refunds may continue to attend the course but may participate in class activities and assignments only to the extent permitted by the instructor. Students who withdraw from clinical courses or laboratory or field experiences must have permission of the department chair to continue in the course.

WITHDRAWALS

Official withdrawal (dropping all courses in progress) from the University can be done through PAWS (the student on-line self-service system). Students attending with VA benefits need to check with the Veteran Affairs Office prior to withdrawing. Students with financial aid need to check with that office to determine the impact of course drops or complete withdrawals on financial aid eligibility or possible repayments. International students must get authorization from the Office of International Services prior to withdrawing. The symbol "WD" is recorded for all courses when the student completes the withdrawal within the time limits listed in the official calendar. A grade of "F, F*, U, or U* " is recorded when a currently enrolled student leaves the University without completing the withdrawal.

COURSES REPEATED FOR CREDIT

A student may repeat a course in which a grade of "D" or "F" is received. Total grade-points are computed on the basis of all attempts. A student who has a grade of "C" or better may repeat the course with the approval of the appropriate academic dean. Credit for a repeated course may be counted only once toward graduation, but all grades are recorded on the student's transcript and are counted in determining quality points.

GRADE REPLACEMENT POLICY

Certain courses are not eligible for grade replacement. Courses that are not eligible include: Graduate courses, PE activity courses, internships/clinicals, health science professional courses, field experiences, research seminars, independent/directed studies, and special topics courses. Please check with your specific program for further restrictions on eligible courses.

Please Note: A USA grade-point average that includes grade replacement, may not be used for some purposes. For example, graduate and professional programs may recalculate your grade-point average with no grade replacement for admissions decisions.

If you are receiving financial aid, please be aware that the Standards of Academic Progress Policy is separate from the Grade Replacement Policy. Replacement of a grade does not change the satisfactory academic progress calculation. All work attempted is part of this calculation and repeating courses could negatively affect your eligibility for financial aid. If you have questions please contact the Office of Financial Aid (251-460-6231 or finaid@southalabama.edu).

This policy is subject to the following conditions:

- Only USA undergraduate students qualify for this policy
- All attempts for each course are recorded on the transcript. Courses that are not used in calculating the GPA will remain on the transcript.
- Only courses taken at USA are eligible for grade replacement.
- Courses in which a B, C, D or an F was earned are eligible for grade replacement.
- A maximum of three course grades can be replaced. In each case, the student must have repeated the identical course with an

improved grade relative to the course grade being replaced.

- It is possible for a student to have more than one grade removed from the GPA calculation for the same course. However each grade that is removed counts towards the maximum of three course grades that can be replaced.
- Course substitutions are not eligible for grade replacement. To be eligible, the repeated course must have the identical course number and identifier as that for the grade being replaced.
- Certain courses are not eligible for grade replacement. Courses that are not eligible include: Graduate courses, Honors courses, PE activity courses, internships/clinicals, health science professional courses, field experiences, research seminars, independent/ directed studies, and special topics courses. Please check with your specific program for further restrictions on eligible courses.
- A course grade received as a result of academic misconduct does not qualify for grade replacement.
- Once a student graduates, a class may not be repeated to improve his/her grade-point average.
- Grade replacement does not change a student's past academic standing.

Application Procedure

- Complete a Grade Replacement Application form and turn it in to your College Advising office.
- Each course grade replacement request must be done on a separate form.
- Once a grade is replaced, the action is irrevocable.
- A maximum of three grades for repeated courses can be replaced. Additional requests will not be granted. This rule may not be appealed.
- This form may be turned in anytime before the awarding of the bachelor's degree.
- You will be notified through your USA e-mail of the approval or denial of this request. You may confirm by viewing your PAWS transcript.

EXAMINATIONS, GRADES AND GRADE-POINTS (UNDERGRADUATE)

Final examinations are held at the end of each semester. Students are graded on the basis of the following guidelines:

A Excellent, 4 grade-points per semester hour
B Good, 3 grade-points per semester hour
C Satisfactory, 2 grade-points per semester hour
D Minimum Passing, 1 grade-point per semester hour
F Failure, no grade-points (weighted)
F* Failure in cases where the student does not officially withdraw, but who failed to attend, or failed to complete assignments or who failed to participate in class activities. It should be used when, in the opinion of the instructor, completed assignments or course activities were insufficient to make normal evaluation of academic performance possible. No grade points.
S Satisfactory, no grade-points (unweighted)
U Unsatisfactory, no grade-points (unweighted)
U* Unsatisfactory in cases where the student does not officially withdraw, but who failed to attend, or failed to complete assignments or who failed to participate in class activities. It should be used when, in the opinion of the instructor, completed assignments or course activities were insufficient to make normal evaluation of academic performance possible. No grade points.

The following symbols are substitutes for grades. *They are not grades*:

I Incomplete (see below)
X Absence from Final Exam (see below)
WD Withdrawal in good standing
P Course in progress (see below)
AU Audit
UA Unsatisfactory Audit (did not meet attendance requirements)
N No grade or invalid grade (assigned only by the Registrar)

The symbol "I" (Incomplete) is assigned when, for reasons beyond the student's control, the student is unable to fulfill all the normal course requirements. The situation warranting an "I" must be a medical condition, an equipment problem, or other mitigating circumstance that is patently demonstrable to be beyond the student's control. This symbol is not used to provide time for completion of extra work beyond the normal course requirements for improving the student's grade, nor is it assigned to permit the student to avoid probation, suspension, or dismissal. The symbol "X" (Absence from Final Examination) is assigned only in cases where illness or an unforeseen emergency precludes the student's appearance at the scheduled examination. All records of the symbols "I" or "X" must be cleared by the specified deadline of the next term; if they are not, grades of "F" will be recorded by the Registrar.

The symbol "P" (In Progress) is assigned only in a limited number of approved courses which require more than one term for completion. Unless the "P" is removed by the end of the second succeeding term, a grade of "F" will be recorded.

A student whose work is unsatisfactory for any reason shall receive a final grade of "F" for the course.

PLAGIARISM AND CHEATING

Plagiarism and other forms of cheating are academic matters; accordingly, no credit will be given for work in which they are involved. In addition, incidents of this nature may be reported to other appropriate authorities for further disciplinary action. (See Student Academic Conduct Policy).

CREDIT BY EXAMINATION

USA students may receive credit by special examination upon approval of the appropriate academic personnel (statement of application procedures may be obtained from the Office of the Registrar). A fee of $30.00 will be charged for each examination. In addition, the student will be charged the current course fee per hour of credit. Hours attempted will be included in determining the student's grade-point average.

COLLEGE LEVEL EXAMINATION PROGRAM (CLEP)

The University of South Alabama is a participant in the College Level Examination Program. Transfer credits earned through the College Level Examination Program will be evaluated according to standards established by this University. Prospective or enrolled students may seek information from the Office of Admissions or Office of the Registrar.

30-HOUR CREDIT LIMITATION

No more than a combined total of 30 semester hours of credit will be allowed for credit received through the College Level Examination Program (CLEP), Advanced Placement Program (AP), International Baccalaureate Program (IB), credit by examination, correspondence courses, military service school courses, and other approved non-collegiate-sponsored programs, as recommended by the American Council on Education.

REPORTING OF GRADES

Final grades are available only through PAWS (Personal Access Web System at http://paws.southalabama.edu) at the completion of each term.

CHANGE OF GRADE

Grades reported by instructors to the Registrar may not be changed except in case of error in recording or in evaluation. Grade changes require the approval of the instructor and the signature of the department chair and the dean of the college in which the course is taught. Grades on record for one calendar year may not be changed for any reason.

FINAL GRADE GRIEVANCE POLICY

A student may initiate an inquiry under procedures set forth by the Undergraduate Final Course Grade Grievance Policy. A copy of this policy is available in the dean's office of each college and is published in *The Lowdown* (Student Handbook) and in the *Faculty Handbook*.

ACADEMIC RECOGNITION

Candidates for all honor lists must be undergraduate degree-seeking students with a clear academic status. Graduates, professional level, unclassified, auditors, transients, non-degree, or other special categories are excluded. The President's Scholars include all full-time students earning a 4.0 semester grade-point average.

The Dean's List includes all full-time students earning a 3.50 semester grade-point average.

The Dean's Honor List includes all full-time students who have completed a minimum of 30 hours at the University of South Alabama, earned a cumulative grade-point average of 3.40 or greater.

The Dean's List for part-time students (students taking fewer then twelve hours) includes all students who are enrolled in at least six semester hours and have earned a semester grade-point average of 3.50 or greater.

All of the above lists are compiled upon completion of the processing of a particular semester's grades. Removal of "I"s, "X"s or other such symbols at a later date will not qualify the student for recognition. Grades recorded in error will be considered only if properly changed and the Dean's office is notified before publication of the lists.

ACADEMIC STATUS POLICY FOR UNDERGRADUATES

Required Grade Point Average

All undergraduate students must meet the established standards designating appropriate academic progress. To stay in good academic standing with a clear status, a student must maintain a grade-point average of 2.0 or greater on University of South Alabama course work.

As discussed in the section, General Requirements of Bachelor Degrees, a student must earn a minimum cumulative USA grade-point average of 2.0 to graduate. (See special requirements in the College of Education.)

Academic Probation

Students with a cumulative grade-point average below 2.0 are having academic difficulties and are alerted to this fact by being placed on academic probation. Students on academic probation are restricted to taking not more than 13 credit hours per term, unless exempted from this regulation by the dean of their college. Students with grade-point averages substantially below 2.0 are subject to academic suspension or dismissal as indicated below.

Academic Suspension

Academic suspension for one regular semester results if a student at the end of any semester does not have the minimum grade-point average indicated in the suspension and dismissal table following. The minimum required grade-point average varies with the total number of credit hours attempted at the University. No student will be suspended before they have at least thirty GPA credit hours at the University.

Academic Dismissal

Academic dismissal for one calendar year results if a student who has been reinstated following a previous academic suspension or dismissal fails to make satisfactory progress. Satisfactory progress is specified in the sections following titled Reinstatement Following Academic Suspension and Reinstatement Following Academic Dismissal.

SUSPENSION AND DISMISSAL TABLE

GPA Hours	Minimum GPA
30-42	1.20
43-54	1.43
55-66	1.56
67-77	1.64
78-89	1.69
90-102	1.73
102-up	
1.80	

Reinstatement Following Academic Suspension

Students reinstated following one regular term (excludes summer term) of academic suspension are readmitted on academic probation. Students in this category are subject to academic dismissal if they do not make satisfactory progress. A student is considered to be making satisfactory progress as long as he or she maintain a USA grade-point average for each semester of 2.00 or above until their cumulative USA grade-point average is above the minimum required grade-point average for dismissal as outlined in the table above. Once a student achieves a grade-point average higher than the minimum required grade-point average, he or she is subject to the requirement to maintain his or her grade-point average above the minimum value as listed in the table. Returning students will remain on Probation until the cumulative USA grade-point average is 2.0 or greater.

Students intending to seek readmission after suspension must first file a Readmission Form by the official deadline with the Office of the Registrar.

Reinstatement Following Academic Dismissal

Students academically dismissed from USA may be considered for readmission on academic probation after a period of one calendar year has passed. Readmission requires dean's approval. Students readmitted after dismissal are subject to a second dismissal if they do not make satisfactory progress. A student is considered to be making satisfactory progress as long as he or she maintains a USA grade-point average for each semester of 2.00 or above until their cumulative USA grade-point average is above the minimum required grade-point average for dismissal as outlined in the table above. Once a student achieves a grade-point average higher than the minimum required grade-point average, he or she is subject to the requirement to maintain his or her grade-point average above the minimum value as listed in the table. Returning students will remain on Probation until the cumulative USA grade-point average is 2.0 or greater.

Students intending to seek readmission after dismissal must first file a Readmission Form with the Office of the Registrar by the official deadline. Readmission after academic dismissal requires approval by the academic dean.

ACADEMIC BANKRUPTCY

Undergraduate students readmitted after an absence of at least one or more calendar years may choose to count all or none of their University of South Alabama credits toward completion of degree requirements and the computation of their GPA. Should the student elect to count none of the prior work, i.e., **declare academic bankruptcy**, the student is, in effect, allowed to start academic work at the University of South Alabama over with a GPA of zero; however, all course work will remain on the student's academic record. This determination must be made by the student during the term of reentry no later than the last day of class for that term, but preferably at the time of application for readmission. It requires dean's office approval. This election may be made only once during a student's USA career and is irrevocable. Such election also carries with it the stipulation that the student's choice of Bulletin is limited to those in effect from the time in which the student declares academic bankruptcy onward. Academic bankruptcy applies only to courses completed at the University of South Alabama.

In determining academic honors at the University of South Alabama, only the course work taken after academic bankruptcy has been declared counts in the calculation of GPA.

The option of academic bankruptcy is not available to a student who has received a bachelor's degree or certificate.

For financial aid recipients - filing academic bankruptcy will not clear your satisfactory progress problem nor reinstate your federal financial aid eligibility (including loans).

READMISSION TO THE UNIVERSITY

Students who have been previously enrolled in the University of South Alabama, and who have not attended for one regular term (not including summer) should comply with the following:

How to Apply for Readmission

An applicant should request the appropriate forms from the Registrar's Office. The re-admission form, including all required credentials, should be filed with the Registrar's Office by the published deadlines found on the Registrar's web site http://www.southalabama.edu/registrar/readmission.htm.

Requirements for Readmission

An applicant must be eligible to return to the University of South Alabama on the basis of a previous academic record at this institution. If the student has attended any college or university subsequent to last enrollment at the University of South Alabama, the student must also have the required transfer average or higher (as computed by the University of South Alabama) on work attempted, and must be in good standing and eligible to return to the last institution attended. If a graduate student reverts to an undergraduate level, then returns as a graduate student, the student must apply through the Office of Admissions rather than the Registrar's Office.

CREDITS EARNED IN OTHER COLLEGES AS A TRANSIENT STUDENT

A student enrolled in the University of South Alabama is not permitted to take credit work as a transient student at another institution to be applied toward a degree without prior permission from the dean of the college. The permission must be in writing, specifying which courses are acceptable and their equivalents at the University of South Alabama. A copy of this permission must be filed with the University Registrar. Students do not need transient approval if they have not been enrolled at the University for two or more consecutive terms.

STUDENT RECORDS

The University of South Alabama maintains records and data relative to the individual student to facilitate the educational process of the student and to assist in the administration of student needs by the University. The University of South Alabama complies with the rights of privacy and access to the educational records of the student as set forth in the Family Educational Rights and Privacy Act (FERPA) of 1974.

The University of South Alabama has formulated the following policy in accordance with the Act:

No information from records, files, or data directly related to a student other than that defined as "directory information" shall be disclosed or released to any individual or agency outside the University without the prior written consent

of the student, except according to lawful subpoena or court orders, or except in the case of need by other educational agencies or governmental agencies. Information will be available to University personnel and faculty only for legitimate educational purposes. The student shall have the right of access to and to review the accuracy of all such information with those exceptions that are defined within this policy statement.

Records may be released to parents of a student who is claimed as a dependent on their most recent federal income tax form, as defined by Section 152 of the Internal Revenue Code of 1986. The University is not required to disclose information from the student's education records to any parent of a dependent student. Discretion in releasing the student's records to the parent will be exercised.

Information about deceased students may be released to legal next of kin and or the executor of the student's estate. The request for deceased student information must be in writing accompanied by an official death certificate and any additional documentation deemed necessary by the University.

A deceased student's educational records may also be accessed by subpoena and or court order issued by a court of competent jurisdiction. No notification of such subpoena or court order will be issued by the University.

Directory information may be released by the University without the written consent of the student. Directory information, as defined by FERPA, includes the student's name, address, telephone number, e-mail address, photograph, date and place of birth, major, dates of enrollment, degrees conferred and dates of conferral, any graduation distinction, institutions attended prior to admission, participation in officially recognized activities and sports, and weight and height of members of University athletic teams.

To request nondisclosure of directory information, students must complete a "Request to Prevent Disclosure of Directory Information" form in the Registrar's Office. This request will remain in effect unless changed by the student. Additional information on FERPA may be found in the University *Lowdown* (student handbook) under "Student Record Policy". A complete explanation of FERPA is available in the Registrar's Office. Any complaints regarding University compliance with this law may be filed with the Family Educational Rights and Privacy Act, Department of Education, Washington, DC 20201.

The Registrar's Office follows the recommendations of the State of Alabama Records Disposition Authority and the American Association of Collegiate Registrars and Admissions Officers in the retention and disposal of student records.

TRANSCRIPTS

Upon the written request of the student, transcripts are normally issued by the Registrar's Office within one to three business days. The fee is $8.00 per transcript. Faxed transcripts carry an additional charge of $10.00 for domestic and $15.00 for international. All outstanding obligations to the University must be cleared prior to the release of transcripts. The University does not release copies of transcripts from other institutions.

ENROLLMENT CERTIFICATION AND DEGREE VERIFICATION

The Registrar's Office will provide official enrollment/degree verification upon the written request of the student.

For enrollment/degree verification related to financial aid, the University of South Alabama is a participant in the National Student Clearinghouse. The Clearinghouse is a repository for enrollment/degree status information and was established to simplify, standardize and automate the status verification and deferment process. The Clearinghouse, the University's agent, will provide student enrollment/degree information directly to the guaranty agencies, lenders, and other services.

GRADUATION

Application For Graduation

Students planning to graduate must make application according to the dates specified in the University Calendar. Failure to make application will result in a delay in scheduled graduation dates.

A student must file an application for graduation with the Registrar's Office two terms before expected degree completion (see University Calendar for deadlines). The degree audit/official check sheet must be approved by the chair of the major department and the academic dean.

Choice of Bulletin Under Which A Student Graduates

A candidate for the bachelor's degree must fulfill the requirements of a degree program as specified in the Bulletin in effect during the academic year of the student's first matriculation as a degree student. Students may select a subsequent Bulletin during their matriculation with the approval of the appropriate academic dean. If a student does not attend the University for a period of one (1) calendar year or longer, the student will be required to fulfill the requirements of the degree program as specified by the Bulletin in effect during the year of the student's return as a degree student.

If a student prolongs the completion of a degree program, curricular or programmatic changes may occur to such an extent that the requirements for the degree program as outlined in a Bulletin for which the student would otherwise be eligible can no longer be fulfilled. If in the judgment of the appropriate academic dean, this has occurred, such Bulletins cannot be used for meeting degree requirements. In these cases, the academic dean would designate the appropriate Bulletin for determination of degree requirements.

If a student changes degree programs, the college or division may require the student to fulfill the requirements of the Bulletin in effect when the change of degree program is approved.

The University reserves the right to make changes, as required, in course offerings, curricula, academic policies, and other rules and regulations affecting students, to be effective whenever determined by the University. These changes will govern current and former students. Interpretations of these policies will be made by the appropriate University authorities, keeping in mind the interests of the students and the University. Enrollment of all students is subject to the conditions and policies as set forth in the Bulletin.

Evaluation of Degree Requirements

Each candidate will have one official check of remaining degree requirements following filing of the degree application for graduation which includes the payment of the $50.00 application fee. This evaluation will be available from the student's dean. A fee of $25.00 will be charged for any additional degree check necessitated by a student's subsequent change of Bulletin, program of studies, or failure to complete degree requirements by the prescribed term.

Graduation With Honors

Undergraduate students who have at least 60 GPA hours in residence with a grade-point average of 3.50 or better at the University of South Alabama are graduated with distinction. Transfer credit hours <u>are not</u> included in the determination of academic honors. Academic honors <u>are not</u> awarded for graduate or professional degrees.

Students completing a second undergraduate degree at USA are eligible for consideration of academic hours. Such students must have 60 or more undergraduate work at USA, counting any work towards a first degree at USA and all work on the second degree. All undergraduate work at USA is used in the calculation. Now work at another institution is considered.

Students earning a grade-point average of 3.90 or higher are graduated **summa cum laude**.

Students earning a grade-point average of 3.70 but less than 3.90 are graduated **magna cum laude**.

Students earning a grade-point average of 3.50 but less than 3.70 are graduated **cum laude**.

Since commencement occurs before final grades are processed, final official honors cannot be determined before the commencement ceremony. Thus tentative honors, based on the student's academic record through the end of the last term completed, will appear in the printed commencement program and will be recognized in the ceremony. Final, official honors will be computed after all grades are processed at the end of the term for the last term of attendance, and will appear on student's diploma and transcript.

Honors Program

Students who have completed all requirements for the University of South Alabama Honors Program with an overall grade-point average of 3.5 or higher will receive special recognition at graduation. For details of the USA Honors Program see <u>USA Honors Program</u>.

Commencement

The University has a Spring and Fall commencement. Students who are candidates for graduation spring term are eligible to participate in the Spring Commencement only. Students graduating summer term and who are candidates for graduation for fall term are eligible to participate in Fall commencement only.

Diplomas

Diplomas are issued each term; however, degrees are conferred at commencement. Diplomas will be held until all outstanding obligations to the University have been cleared. Unclaimed diplomas become the property of the University one calendar year thereafter.

Awarding of Posthumous Degree

A posthumous degree may be awarded to a deceased undergraduate student who had senior academic status or to a deceased graduate student near completion of his or her graduate program. Qualifying students must have been registered at the University of South Alabama within twelve months of the time of death and be in good academic standing at the University. The Dean of the student's college submits a recommendation to the Senior Vice President for Academic Affairs or Vice President for Health Sciences for review. If approved, the recommendation will be forwarded to the Office of the President for final approval.

If they so desire, the deceased student's family may receive the diploma in a regularly scheduled university commencement ceremony or in a private ceremony.

INTERNATIONAL ACADEMIC OPPORTUNITIES - EDUCATION/ STUDY ABROAD

University of South Alabama students in all academic disciplines are encouraged to participate in a study abroad experience for credit toward their major, minor or elective credits. Academic research, practicum, internship and work abroad experience are also highly encouraged for all disciplines and all USA students. Students should check with their academic advisors and the Office of International Education for available opportunities, information on scholarships and application/ approval procedures.

Study Abroad: All students receiving academic credit for study or interning abroad must be enrolled in the official USA Abroad "course" (check with the Office of International Education for course and section numbers). This includes participation in faculty led USA Abroad programs as well as other USA approved study abroad programs offered by other universities and third party program providers. To participate in USA Abroad, students must be 19 years of age prior to departure from the U.S. and have an overall GPA of at least 2.5 for undergraduates and 3.0 for graduate students (see Office of International Education for "exceptional" circumstances procedures). Students with a GPA between 2.0 and 2.5 must demonstrate positive and constructive maintenance of their GPA with no decline in order to be considered for study abroad. Students should have no incomplete course work due from the term prior to going abroad. Students experiencing academic challenges on campus should work closely with their academic advisors and the Office of International Education prior to making any plans to study abroad. Students requiring accommodations or special services should contact the USA Office of Student Disability Services and discuss such arrangements with OIE and the host program well in advance of their proposed activity abroad. All applicants for USA abroad activities must be in good academic and non-academic standing prior to and during the proposed activities abroad.

With some planning, study abroad can be fully integrated in USA degree programs and applied to core, major, minor and elective courses. Prior knowledge of a foreign language is not required although many programs provide access to all levels of language learning (beginning to expert). All programs encourage and facilitate language and intercultural learning opportunities. Opportunities abroad may last from a few weeks (depending on the nature of the program) to a full academic year and are available for all semesters including summer. Upon receipt of a completed USA application including the course approval form(s) students will be enrolled in the USA Abroad "course". This course carries with it a USA administrative and registration fee of at least $150 per program and term abroad. With this registration students are able to receive academic credit for courses taken abroad and while abroad have access to a 24/7 emergency assistance network. Additionally this registration provides access to study abroad advising and support services. All students who plan to study abroad must attend required USA Abroad information and pre-departure sessions. By participating in an approved program, students will retain official full time USA student status and may apply for or retain their financial aid program. Freshmen are encouraged to begin planning their study abroad upon arrival on the USA campus. Scholarship information is available through International Education on USA scholarships for specific disciplines as well as for external sources such as the Gilman Scholarship, Freeman Asia Scholarship, U.S. Fulbright Awards for graduating seniors and the National Security Education/Boren Program for Undergraduate and Graduate Students. Additionally, students eligible for the Alabama prepaid tuition (PACT) program, vocational rehab and veterans benefits may be able to apply these funds to their study abroad program. Please visit the Office of International Education web site at www.southalabama.edu/ international or schedule an appointment for an information session by e-mailing intledu@ southalabama.edu.

HEALTH PRE-PROFESSIONAL, PRE-LAW AND HONORS PROGRAM

The Health Pre-professional Program at the University of South Alabama offers several services to students interested in a variety of health careers, including dentistry, medicine, optometry, pharmacy, veterinary medicine and physician assistant. Services include clinical observations course, workshops, admission test and interview preparation, as well as the critical one-on-one advising. The health pre-professions advisor will assist students in keeping up with deadlines and admission requirements. Students planning to follow pre-professional programs listed above should see the Director of Health Pre-Professional Program, Dr. Cindy Stanfield, Department of Biomedical Sciences.

Requirements for health professional schools vary not only between disciplines but also between schools within a discipline. Students need to be aware of the specific requirements, which include specific course work and admissions tests, letters of evaluation, and timely completion of the application. For many schools, a composite evaluation from the Director of Health Pre-Professional Program is required. Pre-professional students need to start the application process for most professional schools in the junior year, including completion of the admissions exam.

The Health Pre-Professional Advisor works directly with pre-professional students throughout their undergraduate studies, guiding each student toward completing all required course work for the professional schools and completing a successful application for professional school. An advisor within the department in which the student wishes to major will also guide the student in meeting requirements for graduation with a degree within that major.

The courses listed below are generally required for all health professional schools. However, the students should discuss specific requirements with the Health Pre-Professional Advisor.

One Year of General Chemistry with Lab:
CH 131, 131L, 132, and 132L

One Year Organic Chemistry with Lab:
CH 201, 201L, 202, and 202L

One Year General Biology with Lab:
BLY 121, 121L, 122, and 122L

One Year Algebra-based Physics with Lab
(Calculus-based physics is acceptable):
PH 114, 114L, 115, and 115L

One Year Mathematics:
Calculus (MA 125) is recommended; some schools require calculus
Statistics (ST 210) is required by some schools

One Year Humanities:
Several courses meet requirements

One Year English Composition:
EH 101, EH 102

Program in Pre-Dentistry, Pre-Medicine, and Pre-Optometry

This program is designed to prepare students for the rigorous demands of dental, medical, and optometry schools. The program is demanding and requires high scholastic competence and performance. Students must maintain a better than "B" record to be competitive when applying to professional schools.

Most dental, medical and optometry schools require that a bachelor degree be earned for

admission. However, a few schools may accept outstanding students prior to graduation.

Students should complete the appropriate admissions test (DAT – dental, MCAT – medicine, and OAT – optometry) by the end of their junior year (or at least one year before expected matriculation into the professional school). Students should complete the application process for admission to the professional schools about a year in advance of the expected date of matriculation (usually the summer between the junior and senior year).

The pre-optometry student should write for an official bulletin from the professional schools of interest during the freshman year and discuss with the Health Pre-Professional Advisor any special requirements for those schools. For information on requirements for admissions to the University of South Alabama College of Medicine, visit the web site at http://www.usahealthsystem.com/com.

Program for Pre-Pharmacy

Requirements for admission to pharmacy school vary considerably between schools, with schools requiring anywhere from two years of prerequisite course work to having completed a bachelor degree. Although a bachelor degree is not required by most pharmacy schools, students should select a program of courses that not only include pre-pharmacy requirements, but also work toward a degree. Most pharmacy schools require the PCAT (pharmacy college admission test). Complete information about professional curricula in pharmacy may be obtained by writing for an official bulletin from professional schools of choice.

To matriculate in pharmacy school the student must be accepted for admission by the Admissions Committee of the School of Pharmacy. The student should apply for admission to the pharmacy schools of choice approximately one year in advance of the date the student plans to enter pharmacy school. Specific requirements for several pharmacy schools are available in the office of the Pre-Professional Advisor.

The Auburn University Harrison School of Pharmacy at the University of South Alabama requires a minimum of three years of course work, which includes several upper division courses in Biology and/or Biomedical Sciences. Specific requirements can be found at the Auburn University web site http://pharmacy.auburn.edu or at the University of South Alabama web site http://www.southalabama.edu/healthprofessions/pharmacy.html.

Pre-Veterinary Medicine

Requirements for veterinary schools vary considerably between schools, with some schools requiring three years of coursework and others requiring a bachelor degree. Most veterinary schools require the GRE. Students interested in the pre-veterinary medicine program at the University of South Alabama should see the Director of the Health Pre-Professions Program.

Pre-Physician Assistant

Students wishing to enter a physician assistant program will be required to take many of the same courses as other health pre-professional students, although specific courses vary between programs. The admission test for most physician assistant programs is the GRE; some schools accept the MCAT. For information about the Physician Assistant program at the University of South Alabama, go to Pat Capps Covey College of Allied Health section of this **Bulletin** or visit the web site at http://www.southalabama.edu/alliedhealth/pa/.

Contact Information
Director, Health Pre-Professional Program
Dr. Cindy Stanfield
HAHN 4004
(251) 445-9280
Health Pre-Professional Web Site:
http://www.southalabama.edu/healthprofessions/

PREPARATION FOR LAW SCHOOL

Students interested in preparing for a career in law will find outstanding opportunities at the University of South Alabama. The finest pre-law education is considered by many to be a four-year liberal arts curriculum, but law schools will accept bachelor's degrees in other areas also.

Law schools generally do not prescribe a particular major or course of undergraduate study to qualify for admission. They all stress, however, the importance of excellence in whatever course of study is pursued. Specifically, the Association of American Law Schools emphasizes excellence in attaining the following three objectives in pre-law studies:

1. Comprehension and expression in words.
2. Critical understanding of human institutions and values with which the law deals.
3. Creative power in thinking.

"Shortly stated, what the law schools seek in their entering students is not accomplishment in mere memorization but accomplishment in understanding, the capacity to think for themselves, and the ability to express their thoughts with clarity and force" (from Association of American Law Schools, Statement of Policy).

To help the student develop the best possible course of study to prepare for law school in the light of particular needs, the University of South Alabama provides a pre-Law Advisor in the Department of Political Science and Criminal Justice. Pre-Law students are urged to consult with the Advisor for detailed information concerning how best to prepare for law school and for information concerning the Law School Admission Test, now required by practically all law schools.

HONORS PROGRAM

The University of South Alabama Honors Program offers a curriculum of interdisciplinary excellence designed to stimulate analytical and critical thinking of exceptionally qualified and highly motivated students. In this effort, the USA Honors Program challenges the students with scholarly creative activities, exposes them to cultural enrichment, and requires them to engage in community service. The USA Honors Program aspires to instill in students the intellectual excitement that will better prepare them for productive careers and citizenship.

Within the context and diversity of a midsize urban university, the Honors Program provides the academic and cultural atmosphere one expects of a small, personal campus community of excellence.

Two Honors Program options are available at the University of South Alabama, 1) a four-year program resulting in the designation on the transcript and at graduation of "University Honors Program," or 2) Departmental programs resulting in the designation of "Departmental Honors" on the transcript in selected majors.

PROGRAM DESCRIPTION

The University Honors Program includes honors course work and extracurricular activities throughout the four years of a student's undergraduate career. In addition to general university curriculum requirements and degree requirements of the selected major, USA Honors students also complete enriched honors core courses, honors seminars and a Honors Senior Project. A cornerstone of the program is that each student will be assigned a faculty mentor chosen from the student's major department, or suggested by the Honors Program until a major has been identified, who will direct the student through the research and scholarly experience that will culminate in an Honors Senior Project. Mentors will be outstanding faculty of the University. Honors classes are small, limited to 15 students, and are taught by the University's most stimulating faculty.

In addition to a challenging academic curriculum, the USA Honors Program offers a variety of activities that extend learning beyond the classroom, including social and cultural events and community service projects. Honors Students are encouraged to participate in international programs and off-campus internship opportunities.

Students who complete the requirements of both the USA Honors Program and of the selected major with a grade-point average of 3.5 or higher (overall and in the major) will receive the designation "University Honors Program" on the transcript and the diploma. These requirements apply to all students accepted into the University Honors Program. Students transferring from honors programs of other institutions may petition to receive credit for honors work completed elsewhere. All courses completed for honors credit will be so indicated on the student's official transcript.

QUALIFICATIONS FOR CONSIDERATION FOR THE USA HONORS PROGRAM

High school seniors with a minimum 27 ACT Composite (or comparable SAT score) and a minimum 3.5 high school grade-point average (4.0 system) (as computed by the University of South Alabama) are invited to apply. USA students and transfer students who have completed no more than 48 semester hours with an overall grade-point average of 3.5 (4.0 system) are also eligible to apply to the program. Students without the above qualifications can submit an application package and documentation of evidence of their special qualifications for review by the Honors Admissions Committee. Transfer students applying for admission to the University Honors Program should indicate any credit earned in other honors programs.

PROCEDURE TO APPLY FOR THE USA HONORS PROGRAM

1. Complete an application for admission to the University of South Alabama and submit to the Office of Admissions with the non-refundable processing fee.
2. Complete the University of South Alabama Honors Program Application Form and mail to the USA Honors Program. You must specially request this form when asking for a USA application package, or it can be printed from the USA Honors web page.
3. Request that your high school counselor mail an official copy of your high school transcript to the USA Office of Admissions, **OR**
   request that your official transcript from your college/university registrar be sent to the USA Office of Admissions.
4. Request that your official ACT or SAT results be sent to the USA Office of Admissions.
5. Provide two (2) letters of recommendation from individuals who can comment on your intellectual capabilities and personal characteristics such as independent thinking, motivation, creativity and willingness to be academically challenged.
6. Complete an essay on a topic specified annually by the USA Honors Program. The topic will be provided by the USA Honors Program in your application package and may be requested from the Honors Program Office at (251) 461-1637 or found in the Honors brochure and on the web page "Application Guidance."
7. Participate in an interview with the Honors Admissions Committee if selected for final consideration.
8. All application materials above must be received at the University of South Alabama no later than 5:00 pm on December 6, 2014 to be considered. Late or incomplete applications will not be reviewed.

QUALIFICATIONS TO MAINTAIN STATUS AS A USA HONORS STUDENT

University Honors Students must maintain satisfactory progress in the Honors Curriculum to remain in the Honors Program. A minimum of 15 hours of enrolled credit per semester is required for scholarship recipients unless otherwise indicated in the scholarship award. Required overall grade-point averages for Honors Students are 3.0 after the freshman year, 3.25 after the sophomore year, and 3.5 after the junior year and throughout completion of the requirements for the Honors Degree. A student may be placed on honors probation for a period of one semester if the required GPA is not achieved and must attain the required GPA at the end of the probationary semester in order to return to full status in the Honors Program.

Honors students are expected to participate in community and campus service projects and to attend cultural and scholarly events on campus and in the community. These activities will be facilitated by the Honors Program Office and program mentors. Participation may be as a group or in individually focused activities. If a student does not actively participate, then she or he may be put on Honors probation and/or removed from the Honors Program.

By the junior year, each Honors Student will identify a suitable faculty mentor and will design and implement an Honors Senior Project. The project represents a scholarly effort appropriate to the major, including a significant component of investigation and written presentation. Juniors will prepare a prospectus of their project prior to initiating the project. The two-semester Senior Project will total 6.00 credit hours - 3.00 credit hours for each of the two semesters of the graduating senior's culminating academic year at USA. Graduating Honors seniors will present their Honors Senior Project at a defense before their committee in a professional format suitable for the project and discipline (e.g., an exhibition, research presentation or poster, or performance). The senior project will be evaluated and graded by a committee of three faculty members and chaired by the honors project mentor and must be approved by the Director of the Honors Program in order to graduate with University Honors.

DEPARTMENTAL HONORS PROGRAM

A second honors option is available in many departments throughout the Colleges of the University of South Alabama. This option may be particularly suitable for transfer students, or others, who have completed significant credits toward graduation before deciding to pursue an honors degree, and for whom completing the entire University Honors curriculum would not be practical. To receive a designation of "Departmental Honors," students must successfully complete an Honors Senior Project in their major, have at least a 3.5 GPA, and meet the specific honors requirements of their major department. These students may also elect to take Honors Seminars and participate in other University Honors Program activities upon the recommendation of their major advisor. The Director of the Honors Program must approve all Departmental Honors graduation designations.

Please consult departmental sections of the **Bulletin** for any additional honors requirements specific to your major.

OTHER HONORS OPTIONS

For transfer students, or others, who have completed significant credits toward graduation, the specific curriculum requirements for the Honors Degree may be impracticable. Additionally, other non-honors students may find certain honors courses desirable while being unable to commit to the entire honors curriculum. Options available in these cases include enrollment in specific honors courses (indicated on the transcript as honors credit) with permission of the instructor and the Honors Program Director when space is available, and/or pursuing and completing an appropriate Honors Senior Project. Students interested in these options should consult with the Honors Program Director and their major advisor.

UNIVERSITY HONORS CURRICULUM REQUIREMENTS

The following courses, or a substitute approved by the Honors Program Director, must be completed with a grade of "C" or better, in addition to general studies requirements and specific requirements of the major department, to graduate with University Honors recognition. Transfer students may petition to receive credit for honors courses taken elsewhere. High School AP and IBP credits may not substitute for Honors required courses.

	Credit Hours
Honors Freshman Experience (Hon 101) (Required in first semester)*	1
Honors Sophomore Experience (Hon 201)	1
One Freshman Honors Seminar (Variable content)	3
Two Upper-level Honors Seminars (choose two) (Variable content)	6
Two Honors Electives	6
Introduction to Honors Senior Project (HON 301) (taken in the Junior Year)	1
Honors Senior Project** (may count toward major)**	6
	Total 24

* Not required of transfer students or USA students who have completed at least 15 semester hours with a 3.0 or greater GPA.
** Student should determine early in their program the requirements in their major.

Honors Seminars are special topics courses, and two are available each fall and spring semester for students to make their selection. Topics are generally not repeated or are repeated infrequently. When appropriate, Honors Seminars may be approved by an academic advisor for general studies credit, in addition to satisfying an Honors Program requirement.

The Honors Electives requirements can be satisfied by taking any courses offered for Honors credit (courses with "Honors" in the title or an "H" suffix) or by "contracting" Honors credit for non-honors course work such as courses that satisfy general education requirements at USA.

USA EDUCATION/STUDY ABROAD

Honors Program students are encouraged to participate in an international experience through study, research, internship or work abroad. Honors students should seriously consider applying for one of the many international prestigious scholarship programs such as the Goldman Sachs Global Leaders Program, Winston Churchill Foundation Scholarship, George J. Mitchell Scholarship, Rhodes Scholarship, Fulbright Student Grants, Gates Cambridge, Rotary Ambassadorial Scholarships and NSEP Boren Scholarship and Gilman Scholarship. For more information contact your Honors advisor and the Office of International Education.

DESCRIPTIONS OF ALL HONORS (HON) COURSES BEGIN ON PAGE 233.

THE GRADUATE SCHOOL

The University of South Alabama, the only major public institution of higher learning on the upper Gulf Coast, was created by act of the Alabama State Legislature in May, 1963. With Alabama's two older senior universities more than 200 miles distant, the University is strategically located in the greater Mobile area, which has a population of more than a million within a 100-mile radius. The Graduate School provides the student with opportunities for creative achievement and the advancement of knowledge. Graduate study fosters the spirit of independent investigation while creating an environment for free inquiry and intellectual challenge in advanced and specialized areas. Emphasis upon scholarship, original thinking, and the practical application of knowledge to the solution of complex problems will enable the student to make a valuable contribution to society.

All graduate work is administered by the Graduate School under the direction of the Graduate Dean who is advised by the Graduate Council. The voting members of the council are eight Full Members of the Graduate Faculty, eight Graduate Directors, one from each college, and one graduate student. Non-voting ex officio members are the Senior Vice President for Academic Affairs, the Graduate Dean, the Dean of the University Libraries, a representative of the Office of Admissions, and a representative of the Registrar's Office.

DEGREES OFFERED

The Graduate School offers nineteen different graduate degrees (M.A., M.Ac., M.B.A., M.S.N., M.Ed., M.P.A., M.H.S., M.S., M.S.S.H., M.S.C.E., M.S.CHE., M.S.E.E., M.S.M.E., M.S.C.I.S., Ed.S., Ed.D., D.Sc., D.BA., Ph.D., and thirty-eight programs, within numerous areas of concentration. For specific admission and degree requirements, in addition to those of the Graduate School, see the department or college section of your interest.

CERTIFICATE PROGRAMS

Education

See appropriate sections under College of Education.

Gerontology

See appropriate sections under Program in Gerontology.

GRADUATE PROGRAMS

The following graduate degree programs are offered through the Graduate School of the University. More details are available under school/college listings elsewhere in this **Bulletin**.

The **Pat Capps Covey College of Allied Health Professions** offers graduate programs leading to the degrees of Master of Science in Speech - Language Pathology, Master of Science in Occupational Therapy, Master of Health Sciences in Physician Assistant Studies, and the Doctor of Philosophy in Communication Sciences and Disorders.

The **College of Arts and Sciences** offers graduate programs leading to the degrees of Master of Arts in Communication, English, History, and Sociology; Master of Public Administration; Master of Music; Master of Science in Biological Sciences, Marine Sciences, Mathematics, Psychology, and Doctor of Philosophy in Marine Sciences. A limited residence Doctor of Business Administration is also offered.

The **Mitchell College of Business** offers graduate work in business leading to the degree of Master of Business Administration and graduate work in accounting leading to the degree of Master of Accounting. These programs are given in the evenings and are designed for those individuals presently engaged in managerial or technical positions with business, industry, or government.

The **School of Computing** offers a graduate program leading to the degree of Master of Science in Computer and Information Sciences.

The **College of Education** offers graduate programs leading to the degrees of Master of Education, Master of Science, the Educational Specialist, the Education Doctorate, and the Doctor of Philosophy.

The **College of Engineering** offers graduate programs leading to the degree of Master of Science in Chemical Engineering, Master of Science in Civil Engineering, Master of Science in Electrical and Computer Engineering and Master of Science in Mechanical Engineering. Also, the Doctor of Science in Systems Engineering is offered.

The **College of Medicine** offers a program leading to the Doctor of Philosophy degree in Basic Medical Sciences. The objective of the program is to produce graduates with training and knowledge in basic human biology with an in-depth knowledge of one of the basic medical sciences (Biochemistry and Molecular Biology, Microbiology and Immunology, Molecular and Cellular Pharmacology, Physiology, Cell Biology and Neuroscience). A combined program leading to the awarding of both the Ph.D. and M.D. degree is available to highly qualified applicants.

The **College of Nursing** offers a graduate program leading to the degree of Master of Science in Nursing.

The **Graduate School** offers an Interdisciplinary graduate program leading to the degree of Master of Science in Environmental Toxicology and **Doctor of Philosophy in Clinical and Counseling Psychology**.

USA Education/Study Abroad

Graduate students are encouraged to incorporate international experiences in their academic program through participation in study, research, internship and work abroad experiences. For more information please contact your academic advisor and the Office of International Education.

GRADUATE SCHOOL ADMISSION

REQUIREMENTS AND PROCEDURES

The Dean of the Graduate School, advised by the Graduate Council, establishes and monitors the standards under which students are admitted for study in degree programs under its jurisdiction.

Each student must be qualified for admission to the Graduate School. However, the fact of qualification does not guarantee admission. Admission may be restricted because of capacity limitations. Official notice of actions on applications for admission is provided by the Office of Admissions. Any other correspondence between student and faculty members, department chairs, and/or administrative officers does not constitute nor does it imply admission to the Graduate School.

Application forms and other materials should be requested from the Director of Admissions, 2500 Meisler Hall, University of South Alabama, Mobile, Alabama 36688-0002, telephone (251) 460-6141 or toll-free telephone number (800) 872-5247. The e-mail address is admiss@southalabama.edu.

International students should contact the Office of International Services, 2200 Meisler Hall, University of South Alabama, Mobile, Alabama 36688-0002, telephone (251) 460-6050, for application information.

The graduate application form can be located at http://www.southalabama.edu/admissions/grad.html.

Specific information regarding academic programs may be obtained by contacting the Director of Graduate Studies in the appropriate colleges.

DEADLINES FOR APPLICATIONS

Final deadlines for all applications and supporting documents for **new** graduate students are as follows: July 15 for Fall Semester, December 1 for Spring Semester, and May 1 for Summer Semester. New graduate students who do not register for the semester in which they were accepted must update their admission in writing by the deadline if they wish to enroll in a future semester.

A former USA graduate student who has **not** taken a graduate course within a seven-year period, or a graduate student who wishes to change degree program, student type, or student level must apply through the **Office of Admissions**. Deadlines are stated above.

Deadlines for applications and supporting documents for new **international students** are usually at least one month earlier than the deadlines for U.S. citizens. Refer to the "International Students" section for details.

Not all programs admit students each semester and some programs set earlier application deadlines. Please see appropriate section of this publication for exceptions.

Students who were admitted into the Graduate School and did not register for the semester in which they were accepted, but who wish to register for the same graduate program in the same academic year must submit an update form to the Office of Admissions to reactivate their file. This form can be requested from the Office of Admissions. If a student has attended another institution in the interim, all official transcripts must be sent to the Office of Admissions and their file will be re-evaluated for acceptance into the graduate school.

Please note: The College of Education and the College of Nursing re-evaluates files each semester and acceptance is only valid for the semester in which they apply. Acceptance is not valid for an academic year in programs within these two colleges.

USA graduate students who have failed to attend for one semester or more must file for readmission in the Registrar's Office by the published deadlines found on the Registrar's office website (http://www.southalabama.edu/registrar/). If a student has been absent from first enrollment in a Master's program for more than 7 years or from a Ph.D. program for more than 10 years, the student must apply through the Office of Admissions.

DOCUMENTS REQUIRED FOR ADMISSION

All documents required for admission review (transcripts, test scores or letters of recommendation) must be official, i.e., mailed from the home institution or testing agency directly to the Office of Admissions, and become the property of the University of South Alabama. Students applying for admission to the Graduate School must pay a $35 non-refundable processing fee by the appropriate deadline. If a student changes programs, a new processing fee and application must be submitted.

CATEGORIES OF ADMISSION

Each program has specific requirements for admission that may exceed the requirements listed as follows for admission to the Graduate School. Persons interested in applying for admission to a specific program should consult the appropriate program's Requirements for Admission.

Applicants to the Graduate school may be admitted in one of the following categories.

1. **Regular Admission** - Regular admission requires the following:
   A. A bachelor's degree from an accredited institution of higher education.
   B. A minimal grade-point average of 3.00 on all undergraduate work ("A"=4.00). The grade-point average used is that computed by the Office of Admissions.
   C. Sufficient courses in the major subject to qualify for graduate study in the involved discipline. A student who has a deficiency in courses in the discipline but who otherwise qualifies for Regular Admission will be required to complete appropriate prerequisite course work.
   D. Recommendation of the appropriate Coordinator/Chair, Director of Graduate Studies and approval by the Graduate Dean.
   E. International students must submit documentary evidence showing TOEFL test scores of 525 or above (197 on computer based test) or 71 on internet based test, or a minimum score of 6 on the IELTS test, or a bachelor's or graduate degree earned at an accredited United States institution of higher education.
   F. Most graduate programs require standardized test scores for admission. See the individual program descriptions elsewhere in this **Bulletin** for details.

For those students who have had previous graduate work, performance at the graduate level may be taken into consideration as well as undergraduate performance. An earned advanced degree may substitute for some admission requirements (see description of specific program).

2. **Provisional Admission** - Students who do not meet the requirements for Regular Admission may be admitted to the Provisional Admission category. A student in provisional status will not be allowed to enroll in courses other than those specified by their program of study. Provisional Admission requires.
   A. A bachelor's degree from an institution of higher education. In the event that the degree is from a non-accredited institution, the individual graduate program will determine if the quality and content of the degree meets the admission standards of the program.
   B. A minimal grade-point average of 2.5 on all undergraduate work ("A"=4.00) or 2.75 on the last 64 hours of college work. The grade-point average used is computed by the Office of Admissions. Graduate Directors or Coordinators of each graduate program may recommend consideration of other factors in the review of an application.
   C. Recommendation of the appropriate Coordinator/Chair, Director of Graduate Studies, the Dean of the College/School, and the Graduate Dean.
   D. International students must submit documentary evidence showing TOEFL Test Scores of 525 or above (197 on computer based test or 71 on internet based test), or a bachelor's or graduate degree earned at an accredited United States institution of higher education.
   E. Most graduate programs require standardized test scores for admission. See the individual program descriptions elsewhere in this **Bulletin** for details.

For a Provisional student to be changed to Regular status, the following are required:

A. Provisional students will be eligible for Regular status after accruing a minimum of nine (9) semester hours of course work taken at the University of South Alabama for graduate credit toward degree requirements, provided at least a "B" average is maintained in all such work attempted. No more than 15 semester hours of graduate credit earned as a Provisional Admission student may be approved for change of status to Regular Admission. The Provisional student who does not have the required "B" average upon completing 15 semester hours of graduate credit that is part of the student's graduate program, will be dismissed from the graduate program and the Graduate School. See appropriate college or school and/or department section of this publication for any additional requirements. At all times, students are subject to the policy stated in the Academic Standards Section entitled "Academic Dismissal."
B. Approval by the appropriate Director/Coordinator of Graduate Studies, and Dean of the College/School.

3. **Non-Degree Admission** - Students holding baccalaureate degrees from accredited institutions of higher education who are not interested in earning graduate degrees or who need to complete prerequisites for particular degree programs may enroll as Non-Degree graduate students. A suitable background for the courses to be taken is expected. A minimum grade-point average of 2.5 on all undergraduate work ("A" = 4.0) is required to enroll as a Non-Degree graduate student. Some graduate programs may impose additional requirements.

Because of limited class size and resources, academic units may limit the enrollment of Non-Degree students. After admission, permission to enter each course is obtained from the Graduate Director/Coordinator in the appropriate college, school and/or department.

International students must submit documentary evidence showing TOEFL test scores of 525 or above (197 on computer based test or 71 on internet based test), or bachelor's or graduate degrees earned at accredited United States institutions of higher education.

Non-Degree students subsequently seeking admission into one of the graduate degree programs of the University must submit a formal application through the Office of Admissions to the Graduate Director/ Coordinator of the appropriate college, school and/or department. Students may be subject to further conditions, such as the completion of necessary undergraduate background courses. The student's record in graduate courses taken while in the Non-Degree status may be considered. Students may be able to transfer courses toward a graduate degree program (see section on Transfer Credit).

Non-Degree graduate students are subject to the Graduate School Dismissal Policy. For dismissal purposes, program GPA will be calculated based on all credits earned while in non-degree graduate status.

DUAL MASTERS DEGREES

A student may enroll in and pursue two master's degrees simultaneously. The student must apply to and be accepted in each of the two programs individually. One program has to be designated as primary and the other as a secondary degree program. All requirements for each degree have to be met, including the requirement for time to degree. A maximum of nine (9) credit hours may be counted towards both degrees if approved by each of the two degree programs. Although the start date of the two programs does not have to be the same date, the two degrees will be awarded on the same date after completion of both degrees. All requirements for the two degrees must be completed within seven calendar years of admission to the first graduate program.

TRANSIENT ENROLLMENT

Students in good standing in the graduate school of other universities may enroll in the Graduate School of the University of South Alabama, provided they have the written permission of the Dean of the Graduate School of the University of South Alabama. Enrollment as a transient student in no way implies future

admission as a degree or non-degree graduate student. Students who wish to remain in transient status for more than one semester must submit the University's Transient Student Form and a readmission form (available from the Admissions Office) each semester prior to the deadline (see "Readmission to the University").

GRADUATE STUDY FOR ADVANCED UNDERGRADUATES

With permission of the department chair and appropriate director of graduate studies, a student who has completed 96 semester hours with a "B" (3.0) average may register for graduate courses provided the total load does not exceed 12 hours. This policy is extended to provide an opportunity for well-prepared undergraduates who meet two Regular admission criteria: minimum GPA and sufficient undergraduate course work in the major subject to qualify for graduate study in the involved discipline.

The same course may not be counted both as undergraduate and graduate credit. The graduate course may count toward a degree in graduate school, if and when the student is admitted to graduate school, provided such course was not used to satisfy requirements for the undergraduate degree and it has been less than seven years since the course was taken.

ADMISSION TO CANDIDACY REQUIRED BY COLLEGE OF EDUCATION

Admission to Graduate School does not imply admission of a student to Candidacy for a graduate degree in the College of Education. The student is referred to the "Admission to Candidacy' section in the College of Education for further information.

ASSISTANTSHIPS AND FELLOWSHIPS

Information concerning assistantships and fellowships may be obtained from the college or department concerned or online at http://www.southalabama.edu/graduateprograms/GSForm12GradAssistanship.pdf. A completed graduate assistantship/fellowship application which includes three (3) letters of recommendation and transcripts must be submitted. Provisionally admitted students may be considered for a graduate assistantship/fellowship as long as they maintain a 3.0 GPA. Tuition granted for a graduate assistantship/ fellowship may not be applied to courses outside of the degree program.

COMPUTER ACCESS REQUIREMENT

All students enrolled at the University of South Alabama are required to have access to a personal computer. This may be achieved by individual ownership, access to a family machine when residing at home, sharing with a roommate or other suitable arrangements. University public PC laboratories are **not** sufficient. This access must include a current version of the Microsoft® Office® software suite including Word® and Exel®, access to the University's e-mail system and access to the Internet for research purposes. Individual programs may have additional requirements specific to their curriculum.

GRADUATE SCHOOL ACADEMIC STANDARDS

WITHDRAWALS

A student who withdraws from the University or from a course will have WD recorded on his permanent record, provided the withdrawal occurs within the time limits listed in the official Calendar. Withdrawal after the time limits can only be approved by the Dean of the Graduate School upon the recommendation of the appropriate director of graduate studies. (See Withdrawals.)

GRADE STANDARDS

Courses for which the grade of "D" is assigned may not be counted toward a degree program. A maximum of two courses with the grade of "C" may be counted toward a degree program. However, some programs accept no grades of "C"; see specific program.

GRADES

A - Excellent 4 grade-points per sem. hour
B - Good 3 grade-points per sem. hour
S - Satisfactory (certain designated courses only)
C - Marginal 2 grade-points per sem. hour
D - Unsatisfactory 1 grade-point per sem. hour
U - Unsatisfactory (certain designated courses only)
F - Failure no grade points

The following symbols are substitutes for grades. *They are not grades*:

I - Incomplete
X - Absent for final exam
WD - Withdrawal in good standing
P - Course in progress. P grades remain in effect until they are changed to a letter grade, or until the time limits for a graduate degree have expired.
AU - Audit
UA - Unsatisfactory audit (did not meet attendance requirement)
N - No grade or invalid grade

See academic policies and procedures for further explanation of the above grades and symbols.

CHANGE OF GRADE

Grades reported for graduate students by instructors to the Registrar may not be changed except in case of error in records or in evaluation. Grade changes require the approval of the instructor of record, with information regarding the change provided to the department chair, the director of graduate studies of the college in which the course is taught, and the Dean of the Graduate School. Grades on record for one-calendar year may not be changed for any reason.

DISMISSALS

1. **Academic Dismissal**

   The Dean of the Graduate School has authority to dismiss graduate students from the Graduate School.

   Any term in which a graduate student drops below a 3.0 Program GPA, the student is placed on probationary status and has a period of two terms to attain a 3.0 Program GPA or be dismissed.

   A student will be dismissed from the Graduate School after two or three (depending on program) unsuccessful attempts to pass the comprehensive examination or the Qualifying Exam. Some programs allow only two attempts.

   A student in the status of Provisional Admissions who does not have a "B" (3.0) average upon completing 15 semester hours of graduate credit, that is part of the student's graduate program, will be dismissed from the graduate program and the Graduate School.

   A student who has been academically dismissed is eligible to reapply to the Graduate School subject to the approval of the director of graduate studies of the specific new program and the Dean of the Graduate School. This is not intended to include the program from which the student has been dismissed.

2 **Non-Academic Dismissal**

   A student dismissed from a graduate program as the result of an academic misconduct penalty will be automatically dismissed from the Graduate School and the University of South Alabama and will not be eligible to apply for readmission.

FINAL GRADE GRIEVANCE POLICY

A student may initiate an inquiry under procedures set forth by the Graduate School Final Course Grade Grievance Policy. A copy of this policy is available in the dean's office of each college and in the Graduate Dean's Office.

APPEAL PROCEDURE

A graduate student having a grievance against another individual or group in the university community is referred to the General Grievance Policy published in *The Lowdown*. Also available is the Sexual Offence Policy for students. Other USA policies affecting students are also published in *The Lowdown*.

ENGLISH LANGUAGE PROFICIENCY

English is the language of instruction at the University of South Alabama. Any remedial work in English language skill, which may be found needed after a student has been admitted to the Graduate School (Provisional Admission or Regular Admission), may be specified and requested by the director of the graduate program in which the student is enrolled.

ACADEMIC PROCEDURES

REGISTRATION

Registration (making course selections and enrolling in classes) occurs prior to the beginning of each semester. Students must register via the web utilizing USA's PAWS (Personal Access Web System). (See the University Schedule of Classes for additional information.)

FULL LOAD OF COURSE WORK IN A SEMESTER

A full load is six to ten credit hours. Permission to take more than ten credit hours must be obtained within the college/department.

TRANSFER CREDIT

1. **Transfer credit to masters programs**

   A maximum of twelve (12) semester hours of approved transfer credit from another institution is allowed for a master's degree, when a student

has at least 9 hours of USA graduate work and in regular status. Transfer credit from regionally accredited universities may be accepted by certain programs. In the event that the university is non-accredited, the individual USA graduate program will determine if the quality and content of the course meets the standards of the program. Students may also transfer a maximum of twelve (12) semester hours of appropriate courses taken while at USA while in a non-degree graduate status or taken while in another program. Only courses that have not been applied to another degree may be transferred. Transfer credits will only be processed after a student has at least nine hours of USA graduate credit in a program and has attained regular status. Approval of the program's graduate coordinator, the college director of graduate studies, and the Graduate Dean is required. Only courses with "A", "B", or "S" grades are acceptable for transfer. The University of South Alabama does not award graduate credit for prior portfolio-based experiential learning.

2. **Transfer credit to doctoral programs**

A maximum of one half of the minimum hours required for the degree is normally allowed as transfer credit. Exceptions are allowed under unusual circumstances, but in no case will the number of transfer credit hours exceed two thirds of the minimum hours required for the degree. Transfer credit from regionally accredited universities may be accepted by certain programs. In the event that the university is non-accredited, the individual USA graduate program will determine if the quality and content of the course meets the standards of the program. Students may also transfer appropriate courses taken while at USA while in non-degree graduate status or taken while in another graduate program. Some programs will allow graduate courses applied to certain master's degrees to be transferred in and also count towards the doctoral degree, subject to the limits of maximum transfer credit hours. The University of South Alabama does not award graduate credit for prior portfolio-based experiential learning.

Transfer credits will only be processed after a student has at least nine hours of USA graduate credit in a program and has attained regular status. Approval of the program's graduate coordinator, the college director of graduate studies, and the Vice President of Academic Affair's or Health Sciences as appropriate is required. Only courses with "A", 'B", or "S" grades are acceptable for transfer.

CHANGE OF PROGRAM

A student wishing to change from one graduate program to another must apply to the new program through the Office of Admissions, unless the new program is in the College of Education or the Mitchell College of Business. If the new program is in the College of Education or Mitchell College of Business, the student should consult the Director of Graduate Studies of the appropriate college.

APPLICATION FOR DEGREE

Each candidate for the Master's, Educational Specialist's, or Doctor of Philosophy degree must make application for the degree during the semester preceding the semester of graduation, in the Registrar's Office. The dates are specified in the University Calendar.

STUDENT RESPONSIBILITY

While the University of South Alabama will endeavor to provide timely and accurate advisement, it is the responsibility of the student to know and satisfy the degree requirements of the academic program, to be aware of the University calendar and to understand and comply with University academic policies and procedures.

DEGREE REQUIREMENTS

RESEARCH INTEGRITY AND PROFESSIONAL ETHICS

Graduate level instruction in research integrity and professional ethics is required in all graduate programs.

REQUIREMENTS FOR THE MASTER'S DEGREE

1. **A minimum of 30 semester hours of credit in a program approved by the major department and the Dean of the Graduate School is required. The following limitations apply**:
   A. No more than 18 hours of dual-listed courses (400-and 500-level listing for the same course) may be counted toward meeting the minimum hours required for a degree. Graduate students will only receive graduate credit for the 500 level version of dual-listed courses.
   B. A maximum of twelve (12) semester hours of graduate credit obtained at another accredited institution may be approved for transfer to the University of South Alabama. The credit is approved only after completion of a minimum of nine (9) semester hours of graduate credit at the University of South Alabama and the student must be in regular status. Transfer credit must have the recommendation of the major department and appropriate director of graduate studies and the approval of the Dean of the Graduate School. Only grades of "A" or "B" or the equivalent may be accepted as transfer credit. Grade equivalency must be verified by the appropriate director of graduate studies. Course work completed more than seven years prior to the date for graduation may not be counted for degree credit. Students must meet all degree residency requirements.
   C. A course applied toward credit for a degree at this institution, or elsewhere, will not be acceptable as credit toward a second degree, except in approved dual-master's programs where a maximum of nine (9) hours may be counted in both programs.
2. **A minimum overall 3.0 grade-point average on all work attempted in the student's specific program of study as well as an overall 3.0 grade-point average on all work attempted while enrolled in the current program of study is required. Courses for which the grade of "D" is assigned may not be counted toward a degree program. A maximum of two courses with the grade of "C" may be counted toward a degree program; however, some programs accept no grades of "C" (see specific program).**
3. **A minimum of 21 semester hours of degree program credit in residence at the University of South Alabama is required.**
4. **All requirements for a master's degree must be completed within seven calendar years from admission as a graduate student at the University of South Alabama. Under extraordinary circumstances, an appeal may be made to the Graduate Dean for a time extension. Some degree programs may set shorter time limits.**
5. **Each student will be evaluated to ensure achievement of program outcomes. This evaluation may be in the form of a comprehensive exam or other measurement tools. If unsatisfactory, after corrective action, the evaluation may be repeated up to two times. For details see specific programs.**
6. **Submission of a standardized test score may be required. For details, see specific programs.**
7. **A foreign language may be required. For details see specific programs. International students should note that English may not be offered as a foreign language. The foreign language requirement must be fulfilled, normally no later than two semesters before graduation, in one of two ways:**
   A. Undergraduate course work in one acceptable foreign language which demonstrates successful completion of at least the second-year intermediate level (a course offered in the sixth quarter or fourth semester of an undergraduate sequence begun at the introductory level) with a minimum grade-point of 2.5 in all work attempted in the foreign language. The course work must have been completed within seven calendar years before the date of graduation from the relevant program. Course work may be taken as a graduate student with no graduate credit.
   B. A satisfactory performance on an examination conducted at the University of South Alabama requiring a written translation from the foreign language into English, which examination will last no more than two hours and allow the use of a dictionary. The examination is offered only to matriculated students and must be passed no more than seven calendar years before the date of graduation from the relevant program. The text set for translation will be related to the student's subject area. Programs requiring a foreign language are invited to make recommendations regarding appropriate material to the Department of Foreign Languages and Literatures, which will appoint from its faculty a specialist to be the examiner and to schedule, prepare, administer, and evaluate the examination. The examiner

will evaluate the translation as satisfactory or not satisfactory.

8. **Thesis**
   A. A program may require or allow a candidate for the Master's degree to prepare a thesis. A maximum of nine (9) semester hours of 599 thesis credit may be counted toward meeting the minimum hours required for a degree; some programs may allow fewer than nine hours (see specific program), but no fewer than three (3) hours.
   B. The grade of "P" (In Progress) is assigned to thesis credit; upon completion and approval of the thesis by the Dean of the Graduate School, a quality-point grade (A, B, C, D, F) and accumulated credit are assigned.
   C. A student on a thesis option program will be required to prepare a thesis prospectus.
   D. An oral defense of the thesis is required.
   E. The student must be enrolled in at least one hour of thesis during the semester in which the student completes their graduate degree. Normally, thesis students should be enrolled in 599 continuously from inception of the project until final approval of the thesis by the Dean of the Graduate School.
   F. See Guidelines for Theses and Dissertations and Standards for Theses and Dissertations below.

REQUIREMENTS FOR THE EDUCATIONAL SPECIALIST DEGREE

See appropriate section under College of Education.

REQUIREMENTS FOR THE DOCTOR OF PHILOSOPHY DEGREE

1. **The specific requirements for the Doctor of Philosophy degree in the Basic Medical Sciences, in Clinical and Counseling Psychology, in Communication Sciences and Disorders, in Instructional Design and Development, and in Marine Sciences vary among the specialties. Each of the five programs leading to the completion of a Ph.D. degree has specific requirements regarding courses, seminars, laboratory studies, directed studies, workshops, and research. In general, a minimum of 60 credits of graduate work will be required for the Ph.D. degree. Transfer of graduate credit from regionally accredited universities may be accepted by certain programs. Prior approval of the college director of graduate studies is required. Only courses with "A" or "B" grades are acceptable for transfer. The quality of the student's program and performance are emphasized and are considered as important as the fulfillment of requirements. Completion of original research, and writing and defending a dissertation are requirements for the Ph.D. degree.**
2. **Students who are candidates for the Ph.D. degree must be enrolled for Research Dissertation during the semester in which the open defense of the dissertation is completed, and must be enrolled in at least one hour of Research and Dissertation during the semester in which the student completes their graduate degree.**
3. **All requirements for a Ph.D. degree must be completed within ten calendar years from admission to a Ph.D. program at the University of South Alabama. Under extraordinary circumstances, an appeal may be made to the Graduate Dean for a time extension. Some degree programs may set shorter time limits.**

THESES AND DISSERTATIONS

GUIDELINE FOR THESES AND DISSERTATIONS

1. **Students who intend to write a thesis or dissertation should consult early in their programs with the department chair or program director/coordinator for a list of Members of the Graduate Faculty from which to select an advisor to supervise and direct their research.**
2. **If the Member of the Graduate Faculty selected by the student consents to serve as an advisor, then the advisor and student initiate a recommendation for a thesis/dissertation committee using GS Form 4 (2/07).**
3. **A Master's thesis committee must include a minimum of three members of the Graduate Faculty and a dissertation committee must include at least four members of the Graduate Faculty. Master's thesis committees may be chaired by Associate or Full Members of the Graduate Faculty. Dissertation committees must include at least one Full Member of the Graduate Faculty who is the committee chair and normally the student's advisor/major professor. Both thesis and dissertation committees must have at least one member from outside the student's department or program. Administratively appointed graduate faculty members may serve on thesis/ dissertation committees for a specified student. Two thirds of the committee must be USA Associate or Full Members of the Graduate Faculty.**
4. **The Dean of the Graduate School is the appointing authority for thesis and dissertation committees. Once the Graduate Dean has appointed the committee, the student prepares a thesis or dissertation prospectus under the direction of the committee.**
5. **"A Guide for Preparing Theses and Dissertations", accessed at http://www.southalabama.edu/graduateprograms/ThesisDissertationGuide.pdf, is the guide for preparation of the prospectus and the thesis or dissertation.**
6. **Once a thesis or dissertation committee is appointed by the Dean of the Graduate School, the student may then enroll for 599 Thesis or 799 Dissertation credit with permission of the thesis/ dissertation committee chair (advisor or major professor).**
7. **To be considered for approval by the Dean of the Graduate School, an acceptable thesis or dissertation must be submitted to the Graduate School office by the first submission deadline announced in the University Calendar.**

STANDARDS FOR THESES AND DISSERTATIONS

1. **A thesis/dissertation should demonstrate that the student has the capacity for original research, facility in the use of the English language, the ability to review appropriate background material, formulate and address (a) significant question(s), obtain, collate, and analyze appropriate data and draw logical conclusions therefrom, and integrate in a meaningful way the new knowledge into the greater body of existing knowledge and state its significance. The final thesis/dissertation must be acceptable to the major professor, a majority of the thesis/dissertation committee, the chair of the student's department, the college/ school director of graduate studies and the Dean of the graduate school.**
2. **The thesis or dissertation must be an original research and/or creative project. This document will demonstrate the student's ability to**:
   A. Select a topic and delineate a problem that can be studied in terms of time, equipment needs and experimental population available to the faculty sponsor.
   B. Search the literature for relevant studies on the topic of choice.
   C. Organize and analyze the information that is available, using logical and/or statistical analysis appropriate for the project.
   D. Present the results orally and in a written form to the satisfaction of the thesis/ dissertation committee and the Graduate Faculty.
   E. Present a final document as the Thesis or Dissertation to the Graduate School Office in an acceptable form and by the procedures outlined in the Guide for Preparing Theses and Dissertations, University of South Alabama.
3. **All theses/dissertations should meet current standards relative to responsible conduct of research**.

INTERDISCIPLINARY GRADUATE PROGRAMS

MASTER OF SCIENCE IN ENVIRONMENTAL TOXICOLOGY

The University of South Alabama offers an interdisciplinary curriculum to teach graduate students the biochemical and physiological processes resulting from the interactions between toxic compounds and the biosphere.

Students in this program will learn to:

- evaluate the impact of specific pollutants in the environment
- perform laboratory and field-tests to monitor environmental pollutants
- control and manage toxic substances
- identify water and air pollutants
- review current and new legislation and protocols in this area.

Graduates from this program will be able to work in industrial settings in the areas of

Industrial Hygiene, Environmental Health, Environmental Engineering and Toxicology or to continue their education by pursuing a Ph.D. degree in Toxicology or related areas. In addition, these graduates will be qualified for jobs requiring M.S. degrees in their original areas of concentration. For example, a chemist or a chemical engineer will be better qualified to work in a chemical or pharmaceutical company if, in addition to his/her background in chemistry or engineering, the applicant has training in toxicology to address the environmental impact of specific projects.

ADMISSION

Students applying to this program must fulfill all the requirements for regular or provisional admission specified by the Graduate School. Additional requirements include:

B.S./B.A. degree from an accredited four-year institution: the program is designed for graduates holding degrees in Biology, Biomedical Sciences, Chemistry, Engineering or related fields.

The GRE will be required and will be considered among the admission criteria.

In addition, students applying to this program must have completed the following undergraduate courses:

- Biology (1 semester)
- Statistics (1 semester)
- Calculus (1 semester)
- Organic Chemistry (6 credit hours)
- Any other prerequisites needed for specific courses within each concentration

It is recommended (but not required) that students applying to the program also complete 6 credit hours of undergraduate Biochemistry. Those students who did not take undergraduate Biochemistry will have to include 6 hours of graduate Biochemistry among the required courses to complete the program. This will not change the total number of hours required to complete the program.

PROGRAM COMPLETION REQUIREMENTS

A total of 35 credit hours are required for the M.S. degree in Environmental Toxicology, including:

- 20 credit hours of core courses, including:
- Fundamentals of Environmental Engineering (3 credits)
- Environmental Statistics (3 credits)
- Research Integrity (1 credit)
- Chemical Ecology (3 credits) or Environmental Toxicology (3 credits)
- Environmental Chemistry (4 credits)
- Environmental Sociology (3 credits)
- Molecular and Cellular Toxicology (3 credits)
- A Research Thesis (6 credit hours) or a Library Research Project (3 credits hours) on a subject identified jointly by the student and the Advisory Committee.
- 9 credit hours ("Research Thesis" track) or 12 credit hours ("Library Research Project" track) of courses in specific areas of concentration. Students in the "Library Research Project" track must take an extra 3 credit hours to complete the 35 credit hours in the program.

The "Research Thesis" must be completed either at the University of South Alabama or, upon approval by the Advisory Committee, at a government or industrial laboratory in the area.

Students will choose one of the following areas of concentration:

- Biology (TXBY)
- Basic Medical Sciences (TXMS)
- Chemistry (TXCH)
- Environmental Engineering (TXEE)
- Civil Engineering (TXCE)
- Exposure Route/Chemical Transport (TXEC)

Each student will be assigned to an advisory committee responsible for designing the curriculum that best fits the student's professional goals. If, in the opinion of the student's committee, the student lacks adequate undergraduate preparation, the student will be required to make up such deficiencies.

Upon approval by the Advisory Committee, students will be allowed to take some of the on-line courses offered at other institutions. For example, Troy University offers several graduate online courses pertaining to environmental policy.

DEADLINE FOR APPLICATION FOR ENVIRONMENTAL TOXICOLOGY

Applications are accepted in the Fall, Spring, and Summer semesters by the deadlines indicated in the University of South Alabama **Bulletin**.

DESCRIPTIONS OF ALL ENVIRONMENTAL TOXICOLOGY (EXT) COURSES BEGIN ON PAGE 227.

DOCTOR OF PHILOSOPHY IN CLINICAL AND COUNSELING PSYCHOLOGY

The University of South Alabama offers a Doctor of Philosophy in Clinical and Counseling Psychology (CCP). This program is a collaborative effort between the Department of Psychology in the College of Arts and Sciences and the Department of Professional Studies in the College of Education. The Clinical and Counseling Psychology program prepares professionals to provide the most effective types of psychological care for individuals and communities. Graduates of the program will have a set of competencies which will also enable them to work successfully with a variety of other professionals for the purposes of health promotion and to treat mental disorders. Graduates might be employed in a variety of settings, including counseling centers in colleges and universities, medical centers, Veterans Administration hospitals, schools, private practices, health and wellness facilities, state and federal agencies, family counseling services, academic departments in higher education institutions, and professional associations. The program combines an asset-strength model from Counseling Psychology with a health psychology/wellness model from Clinical Psychology. Graduates will be comfortable providing care in a variety of settings including medical, traditional mental health or counseling, school, university, and community. Such care would include direct service to individuals and the management of psychological services for individuals and groups using evidence-based interventions.

PROGRAM ADMISSIONS REQUIREMENTS

Students are admitted to start the program in the fall semester. No spring or summer admission will be accepted. Participation in the program is full-time and, with the exception of an assistantship, students are discouraged from engaging in any outside employment. Applications to the Clinical and Counseling Psychology (CCP) program should be completed by December 15th for admission for the following fall semester. In addition to the Graduate School application form and required supporting documentation, the Clinical and Counseling Psychology program requires submission of a program application form, a statement of purpose, and three letters of academic recommendation. The following criteria supplement the Graduate School criteria for admission:

In addition to meeting graduate school requirements for regular admission, applicants to the Clinical and Counseling Psychology program must meet the following criteria:

a. Summed score of 300 or greater on the verbal and quantitative sub tests of the General Test of the Graduate Record Examination will be expected.
b. Completion of an undergraduate or graduate degree in psychology, counseling or a similar program from an accredited institution.

REQUIRED PSYCHOLOGICAL FOUNDATIONS

Students must complete graduate course work and demonstrate competency in the following foundation areas. These courses will typically be completed in the student's Master's degree program of study, but in exceptional circumstances, deficiencies may be approved to be addressed in the doctoral program of study. Each deficiency will reduce the likelihood of admission, however, or may extend time to complete the program.

<u>Psychological Measurement</u>
- Psychoeducational Assessment
- Personality Assessment
- Individual Intelligence/Cognitive Assessment

<u>Psychological Interventions</u>
- Individual and Group Counseling Techniques
- Evidence Based Practice

<u>Biological Aspects of Behavior</u>
- Physiological Psychology

<u>Cognitive and Affective Aspects of Behavior</u>
- Learning and Cognition

<u>Social Aspects of Behavior</u>
- Multicultural Psychology
- Developmental Psychology

<u>Research Methodology and Data Analysis</u>
- Inferential Statistics/Research Methodology
- Applied Research Methods
- Psychometrics

<u>History and Systems of Psychology</u>

Applicants should submit the following materials by December 15th to:

University of South Alabama
Office of Admissions
Meisler Hall, Suite 2500
Mobile, Alabama 36688-0002

- Official GRE scores
- Official copies of all undergraduate and graduate academic transcripts
- Statement of purpose
- Three letters of academic recommendation
- Clinical and Counseling Psychology program application form
- Graduate School application form
- Those interested in applying for a graduate assistantship should also submit a graduate assistantship application form
- One or two representative work samples of current skills (e.g., test reports, counseling summaries, research reports, publications, etc.)

PROGRAM COMPLETION REQUIREMENTS

A minimum of 60 credit hours of doctoral level courses taken at the University of South Alabama is required for the doctoral degree in Clinical and Counseling Psychology.

- 36 credit hours of core courses including
  - Ethics and Practice in Professional Psychology (3 credits)
  - Applied Multivariate Statistics in Psychology (3 credits)
  - Applied Health Psychology (3 credits)
  - Psychology of Resilience to Trauma/ Crisis (3 credits)
  - History and Systems (3 credits)
  - Group and Systems Theory and Intervention (3 credits)
  - Multicultural/Diversity Issues (3 credits)
  - Supervision of Clinical Interventions Internship (3 credits)
  - Practicum I (3 credits)
  - Practicum II (3 credits)
  - Practicum III (3 credits)
- 9 credit hours of dissertation research on a subject identified jointly by the student and his or her Advisory Committee
- 9 credit hours of elective courses are to be selected from the following list of courses.
  - Teaching of Psychology (3 credits)
  - Introduction to Neuropsychology (3 credits)
  - Advanced Applied Psychophysiology and Biofeedback (3 credits)
  - Child and Family Psychopathology and Intervention (3 credits)
  - Special Topics (3 credits)
  - Supervision of Clinical Interventions (3 credits)
  - Practicum III (3 credits)
  - Directed Studies (1-3 credits)

NOTE: This list above represents the minimum requirements for completion of the doctoral program of studies. A student may be required or elect to take additional course work in a specific area if needed to enhance skills or to support an area of specialization. Each candidate for the Ph.D. degree in clinical psychology takes practicum courses in the psychological clinic and must also complete a one-year internship in an accredited facility. The internship is taken after completion of course work and passing of the doctoral preliminary exam, and is a degree requirement.

GRADUATE ASSISTANTSHIPS

Graduate assistantships are available annually on a competitive basis. Applicants interested in receiving an assistantship should complete the graduate assistantship application form.

COMPREHENSIVE EXAMINATION

Students must pass a comprehensive examination following successful completion of their academic work to be admitted to candidacy for the doctoral degree. The content of the comprehensive examination will be determined by the comprehensive examination committee and may consist of a written as well as an oral component.

CANDIDACY

Admission to candidacy for the doctoral degree requires completion of the following:

- successful completion of required academic work
- successful completion of the comprehensive examination
- approval of a dissertation research project

The doctoral candidate is, therefore, a student who has fulfilled all requirements for the Ph.D. degree with the exception of completing the dissertation research and the required internship.

DISSERTATION HOURS AND DEFENSE

Nine credit hours of dissertation research may be applied to and are required for completion of the doctoral program of studies in Clinical and Counseling Psychology. However, a student must be continually enrolled in CCP 799 (Dissertation Research) until the final defense of the dissertation is completed and the dissertation document has been approved by the Graduate School. The final defense is scheduled following the completion of and preparation of the final written report of the dissertation research. Revisions of the dissertation may be required for final approval by the student's advisory committee or as a condition of the Graduate School's evaluation of the written report.

THE LIMIT

After being admitted to candidacy for the Ph.D. degree in Clinical and Counseling Psychology, the student has a maximum of three years to complete the dissertation.

DESCRIPTIONS OF PH.D. CLINICAL AND COUNSELING PSYCHOLOGY (CCP) COURSES BEGIN ON PAGE 188.

DESCRIPTIONS OF GRADUATE INTERDISCIPLINARY STUDIES (GIS) COURSES BEGIN ON PAGE 230.

PAT CAPPS COVEY COLLEGE OF ALLIED HEALTH PROFESSIONS

Dean: Richard E. Talbott (251) 445-9250
Associate Dean and Director of Graduate Studies: Julio F. Turrens (251) 445-9250
Academic Advisors: Selicia Hughes and James A. Hunter (251) 445-9260

Pat Capps Covey College of Allied Health web site
http://www.southalabama.edu/alliedhealth

The Pat Capps Covey College of Allied Health Professions offers the following programs:

Certificate Program in:
- Emergency Medical Technician- (EMT)
- Advanced Emergency Medical Technician- (AEMT)
- Paramedic

Bachelor of Science Programs in:
- Biomedical Sciences
- Cardiorespiratory Sciences
- Emergency Medical Services
- Professional Health Sciences
- Radiologic Sciences
- Speech and Hearing Sciences

Master's Degree Programs:
- Master of Health Science - (Physician Assistant Studies)
- Master of Science in Occupational Therapy
- Master of Science in Speech - Language Pathology

Doctoral Level Degree Programs:
- Doctor of Audiology
- Doctor of Physical Therapy

Doctor of Philosophy Program in:
- Communication Sciences and Disorders

The programs are designed to provide the highest quality in basic medical sciences and health professional education to meet health care needs and to contribute to new knowledge through research. Upon graduation, students are eligible to sit for their respective licensure and board examinations to enter professional practice in their chosen area.

Through University approval, and when deemed to be in the best interest of the students, the faculty of the College reserves the right to alter curricula and regulations as considered necessary.

The professional programs in Allied Health are accredited by their respective national accrediting agencies listed below:

ACCREDITATION

Program and Accrediting Agency

Cardiorespiratory Care:
Committee on Accreditation of Allied Health Educational Programs (CAAHEP) and the Committee on Accreditation for Respiratory Care (CoARC)

Emergency Medical Services:
Committee on Accreditation of Allied Health Educational Programs (CAAHEP) and the Committee on Accreditation for the EMS Professions (CoAEMSP)

Occupational Therapy:
Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA)

Physical Therapy:
Commission on Accreditation in Physical Therapy Education (CAPTE) of the American Physical Therapy Association (APTA)

Physician Assistant:

Accreditation Review Commission on Education for the Physician Assistant, Inc. (ARC-PA)

Radiologic Sciences:

Joint Review Committee on Education in Radiologic Technology (JRCERT)

Speech-Language Pathology and Audiology:

Academic Program: Council on Academic Accreditation (CAA) of the American Speech-Language-Hearing Association (ASHA)

ACADEMIC ADVISING

Students are encouraged to take full advantage of the academic advising services provided in the Pat Capps Covey College of Allied Health Professions. The academic advisors are available throughout the academic year to assist undergraduate students and other persons seeking information about Allied Health Professions programs. The academic advisors are located in HAHN 3028, telephone number (251) 445-9260 Undergraduate students in the professional component of their program and graduate students are advised by their respective departmental advisors.

COMPUTER ACCESS REQUIREMENT

All students enrolled in the Pat Capps Covey College of Allied Health Professions are required to have access to a personal computer. This access must include a current version of the Microsoft® Office® software suite including Word® and Excel®, access to the University's e-mail system and access to the Internet for research purposes. Individual programs may have additional requirements specific to their curriculum.

GENERAL REQUIREMENTS FOR STUDENTS IN PROFESSIONAL PROGRAMS

Students applying for admission to professional programs (all programs with the exception of Biomedical Sciences) will need to show proof of health insurance coverage before being admitted in the program and every year after registration. These students will also be subjected to background checks and drug tests prior to being admitted in the professional component of the program. Drug tests may be randomly administered while in the professional component of the program. Students will be informed of these requirements in the application forms for enrollment in their programs. Specific requirements for each program are listed in the respective departments' sections. Students are responsible for becoming familiar with individual requirements and regulations specific to their programs.

UNDERGRADUATE PROMOTION POLICIES

For **Professional Component** undergraduate students in Cardiorespiratory Care, and Radiologic Sciences, a minimum grade of "C" is required in each **Professional Component** course. This minimum grade of "C" reflects only the letter grade since many courses will require an 80% or 90% competency in order to be considered passing level. Students receiving less than a "C" in a **professional** course in Cardiorespiratory Care, and Radiologic Sciences will not be allowed to proceed in the program. Students not meeting this minimal requirement may apply for reinstatement by petitioning the respective departmental **Student Evaluation and Promotions Committee**. The student must petition in writing through the office of the Department Chair no later than five days prior to the beginning of the semester for which reinstatement is requested. If for any reason, a student must withdraw from the Professional Component of a program, readmission will require approval of the appropriate Department Chair and the Dean of the College.

Undergraduate students majoring in Speech and Hearing Sciences must complete each SHS course with a grade of "C" or better. "C" reflects only the letter grade since some courses will require an 80% or 90% competency level-point average in order to be considered passing level. Speech and Hearing majors are expected to maintain an overall grade-point average acceptable for admission to the graduate program.

TRANSIENT COURSE WORK CREDIT

All students enrolled in the Pat Capps Covey College of Allied Health Professions must receive prior approval from both the Chair of the Department and the Dean before taking courses in their major field at another institution. Failure to obtain prior approval may result in loss of credit for the course work.

ADMISSION TO PROFESSIONAL PROGRAMS

The Dean of the Pat Capps Covey College of Allied Health Professions oversees the establishment and monitoring of the admission standards for the Professional degree programs. Each student must meet the admission standards of the program for which he/she is applying. However, because of limited capacities, admission is on a competitive basis. Notice of actions on applications for admission is provided by the respective departments. Any other correspondence between students and faculty members, department chairs, and/or administrative officers does not constitute nor does it imply admission to any specific program.

Application forms and other information may be obtained from each department's web site or by contacting the department directly.

MINIMUM COLLEGE REQUIREMENTS FOR ADMISSION TO GRADUATE PROGRAMS

In addition to the minimum requirements set by the Graduate School, students applying to graduate programs in the Pat Capps Covey College of Allied Health Professions must take the Graduate Record Examination (GRE). The minimum GRE score required to apply for admission to each graduate program is established by the program's admissions committee. Interested students should check the specific requirements for every program.

DOCTORAL LEVEL DEGREE PROGRAMS

The Pat Capps Covey College of Allied Health Professions offers a Ph.D. degree in Communication Sciences and Disorders and two professional doctoral degrees, the Doctor of Audiology (AuD) and the Doctor of Physical Therapy (DPT). The Ph.D. degree is administered through the Department of Speech Pathology and Audiology, the College, and the Graduate School. The two professional doctoral degrees are administered through the respective departments and the Pat Capps Covey College of Allied Health Professions. These professional doctoral degrees are designed to provide the knowledge and skills required to function as entry-level practitioners and for licensure in professional fields of study. Program requirements for all doctoral programs can be found under the respective departmental information.

PROFESSIONAL DOCTORAL DEGREE REQUIREMENTS

DOCUMENTS REQUIRED FOR ADMISSION

All documents required for admission review such as transcripts, test scores and letters of recommendation must be official. Transcripts must be mailed from the home institution to the department. Scores from testing agencies must be sent directly to the University. These documents become the property of the University of South Alabama. Students applying for admission to the Pat Capps Covey College of Allied Health Professions Professional Doctoral degree programs must pay the specified non-refundable processing fee by the appropriate deadline. If a student decides to apply to another program, a new processing fee and application must be submitted.

CATEGORIES OF ADMISSION

Applicants to the Professional Doctoral programs may be admitted in one of the following categories.

Admission Categories:

1. Regular Admission Requirements:
   - (a) A bachelor's degree from an accredited institution of higher education.
     - (i) Doctor of Audiology: must meet all requirements for admission as specified in the Doctor of Audiology section in this **Bulletin**.
     - (ii) Doctor of Physical Therapy: must meet all requirements for admission as specified in the Doctor of Physical Therapy section of this **Bulletin**.
   - (b) A minimal grade-point average of 3.00 on all undergraduate work (A=4.00). The grade-point average used is that computed by the department.
   - (c) Sufficient courses in the major to qualify for professional doctoral study in the involved discipline. A student who has course deficiencies in the discipline but who otherwise qualifies for Regular Admission will be required to complete appropriate prerequisite course work.
   - (d) Recommendation of the appropriate Coordinator/Chair, the College Director of Graduate/Professional Studies and the Dean of the College.
   - (e) International students must submit documentary evidence showing TOEFL test scores of at least 600 (written form), 250 (computer version) or 100 (internet based version), or bachelor's or graduate degrees earned at accredited

United States institutions of higher education. Some programs may also require the Test of Written English and the Test of Spoken English.

(f) A Graduate Record Examination (GRE) score must be officially reported to the University of South Alabama Office of Admissions. The GRE must have been taken within the last five years.

(g) For those students who have had previous graduate work, performance at the graduate level may be taken into consideration. An earned professional degree may substitute for some admission requirements (see description under specific program).

2. Provisional Admission Requirements: Students who do not meet the requirements for Regular Admission may be admitted in the Provisional Admission category. A student in provisional status will not be allowed to enroll in courses other than those specified by their program of study. Provisional Admission requires:

(a) A bachelor's degree from an institution of higher education.

(i) Doctor of Audiology: must meet all requirements for admission as specified in the Doctor of Audiology section in this **Bulletin**.

(ii) Doctor of Physical Therapy: must meet all requirements for admission as specified in the Doctor of Physical Therapy section of this **Bulletin**.

(b) A minimal grade-point average of 2.5 on all undergraduate work (A=4.00) or 2.75 on the last 64 hours of college work. The grade-point average used is that computed by the department.

(c) Recommendation of the appropriate Coordinator/Chair, the College Director of Graduate/Professional Studies and the Dean of the College.

(d) International students must submit documentary evidence showing TOEFL test scores of at least 600 (written form), 250 (computer version) or 100 (internet based version), or bachelor's or graduate degrees earned at accredited United States institutions of higher education. Some programs may also require the Test of Written English and the Test of Spoken English.

(e) A Graduate Record Examination (GRE) score must be officially reported to the University of South Alabama Office of Admissions. The GRE must have been taken within the last five years.

3. Change from Provisional to Regular Enrollment Status

(a) Provisional students will be eligible for Regular status after accruing a minimum of nine (9) semester hours of course work taken at the University of South Alabama for credit toward degree requirements, provided at least a "B" average is maintained in all such work attempted. No more than 15 semester hours of credit may be earned as a Provisional student. The Provisional student who does not have a 3.0 GPA upon completing 15 semester hours of graduate credit applied toward the degree will be academically dismissed from the program. See appropriate department section of this publication for any additional requirements. At all times, students are subject to the policies stated in the Section entitled "Academic Dismissal."

(b) Change to regular status requires approval by the appropriate Coordinator/ Chair, the College Director of Graduate/ Professional Studies and the Dean of the College.

4. Admission as a Non-Degree student

(a) Students holding baccalaureate degrees from accredited institutions of higher education who are interested in taking courses in a professional program may do so upon approval of the department Chair and the Graduate/Professional Coordinator of the College. Prerequisites for the course(s) requested must be met.

(b) Before applying for admission as a Non-Degree student, interested students should contact the Chair in the specific department. The department may limit the enrollment of Non-Degree students and/or the specific courses in which they may enroll. After admission, permission to enter each course is obtained from the Chair in the department. Non-Degree students subsequently seeking admission into one of the Professional degree programs must submit a formal application to the department. The student's record in graduate courses taken while in the Non-Degree status may be considered. A maximum of 15 semester hours of graduate credit earned while in Non-Degree status may be applied toward a Professional degree if the student is later admitted to a program of study.

PROFESSIONAL DOCTORAL PROGRAMS ACADEMIC STANDARDS

WITHDRAWAL

A student who withdraws from the University or from a course will have "WD" recorded on his permanent record, provided the withdrawal occurs within the time limits listed in the official Academic Calendar. Withdrawal after the time limit can only be approved by the Dean of the Pat Capps Covey College of Allied Health Professions upon the recommendation of the department Chair.

GRADE STANDARDS

The grading system for Allied Health Professional Doctoral degrees include "A", "B", "C", "D" and "F". A minimum overall Grade-Point Average (GPA) of 3.0 must be maintained throughout the program. A maximum of eight semester credits of courses with the grade of "C" may be counted toward a degree program. Students may, with approval of the departmental faculty, repeat a course in which a "C" has been earned. Any grade lower than a "C" in any course will result in academic dismissal from the program. Students may appeal dismissal to the Department Academic Standards Committee, but reinstatement is not automatically granted and will be evaluated on a case-by-case basis.

CHANGE OF GRADE

Grades reported for Professional degree students by instructors to the Registrar may not be changed except in case of error in records or in evaluation. Grade changes require the approval of the instructor of record, with information regarding the change provided to the department Chair, the Director of Graduate/ Professional Studies, and the Dean of the Pat Capps Covey College of Allied Health Professions. Grades on record for one-calendar year may not be changed for any reason.

ACADEMIC DISMISSAL-PROBATION STATUS

Any term in which a graduate student drops below an overall 3.0 GPA, the student is placed on probationary status and has a period of one semester to attain an overall 3.0 GPA or be dismissed from the program.

A student in the status of Provisional Admissions who does not have a 3.0 GPA upon completing 15 semester hours of graduate credit applied toward the degree will be academically dismissed from the program.

Students who receive more than 8 credit hours of "C" in courses that could be used for credit towards their professional degree, will be dismissed from their program. The student may request the Departmental Academic Standards Committee to be allowed to retake up to one course in order to reduce the number of hours of "C" within the 8-hour limit. If the student cannot reach this limit by retaking only one course, he/she will be dismissed from the program. If the student is allowed to remain in the program by retaking one course, any "C" grades in future courses will also result in automatic dismissal from the program.

In addition, any grade lower than a "C" will also result in academic dismissal. Students may appeal a dismissal to the Department Academic Standards Committee, but reinstatement is not automatically granted and will be evaluated on a case-by-case basis.

A student who is academically dismissed from a program will not be allowed to re-apply to the same program.

ACADEMIC MISCONDUCT DISMISSAL

A student dismissed from a Professional Doctoral program as the result of an academic misconduct penalty will be automatically dismissed from the College and the University of South Alabama and will not be eligible to apply for readmission to that program.

FINAL GRADE GRIEVANCE POLICY

A student may initiate an inquiry under procedures set forth in *The Lowdown* (www.southalabama.edu/lowdown/).

APPEAL PROCEDURE

Students may appeal academic dismissal, academic misconduct dismissal and final grade grievance decisions under specified circumstances. Information concerning this procedure may be obtained from the office of the Dean of the College.

ENGLISH LANGUAGE PROFICIENCY

English is the language of instruction at the University of South Alabama. All international students, regardless of TOEFL score, are required

to take the English Language Proficiency Examination administered at this University during the International Student Orientation of the first semester in which they are enrolled. Students with deficiencies in any of the various areas of command of English (oral comprehension, reading comprehension, grammatical structure, vocabulary, etc.) may have appropriate ESL courses or additional remedial work required. See appropriate section under each department.

REGISTRATION

Registration (making course selections and enrolling in classes) occurs prior to the beginning of each semester. Students must register via the Web utilizing USA's PAWS (Personal Access Web System). (See the University Schedule of Classes for additional information.)

TRANSFER CREDIT

A maximum of twenty-five (25) semester hours of transfer credit from regionally accredited universities may be accepted by a program. Prior approval of the Chair of the department and College Director of Graduate/Professional Studies is required. For specific information concerning Transfer Credit see appropriate section under Pat Capps Covey College of Allied Health Professions or contact the Chair of the specific program. Only courses with "A" or "B" grades are acceptable for transfer.

STUDENT RESPONSIBILITY

While the Pat Capps Covey College of Allied Health Professions will endeavor to provide timely and accurate advisement, it is the responsibility of the student to know and satisfy the degree requirements of the academic program, to be aware of the University and College academic calendar and to understand and comply with University and College academic policies and procedures.

APPLICATION FOR DEGREE

Each candidate for the Doctor of Audiology or Doctor of Physical Therapy degree must make application for the degree during the semester preceding the semester of graduation at the Registrar's Office. The dates are specified in the University Calendar.

DEPARTMENT OF BIOMEDICAL SCIENCES

Chair: William B. Davis (251) 445-9265
Professors: Davis, Spector, Turrens
Professor Emeritus: Covey
Associate Professor: Stanfield, Mockett
Assistant Professors: Dugger, Thulasiraman, Shokolenko, Swiger
Clinical Assistant Professor: Ravine

Department of Biomedical Sciences web site http://www.southalabama.edu/alliedhealth/biomedical

The Department of Biomedical Sciences is dedicated to providing excellent undergraduate preparation for those students interested in pursuing careers in medicine, dentistry, basic medical research, biomedical education or other health professions. The curriculum is designed to provide students a strong general education in the humanities, arts, social sciences, mathematics, and sciences, followed by in-depth study in the basic medical sciences. The program offers an optional **Honors Research Thesis** (BMD 499) to qualified students consisting of a first-hand research laboratory apprenticeship in biomedical research under the mentorship of a faculty scientist. Students interested in the **Honors Research Thesis** option should contact Dr. Michael Spector for information. The Biomedical Sciences curriculum as a whole is aimed at establishing a conceptual framework from which the student can pursue postbaccalaureate educational experiences in the biomedical sciences, particularly medicine, dentistry, or Ph.D. study in Basic Medical Sciences, as well as in a variety of health and science related fields. In addition, the Department of Biomedical Sciences offers basic medical science course work that serves as a background for students wishing to pursue professional component programs in the Pat Capps Covey College of Allied Health Professions. For more information, visit the departmental web site at: http://www.southalabama.edu/alliedhealth/biomedical/.

PREPROFESSIONAL ADVISING PROGRAM

Students planning to major in Biomedical Sciences who also have plans to attend medical, dental, optometry, physician assistant, veterinary or pharmacy school are advised by a Pat Capps Covey College of Allied Health Professions advisor and by a Health Preprofessional advisor.

Cindy Stanfield, Ph.D.
Health Preprofessional Advisor
HAHN 4004
(251) 445-9280

Academic Advisor
Pat Capps Covey College of Allied Health Professions
HAHN 3028
(251) 445-9260

REQUIREMENTS FOR A MAJOR IN BIOMEDICAL SCIENCES
(121 semester hours including the following)

Area I - Written Composition	**(6)**
EH 101, 102	3, 3
Area II - Humanities & Fine Arts	**(12)**
CA 110	3
ARH 100, ARH 103, ARH 123, ARH 240, ARH 242, ARS 101, DRA 110, MUL 101	3
EH 215 or EH 216 or EH 225 or EH 226 or EH 235 or EH 236	3
*Humanities Elective (recommend PHL 121 if HY sequence chosen)	3
Area III - Natural Sciences & Math	**(12)**
MA 125	4
CH 131/CH 131L, CH 132/CH 132L	4, 4
Area IV - History, Social and Behavioral Sciences	**(12)**
PSY 120	3
HY 101 or HY 102 or HY 135 or HY 136	3
SY 109	3
*Social Science Elective	3
Area V - Preprofessional, Major and Electives	**(29)**
BLY 121/BLY 121L, BLY 122/BLY 122L	4, 4
CH 201, CH 202	4, 4
PH 114, PH 115	5, 5
ST 210	3

*Must complete two course sequence in Literature or History
*Students must pass CIS 010 proficiency exam

MAJOR REQUIREMENTS

Humanities/Fine Arts	3
General Elective	3
Biomedical Sciences courses:	
BMD 201 - Seminars in Biomedical Sciences	1
BMD 311 - Human Anatomy	3
BMD 321 - Biochemistry I	3
BMD 322 - Biochemistry II	3
BMD 323 - Biochemistry Laboratory	1
BMD 334 - Human Physiology I	3
BMD 335 - Human Physiology II	3
BMD 336 - Physiology Laboratory (W)	1
BMD 401 - Immunology	3
BMD 402 - Medical Microbiology	5
BMD 410 - Pathophysiology	3
BMD 430 - Neuroscience*	4
BMD 450 - Introduction to Research	2
BMD 493 - Issues in Biomedical Sciences (W)	3
And either	
BMD 499 (*Honors students taking BMD 499 may substitute BMD 420 for BMD 430 above; See Advisor)	6
OR	
BMD 420 (3 credits) plus at least 3 credits of Math/Science Elective (BMD 210, 350, 494, MA 126, ST 310, BLY 205, 215, 311, 341, 363, 459, CH 265, CH 499 or other courses as approved)	6

REQUIREMENTS FOR A MINOR IN BIOMEDICAL SCIENCES

A minimum of 18 credits in Biomedical Sciences, including BMD 311, 321, 322, 334, 335, and 3 additional BMD credits. At least 50% of the credit hours must be taken in the Department of Biomedical Sciences.

DESCRIPTIONS OF ALL BIOMEDICAL SCIENCES (BMD) COURSES BEGIN ON PAGE 181.

DEPARTMENT OF CARDIORESPIRATORY CARE

Chair: William Wojciechowski (251) 445-9284
Medical Director: Wiley Justice
Professors: Chang, Op't Holt
Associate Professor: Wojciechowski
Senior Clinical Instructor: Pruitt

Department of Cardiorespiratory Care web site http://www.southalabama.edu/alliedhealth/crc

The University of South Alabama offers a complete program in Cardiorespiratory Care leading to the Bachelor of Science degree. The curriculum provides a broad education in liberal arts and basic sciences and an in-depth study in respiratory therapy and non-invasive cardiovascular technology. The program is accredited by the Commission on Accreditation for Respiratory Care (CoARC). Upon graduation students are eligible to sit for the National Board for Respiratory Care Examination for entry into practice.

The curriculum is divided into two components: the Pre-Professional Component and the Professional Component.

PRE-PROFESSIONAL COMPONENT

The Pre-Professional Component (freshman and sophomore years) may be completed in two years and consists of 66 semester hours of prescribed and elective course work.

PROFESSIONAL COMPONENT

The Professional Component (junior and senior years) consists of two years of academic and clinical study in Cardiorespiratory Care. The program includes one summer term between the junior and senior years. All candidates must have satisfied the requirements of the Pre-Professional Component to qualify for admission to the Professional Component. **Enrollment into the Pre-Professional Component as a Cardiorespiratory Care major does NOT automatically assure the student admission to the Professional Component**. Enrollment in the Professional Component is limited and admission is based on academic record and aptitude for a career in respiratory therapy and non-invasive cardiovascular technology as evidenced by personal qualifications such as character and motivation.

Students will be required to complete formal application to the Professional Component. The application process normally begins in the spring semester of the sophomore year.

PROBLEM-BASED LEARNING CURRICULUM

The Cardiorespiratory Care curriculum is a problem-based curriculum. This instructional methodology requires students to be active participants in the learning process. This method of teaching is used to develop and improve the students' problem-solving abilities.

In the curriculum, students work in groups (5-7 students) and solve case studies under the direction of faculty members. Students assume the major responsibility for resolving the problems in the case studies by utilizing a variety of resources.

This approach to learning emphasizes self-direction, independent thinking, decision-making, information gathering, and problem solving. All of these skills are needed to succeed in the clinical setting. Students also develop and improve communication skills through this process, as they interact with fellow students, instructors, and other health care personnel. Students learn the value of working together as a team through the small group process.

ADMISSION REQUIREMENTS FOR THE PROFESSIONAL COMPONENT

1. Completed application form with appropriate application fee submitted no later than March 15 of the year for which admission is requested. (Late applications will be evaluated based on individual circumstances.)
2. A minimum of a 2.5 cumulative grade-point average in the science prerequisites.
3. A minimum of a 2.5 cumulative grade-point average in the Pre-Professional Component.
4. A personal interview with the Cardio-respiratory Care Admissions Committee.
5. Tour of hospital.
6. International students must score a minimum of 76 on the TOEFL exam to include the following minimum subscores on the IBT:
   - Listening 20
   - Speaking 20
   - Reading 18
   - Writing 18

The IELTS exam will not be used as an admission requirement to the Cardiorespiratory Care Program.

REQUIREMENTS FOR A MAJOR IN CARDIORESPIRATORY CARE

Successful completion of 129 semester hours of Pre-Professional and Professional course work as specified below.

I. Pre-Professional Component

Area I - Written Composition	**(6)**
EH 101, EH 102	3, 3
Area II - Humanities and Fine Arts	**(12)**
CA 110	3
ARH 100, 103, ARH 123, ARH 240, ARH 242, ARS 101, DRA 110, MUL 101	3
EH 215 or EH 216 or EH 225 or EH 226 or EH 235 or EH 236	3
*Humanities Elective (recommend PHL 121 or PHL 131 if HY sequence chosen)	3
Area III - Natural Sciences and Math	**(11)**
MA 112	3
CH 131/CH 131L, CH 132/CH 132L	4, 4
Area IV - History, Social and Behavioral Sciences	**(12)**
PSY 120	3
SY 109	3
HY 101 or HY 102 or HY 135 or HY 136	3
*Social Science Elective	3
Area V - Pre-Professional, Major and Electives**	**(25)**
ST 210	3
BLY 121/BLY 121L	4
PH 104	4
BMD 210	3
BMD 114, BMD 115	8
CIS 150	3

*Must complete two course sequence in Literature or History.

**All Area V courses are required for entry into the Cardiorespiratory Care Program.

II. Professional Component

Junior Year

Fall		**Spring**	
CRC 330	5	CRC 335	5
CRC 331	3	CRC 345	6
CRC 334	3	CRC 332	4
CRC 342	3		**15**
	14		

Summer

CRC 415	2
CRC 430	3
CRC 431	3
	8

Senior Year

Fall		**Spring**	
CRC 435	3	CRC 441	6
CRC 440	6	CRC 446	2
CRC 450	2	CRC 451	2
CRC 447	2	CRC 460	3
	13		**13**

In special situations, advanced standing may be available in the form of transfer credits and equivalency examinations. Documentation of pertinent information submitted by advanced-standing applicants, such as individuals having an associate degree in respiratory therapy, certified respiratory therapy technicians, or practitioners credentialed in other allied health professions, will be reviewed by the Cardiorespiratory Care Admissions Committee to determine the actual awarding and the method of advanced standing. Applicants seeking advanced standing at the University of South Alabama should consult directly with the Chair of the Department of Cardiorespiratory Care, 5721 USA Drive N, HAHN 3137, Mobile, Alabama 36688, Phone: (251)445-9284.

Special Fees

A special course fee is assessed in each of the following courses:

CRC 330	$60.00
CRC 431	$125.00
CRC 450	$19.00
CRC 451	$19.00

MASTER OF SCIENCE IN INSTRUCTIONAL DESIGN AND DEVELOPMENT WITH RESPIRATORY THERAPY EDUCATOR PREPARATION ELECTIVES

The College of Education, through an agreement with the Department of Cardiorespiratory Care offers an innovative Master of Science Degree in Instructional Design and Development live and online. This degree will prepare baccalaureate degree, registered respiratory therapists (RRTs) for the teaching profession. This internationally recognized IDD program uses state-of-the-art technology to deliver high-quality, affordable courses, both live and via Internet, enabling the completion of most of this degree from anywhere in the world. These courses and selected electives will fulfill the need for RRTs who aspire to teach respiratory therapy at the university and community college levels.

ADMISSION REQUIREMENTS

1. Bachelor's degree;
2. Registered Respiratory Therapist credential (National Board for Respiratory Care); and
3. Graduate Record Examination (GRE) or Millers Analogy Test (MAT) with the GRE writing component.

For detailed information regarding requirements, admissions, courses, and registration, please refer to the description of the IDD Master's program in the **Bulletin**.

For more information, go to: http://idd.southalabama.edu/ or contact the department:
Department of Cardiorespiratory Care
HAHN Room 3137
University of South Alabama
Mobile, Alabama 36688
Telephone: (251) 445-9284
E-mail: toptholt@jaguar1.usouthal.edu

DESCRIPTIONS OF ALL CARDIORESPIRATORY CARE (CRC) COURSES BEGIN ON PAGE 203.

DEPARTMENT OF EMERGENCY MEDICAL SERVICES EDUCATION

Chair: Charles Erwin, M.A. NRP (251) 461-1832
Program Directors: Brooks, Morgan,
AGEMSS: D. Garmon

Medical Director: Frank S. Pettyjohn, M.D.
Instructors: Brooks, Creel, Erwin, Garmon, McArthur, Morgan
Academic Advisors: Brooks, Creel, Morgan, McArthurr
Part-time Instructors: A. Day, B. McKenna, J. Powell, S. White
Clinical Faculty: S. McArthur
CME Coordinator: K. McKenna

Home Page: http://www.southalabama.edu/Alliedhealth/ems

PROGRAMS OFFERED:
Certificate Program in Emergency Medical Technician - (EMT)
Certificate Program in Advanced Emergency Medical Technician (AEMT)
Certificate Program in Paramedic
Bachelor of Science in Emergency Medical Services
Bachelor of Science in Professional Health Sciences (Healthcare Informatics)
Bachelor of Science in Professional Health Sciences (Healthcare Management)

The Department of EMS Education prepares students for careers in Emergency Medical Services. To meet the expanding role of pre-hospital providers, the Department of EMS Education offers three certificate programs, EMT, AEMT and Paramedic, as well as a Bachelor of Science in Emergency Medical Services.

CERTIFICATE PROGRAMS

The EMT certificate program can be completed in one academic semester and is a prerequisite to the Advanced EMT (AEMT) certificate program. The AEMT certificate program can be completed in one academic semester and is a prerequisite to the Paramedic certificate program. The Paramedic certificate program can be completed in three academic semesters. Together, these programs can be completed in five semesters. Students may, however, elect to complete only the EMT level of education, or the AEMT level of education. After successful completion of each level of education, the student is eligible to sit for the National Registry of EMT's (NREMT) certification examination. Successful completion of this examination is mandatory for licensure to practice in the State of Alabama. State licensure as an EMT is required to apply for AEMT education. State licensure as an AEMT is required to apply for Paramedic education. Those who complete any level of education and licensure are qualified to work in escalating roles (by level) in many areas of out-of-hospital emergency medical care, including ambulance services, fire rescue departments, and industrial health and safety settings.

BACHELOR OF SCIENCE IN EMERGENCY MEDICAL SERVICES PROGRAM

Students graduating from USA's Paramedic certificate program, as well as licensed Paramedics from other educational institutions, may continue their education at USA and complete a Bachelor of Science Degree in Emergency Medical Services. The baccalaureate program is designed to provide graduates of the certificate program with an opportunity to expand their careers in Emergency Medical Services as administrators, educators and Critical Care Paramedics, or continue their graduate educations into other medical or allied health fields.

ADMISSIONS

General admission to the University is required for all levels of EMS education. Additionally, admission to all EMS programs is contingent upon a satisfactory background check and drug screen. The following are admission requirements for the Bachelor of Science degree program:

The following are admission requirements for the EMS certificate program:

- General admission to the University is required for all levels of EMS education.
- Admission to all EMS programs is contingent upon a satisfactory background check and drug screen.
- All incoming students into the EMS Paramedic programs must have passed the HOBET exam with minimum combined score of 60.
- All incoming international students into the EMS programs must have passed the TOFEL exam with a minimum combined score of 80 IBT (Internet Based Testing)
- Academic advising prior to admission to any certificate level. Completion of all health-care, administrative and documentation requirements.
- Completion of all mandatory requirements at least one week prior to the beginning of the semester.
- Evidence of a current State of Alabama EMT license prior to admission to AEMT program.
- Evidence of a current State of Alabama AEMT license prior to admission to Paramedic program.

The following are admission requirements for the Bachelor of Science degree program.

- Evidence of successful completion of a nationally accredited or State approved paramedic program, or currently enrolled in the EMS program at the University of South Alabama.
- Evidence of a current state paramedic license or national certification.
- Official transcript or documentation which indicates the successful completion of at least 32 semester hours of paramedic credit (or its equivalent).
- Submission of departmental application per University admission policy including a $50 application fee.
- Minimum GPA of 2.0 in all prerequisite courses and a minimum university GPA of 2.0.
- Submission of a one to two page written essay explaining professional goals and career aspirations.

ADMISSION TO PARAMEDIC TO B.S. IN EMS TRACK

The Department of EMS Education has a track designed especially for licensed Paramedics who obtained their paramedic education elsewhere. In addition to meeting all other admissions requirements, students in this track are required to take a six hour bridge course. Upon completion of the bridge course, up to 40 semester hours of credit will be awarded for the student's previous paramedic training during the final semester before graduation.

PROGRESSION AND COMPLETION POLICIES

To progress throughout the certificate program, a minimum final grade of 80% (or satisfactory, if applicable) must be achieved in each course. The State of Alabama mandates the National Registry of EMT's examination at the EMT, AEMT and Paramedic levels of practice. Only those students who have met all academic requirements of the certificate program will be eligible for their respective National Registry examination.

Students unable to satisfactorily complete the final comprehensive examinations in EMS 297 will be required to repeat this course the following semester.

Students will be allowed to repeat any course only one time, and then only with the permission of the Program Director.

In accordance with State EMS Rules, each student must be a state licensed EMT prior to beginning AEMT instruction, and a licensed AEMT prior to beginning paramedic instruction.

All other criteria for progression will be listed in each course syllabus and will be mandatory.

CLASS AND CLINICAL INTERNSHIPS

Attendance is mandatory. Those students who have conflicts regarding attendance will be asked to transfer to programs more suited to their schedules.

EXPENSES

Students enrolled in EMS clinical courses must maintain current CPR certification and must keep all immunizations current. Each semester of education; EMT (one semester), AEMT (one semester) and Paramedic (three semesters) have clinical components and current immunization status will be reviewed prior to the beginning of each semester by the Clinical Coordinator to prevent unprotected exposure to communicable diseases during clinical activity. **Students are responsible for all personal health care expenses including expenses resulting from injury or accident, etc., while the student is engaged in learning experiences required by the EMS Department**. Therefore, all students are responsible for the purchase and maintenance of current and adequate health care insurance. All students are charged once a year for professional liability insurance. Students are responsible for all travel expenses to clinical sites and classes at the University. Students are responsible for the purchase of uniforms and required clinical equipment and supplies. Students are also responsible for costs related to drug testing and criminal background checks required to be current and/or updated prior to advancement to each subsequent level of education. Tuition and fees are set by the University of South Alabama, upon approval of the Board of Trustees.

BACKGROUND EXAMINATION

Those students accepted into the clinical components of EMT, AEMT and Paramedic will be required to have a drug test and a background examination via an EMS Department designated

vendor before beginning classes. Admission will be withdrawn for a student testing positive on their drug test. Admission may be withdrawn for students who in the judgment of the Dean and the Department Chair has been convicted of offenses or have pending criminal charges that would not be acceptable to our clinical agencies. Random drug screens or testing for reasonable suspicion are conducted. Students must submit to drug testing for controlled substances and background examinations as requested. Failure to submit to testing or a positive drug test and/or unsuitable background examination will result in the student's dismissal from the program.

PROFESSIONAL ACCREDITATION

The Department's Paramedic Program is fully accredited by the Commission on the Accreditation of Allied Health Education Programs (CAAHEP) and the Committee on Accreditation of Educational Programs for the EMS Professions (CoAEMSP).

CURRICULUM

The basis for the curriculum is the 2009 National EMS Educational Standards.

CERTIFICATE PROGRAMS

EMT CERTIFICATION PROGRAM - 8 Hours (1 Semester)

First Semester

EMS 112: EMT	6
EMS 113: EMT Lab	1
EMS 115: EMT Clinical Internship	1
	8

ADVANCED EMT (AEMT) CERTIFICATE PROGRAM - 15 Hours (1 Semester)

EMS 210: Medical Terminology	3
EMS 200: Human Systems and Pathophysiology (or BMD 114 and 115)	3
EMS 140: Advanced EMT	6
EMS 141: Advanced EMT Lab	1
EMS 143: Advanced EMT Clinical	2
	15

PARAMEDIC CERTIFICATE PROGRAM - 31 Hours (3 Semesters)

First Semester

EMS 212: Foundations of Paramedicine	3
EMS 214: Introduction to EMS Cardiology	3
EMS 216: Paramedic Assessment and Operations	3
EMS 217: Paramedic Clinical Internship I	3
	12

Second Semester

EMS 240: Special Populations	3
EMS 242: Paramedic Emergency Care I	3
EMS 244: Paramedic Emergency Care II	3
EMS 245: Paramedic Skills Lab	1
EMS 247: Paramedic Clinical Internship II	2
	12

Third Semester

EMS 295: Paramedic Field Internship	6
EMS 297: Comprehensive Review and Exams	1
	7

SPECIAL NOTES:

Academic advising is required of all new and existing students prior to each semester. It is the responsibility of each student to schedule an advising session with the academic faculty advisor prior to registration each semester.

BACHELOR OF SCIENCE PROGRAM

Freshman Year

1st Semester		2nd Semester	
EH 101	3	EH 102	3
Any LAB science	4	Any LAB science	4
HY*	*3	SY 109	3
Fine Arts Elective	3	MA 110 or 112	3
Total	**13**	CA 110	3
		Total	**16**

Sophomore Year

1st Semester		2nd Semester	
Literature*	3	2nd HY or Lit*	3
PSY 120	3	EMS 200	3
EMS 112	6	EMS 140	6
EMS 113	1	EMS 141	1
EMS 115	1	EMS 143	2
EMS 210	3	**Total**	**15**
Total	**17**		

Junior Year

1st Semester		2nd Semester	
MGT 300	3	EMS 240	3
EMS 212	3	EMS 242	3
EMS 214	3	EMS 244	3
EMS 216	3	EMS 245	1
EMS 217	3	EMS 247	2
Total	**15**	**Total**	**12**

Senior Year

1st Semester		2nd Semester	
EMS 295	6	EMS 325	3
EMT 297	1	EMS 340	3
EMS 310	3	EMS 440	3
EMS 315	3	EMS 445	3
EMS 320	3	EMS 475	3
EMS 460	3	EMS 495	1
Total	**19**	**Total**	**16**

Total Credits 123

*Must complete a two semester series of either Literature or History.

Fine Arts Elective - 1 course. Acceptable include: ARH 100, 103, 123, ARS 101, DRA 110, or MUL 101

Literature Elective* - 1 course. Acceptable include: EH 215, 216, 225, 226, 235, or 236

Humanities Elective* - 1 course. Acceptable include: AFR 101, AIS 105, ARH 100, 103, 123, ARS 101, 121, 123, 124,, DRA 110, EH 216, 225, 226, 235, 236, LG 211, 212, 231, 232, 251, 252, 271, 272, LGS 202, 206, LGS 207, 221, 222, 241, 242, MUL 101, PHL 110, 121, 131, 231, or 240

Lab Science* - 2 courses. Acceptable include: BLY 101/101L, 102/102L, 121/121L, 122/122L, CH 101/101L, 103/103L, 132/132L, 141/141L, GEO 101/101L, 102/102L, GY 111, 112, PH 101, 114, 115, 201, 202.

History Elective * - 1 course. Acceptable include: HY 101, 102, 135, or 136

Social Science Elective* - 1 course. AIS 201, AN 100, 101, CA 100, 211, ECO 215, 216, GEO 114, 115, HY 101, 102, 135, HY 136, IS 100, PSC 130, PSY 121, 250,, SY 112

*Must complete a 2 course sequence in Literature or History

Acceptable sequences are: EH 215 and 216 or EH 225 and 226 or EH 235 and 236 or HY 101 and 102 or HY 135 and 136

DESCRIPTIONS OF EMERGENCY MEDICAL SERVICES (EMS) COURSES BEGIN ON PAGE 224.

BACHELOR'S DEGREE IN PROFESSIONAL HEALTH SCIENCES

The Department of Emergency Medical Services offers two BS degrees in Professional Health Sciences, Healthcare Management and Healthcare Informatics. This program is designed for students who wish to have a well rounded background in health sciences, but do not wish to pursue a specific professional degree or allows students in pre-professional programs that change their mind about specific professional degrees to apply most of their course credits towards another degree. The program provides broad information in health related disciplines and also in health informatics. Graduates from this program should be suited to work at hospitals, health insurance companies, pharmaceuticals, long-term care facilities, assistant to hospital managers, physician offices, or health informatics technicians. They could also pursue an MBA to go into hospital administration.

Admission to the Health Sciences Component

All students are required to fulfill a 41 semester hour General Education Core and a 21 semester hour Preprofessional Core as outlined in the curriculum below. After successfully completing these courses, students may then apply to the department for entry into the Health Sciences component. Requirement for admission to the professional component is the following:

- Minimum GPA of 2.0 in all pre-requisite courses and a minimum University GPA of 2.0.

Bachelor's Degree in Professional Health Sciences Curriculum

General Education Core - 41 Hours

Written Composition	**(6)**
English - EH 101	3
English - EH 102	3
Humanities and Fine Arts	**(12)**
Public Speaking/Speech - CA 110	3
Fine Arts Elective	3
Literature I	3
-and-	
Literature II*	3
-or-	
Humanities Electives	3
Natural Sciences and Math	**(11)**
Math - MA 112	3
Biology - BLY 101 or 121	4
Any Lab Science	4
History, Social Sciences	**(12)**
Psychology - PSY 120	3
Sociology - SY 109	3
History I	3
-and-	
History**	3
-or-	
Social Science Electives	3

*Must complete a two semester series of either Literature or History

Pre-Professional Core - 21 hours

EMS 110 - Emergency Medical Responder or General Elective (3) or Science Elective (4)	3
EMS 104 - First Aid/CPR	1

ST 210 - Statistical Reasoning and Applications	3
EMS 210 - Medical Terminology	3
BMD 210 - Infectious Disease in Health Care	3
BMD 114 - Human Anatomy and Physiology I	4
BMD 115 - Human Anatomy and Physiology II	4

Health Sciences Core (Required for both HCS tracks) - 48 hours

EMS 310 - Introduction to EMS Systems	3
EMS 320 - EMS Law/Legal Issues	3
EMS 340 - Disaster Mgt & Event Planning	3
EMS 440 - Health Insurance/Managed Care in EMS	3
EMS 460 - Issues and Trends in EMS or General Elective	3
EMS 401 - Seminar in Allied Health Professions	3
CP 450 - The Job Campaign	3
MGT 300 - Management Theory	3
EH 372 - Technical Writing (W)	3
FIN 300 - Personal Finance	3
CA 275 - Small Group Discussion	3
Sociology or Psychology Electives (300 + Levels)	15

TRACK 1: Health Care Management Core - 12 hours

MGT 305- Organizational Communication	3
MGT 340 - Organizational Behavior	3
MGT 351 - Human Resource Management	3
MKT 320 - Principles of Marketing	3

TRACK 2: Health Care Informatics Core - 12 hours

ISC 300 - Health Informatics Clinical Environment	3
ISC 410 - Health Informatics	3
ISC 450 - Health Systems Analysis & Design	3
ISC 455 - Health Decision Support System	3

Total credits: 122

EMS CONTINUING EDUCATION TRAINING

The Department of Emergency Medical Services Education provides continuing education For EMS and other Allied Health professions. The Department of EMS provides non-credit and continuing education courses for emergency medical services (EMS) personnel, as well as nurses, physicians and other allied healthcare professionals in the community. The EMS department has been designated as an authorized community training center (CTC) of the American Heart Association. The Center also provides other non-credit training courses of interest to the emergency response community. Below are the Center's main course offerings. Please call for a schedule of classes.

Advanced Cardiac Life Support (ACLS) Provider

Designed for healthcare professionals whose daily occupation demands proficiency in the knowledge and skills of adult resuscitation. A current BLS card is recommended. Course is taught in two (2) consecutive eight (8) hour days.

Pediatric Advanced Life Support (PALS) Provider

Designed for healthcare professionals whose daily occupation demands proficiency in the knowledge and skills of pediatric resuscitation. A current BLS care is recommended. Course is taught in two (2) consecutive eight (8) hour days.

Basic Life Support (BLS) - Healthcare Provider CPR

Designed for healthcare professionals and laypersons who may need to provide either basic cardiopulmonary resuscitation (CPR) or foreign body airway obstruction (FBAO) management in either children or adults, and who need the training to be able to provide two-rescuer CPR. The course can be taught in one (1) eight (8) hour day.

American Heart Association Instructor Courses

Designed for participants from a Provider course who attain Instructor Potential (IP) status. Course is a one day, eight (8) hour course which qualifies the participant to educate students at the Provider levels. These courses are by invitation only.

Basic Life Support (BLS) - Heartsaver

Designed for laypersons who have a need to know cardiopulmonary resuscitation (CPR) and foreign body airway obstruction (FBAO) management techniques for adults. This course is useful for elementary through high school students, neighborhood groups with primarily adults and spouses caring for adults at high risk for heart attacks or strokes.

Pre-Hospital Trauma Life Support (PHTLS)

Designed to provide practicing EMT Basics, paramedics and nurses with a specific body of knowledge related to the pre-hospital assessment and care of trauma patients. Course is taught in two (2) consecutive eight (8) hour days.

Emergency Medical First Responder

A skills approach in helping the student to intervene in any medical or traumatic emergency situation before emergency personnel arrive on the scene. Emphasis is placed on care of the airway, CPR, control of bleeding, splinting and bandaging, and overall management. Course is typically taught in five (5) consecutive eight (8) hour days.

EMS Refresher Courses

Designed to assist those licensed EMS personnel who are in need of a National Standard EMS Refresher class for recertification purposes. Call department for availability and costs.

REQUIREMENTS FOR A MINOR IN EMERGENCY MEDICAL SERVICES

A minimum of 24 credits in Emergency Medical Services including EMS 112, EMS 113, EMS 115, EMS 140, EMS 141, EMS 143, EMS 200 or BMD 115 and EMS 210.

DEPARTMENT OF OCCUPATIONAL THERAPY

Chair: Marjorie E. Scaffa (251) 445-9222
Professor: Scaffa
Associate Professor: Wooster
Assistant Professors: Sasse, Woodward
Adjunct Faculty: Chromiak, Henderson, Peters

Department of Occupational Therapy web site http://www.southalabama.edu/alliedhealth/ot/ot.htm

Occupational Therapy is a health care profession devoted to providing skilled treatment that helps individuals achieve independence in all aspects of their lives. Occupational therapists work with persons with acute and chronic physical, psychosocial, mental and developmental disabilities. An occupational therapist may aid in the growth and development of premature babies; create a learning environment for physically and mentally challenged children; adapt home environments for persons with stroke, cerebral palsy, spinal cord injury and other disabilities; or create activities that are designed to restore mental health for persons with emotional, mental, or substance abuse problems. Occupational therapy focuses on "skills for the job of living" which includes all of the necessary skills for individuals to "live life to its fullest" and lead independent and satisfying lives.

The Master of Science degree program in Occupational Therapy (MSOT) is an entry-level professional program designed to enable the student to develop advanced critical reasoning skills and to prepare the graduate for professional practice in a variety of settings. Graduates will also have the capability of assuming responsibilities in the areas of administration, program development, consultation and research in occupational therapy.

The program consists of 94 semester hours and is seven consecutive semesters in length. This includes 24 weeks of full-time Level II Fieldwork as required by accreditation standards. Level II Fieldwork is available in a variety of medical and community sites representing a diverse range of learning opportunities for students. All Level II Fieldwork must be completed within 12 months following completion of academic requirements.

The program is designed to accommodate applicants who have either a baccalaureate degree in another field or advanced undergraduates who have completed three years (96 semester hours) of prescribed and elective undergraduate course work.

CRITERIA FOR ADMISSION

A new class of MSOT students begins each year in the fall semester. Applications are accepted beginning in September for the following year. Applications with appropriate processing fees should be submitted directly to the Occupational Therapy Department. Selected applicants who meet all academic admission requirements below may be invited for an interview. Students offered admission may choose to guarantee a seat by submitting a matriculation fee (applied toward tuition) or be placed on the alternate list. All other qualified applicants will be placed on the alternate list. All students admitted to the program must complete a criminal background check; admission is contingent on the background check being clear of criminal charges.

The candidate is expected to satisfy the following minimum criteria for admission:

Regular Graduate (Category I) applicants

- Baccalaureate degree from an accredited college or university including the OT prerequisites
- A minimum 3.0 (A=4.0) overall cumulative GPA and a minimum 3.0 GPA in the

prerequisite course work with a grade of "C" or better in each course
- Minimum of 25 documented OT observation hours
- GRE minimum score of 290 (verbal and quantitative combined). Applicants must also take the analytic portion of the exam but no minimum is required.
- Must have completed at least 60% of the Math/Science prerequisite courses and 60% of the General Studies prerequisite courses before applying

Advanced Undergraduate (Category II) applicants
- At least 96 semester hours including the OT prerequisites and University graduation requirements
- A minimum 3.25 (A=4.0) overall cumulative GPA and a minimum 3.25 GPA in the prerequisite course work with a grade of "C" or better in each course
- Minimum of 25 documented OT observation hours
- GRE minimum score of 290 (verbal and quantitative combined). Applicants must also take the analytic portion but no minimum is required.
- Must have completed at least 60% of the Math/Science prerequisite courses and 60% of the General Studies prerequisite courses before applying

Applications will be reviewed for academic qualifications on receipt of application, processing fee, transcripts and GRE results. Selected applicants who meet all academic admission requirements below may be invited for personal interviews.

Admission is offered to the top students who apply after consideration of the admission score. Selection is based on the total admission score which is calculated based on the following: Prerequisite GPA, an interview rating and any extra admissions points earned.

Extra points may be calculated into the admission score of applicants who have completed any of the following additional courses with a grade of "B" or higher: anatomy (300 level or higher), pathophysiology, physics, exercise physiology, gerontology (300 level or higher), and introduction to occupational therapy (OT 201). A maximum of 3 courses can be taken for extra points.

Applicants are strongly encouraged to observe occupational therapy practice in a variety of settings. A minimum of 25 documented OT observation hours are required. Documentation forms for observation are included in the application packet. These forms may also be downloaded from the department web site (http://www.southalabama.edu/alliedhealth/ot/USAOTObservationform.pdf) or may be obtained from the occupational therapy department.

Core Performance Standards, which are fundamental tasks that must be performed to successfully complete the program, have been outlined and are available upon request from the program.

Applicants who are interested in whether courses from other universities will meet prerequisite requirements may contact the department by e-mail for an unofficial review of their course descriptions.

Baccalaureate Degree Holders (Category I)

The student must hold a baccalaureate degree from an accredited college or university including the prerequisites listed below and must meet the minimum requirements for admission.

OR

Advanced Undergraduates (Category II)

The student must have completed a minimum of 96 semester hours of prerequisite work as stated below for Advanced Undergraduate students and must meet the minimum requirements for admission.

Applicants interested in this category of admission should review the Additional Information for Advanced Undergraduate Applicants section below.

PROGRAM PREREQUISITES ALL APPLICANTS MUST COMPLETE

Baccalaureate Degree Holders (Category I) and Advanced Undergraduate Applicants (Category II) must complete these prerequisites:

Math/Science Pre-Requisite Courses

Precalculus Algebra (or higher mathematics)	3
General Biology with lab	4
*Anatomy & Physiology	6
*Kinesiology	3
*Statistics or Research Methods	3
Sub-total	19

*Indicates courses that must be taken no more than 10 years prior to application.

General Studies Pre-Requisite Courses

English Composition	3
General Psychology	3
Developmental Psychology (life span)	3
Abnormal Psychology	3
Cultural Anthropology	3
Elective (one of the following: Ethics, Public Speaking, Logic, Group Dynamics)	3
Sub-total	**18**
TOTAL SEMESTER HOURS	**37**

Additional Prerequisites Advanced Undergraduate Applicants (Category II) Must Complete:

English Composition II (3 semester hours)
Laboratory Science Elective (4 semester hours (not Botany)
Fine Arts Elective (3 semester hours)
*Literature Elective (3 semester hours)
Humanities Elective (3 semester hours)
*History Elective (3 semester hours)
Social Science Elective (3 semester hours)
Applied Art Elective (3 semester hours)
Electives (sufficient number of semester hours to meet University graduation requirements)

*Must complete a two course sequence in Literature or History.

Additional Information for Advanced Undergraduate Applicants (Category II):

Students not holding a baccalaureate degree who want to apply to the program as an Advanced Undergraduate must complete the university requirements for a Bachelor of Science in Professional Health Sciences. This will help ensure that students who fail to gain admission to the Occupational Therapy program or who elect not to apply will be able to complete an undergraduate degree within the normal time frame.

Advanced undergraduates who are admitted to the MSOT program will officially be classified as undergraduates for the first two semesters of the program; however, they will be taking graduate courses in the program. They will be held to the same academic standards of performance as the graduate students with bachelor's degrees.

Upon satisfactory completion of all course work during the first two semesters of the program, the advanced undergraduate student will be awarded a Bachelor of Science in Professional Health Sciences. The student must complete all necessary paperwork for reclassification as a graduate student in order to continue through the remainder of the program.

The academic program for students with bachelor's degrees and advanced undergraduates is identical in its entirety. Tuition will be assessed at the graduate level for the entire seven semesters of the Master's degree program. In the first two semesters of the program, while classified as an undergraduate student, any financial aid awarded is restricted to the types and amounts for which an undergraduate student is eligible.

REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE IN OCCUPATIONAL THERAPY

The Master of Science degree program consists of the following courses:

OT 500	Occupation in Context	3
OT 502	Occupational Development I	3
OT 503	History and Philosophy of OT	3
OT 504	Neuroscientific Basis of Occup Perf	3
OT 505	Scientific Inquiry I	3
OT 510	Theoretical Foundations of OT - W	3
OT 512	Occupational Development II - W	3
OT 517	Occupational Evaluation I	3
OT 519	Professional Dev Seminar I	2
OT 520	Occupational Intervention I	5
OT 521	Practicum I	1
OT 524	Biomed & Phenomenol Persp on Disability I	3
OT 525	Documentation	3
OT 527	Occupational Evaluation II	3
OT 530	Occupational Intervention II	5
OT 531	Practicum II	1
OT 534	Biomed & Phenomenol Persp on Disability II	3
OT 536	Management	3
OT 538	Group Dynamics	2
OT 539	Professional Dev Seminar III	2
OT 540	Occupational Intervention III	5
OT 541	Practicum III	1
OT 544	Musculoskeletal Assessment	2
OT 545	Scientific Inquiry II	3
OT 546	Supervision	2
OT 550	Level II Fieldwork (A)	6
OT 555	Level II Fieldwork (B)	6
OT 558	Technology & Environ Interventions in OT	3
OT 559	Professional Leadership	3
OT 570	Community-Based Intervention	3
OT 575	Advanced Professional Writing	3

During the Summer and Fall semesters of the last year students participate in fieldwork education at special fieldwork sites affiliated with the program. Students should be prepared

to relocate to two different out-of-town fieldwork centers during these two semesters.

Expenses

Students admitted in the Occupational Therapy program will be charged a matriculation deposit of $200 required to secure a seat in the entering class. This amount is not refundable but will be applied towards tuition expenses after registration.

Students should be prepared for extra expenses associated with professional studies including books, local travel to and from fieldwork sites and out-of-town travel and living expenses during Level II Fieldwork assignments. Special lab fees are assessed for the following courses:

OT 500	Occupation in Context	$30.00
OT 504	Neuroscientific Basis of Occupational Performance	$70.00
OT 510	Theoretical Foundations of OT	$30.00
OT 517	Occupational Evaluation I	$50.00
OT 520	Occupational Intervention I	$50.00
OT 527	Occupational Evaluation II	$50.00
OT 530	Occupational Intervention II	$50.00
OT 540	Occupational Intervention III	$50.00
OT 544	Musculosketletal Assessment	$30.00
OT 545	Scientific Inquiry II	$25.00
OT 550	Level II Fieldwork (A)	$ 5.00
OT 555	Level II Fieldwork (B)	$ 5.00
OT 558	Technology and Environmental Intervention in OT	$50.00

RETENTION POLICIES

In accordance with the Policies of the University of South Alabama Graduate School:

1. A minimum overall 3.0 GPA on all work attempted in the student's specific program of study is required. A maximum of two courses with the grade of "C" may be counted toward a degree program.
2. Any term in which a graduate student drops below a 3.0 GPA, the student is placed on probationary status and has a period of two terms to attain a 3.0 GPA or be dismissed from the Graduate School.

In addition, the following Departmental Retention Policies apply:

1. Students in the Master of Science in Occupational Therapy degree program are required to achieve a minimum grade of "C" in each course in the occupational therapy curriculum. This minimum grade of "C" reflects only the letter grade since many courses will require an 80% or 90% competency in order to be considered passing level.
2. A student who receives a "D" or "F" will be academically dismissed.
3. Any combination of nine (9) semester hours of grades of "C" in OT courses will result in academic dismissal.
4. If for any reason a student must withdraw from the occupational therapy program, re-admission will require approval of the department chairperson and the Dean of the Pat Capps Covey College of Allied Health Professions.
5. All occupational therapy course work taken prior to Level II Fieldwork must be successfully completed with a grade of "C" or better and a minimum GPA of 3.0 in order for a student to be eligible to proceed with Level II Fieldwork.
6. Level II Fieldwork will be graded as Pass/Fail using the criterion scores developed by the American Occupational Therapy Association. A student will be allowed to withdraw from fieldwork, without penalty, under special circumstances, for example, a serious illness/newly acquired disability. Withdrawal from Level II Fieldwork requires the recommendation of the Academic Fieldwork Coordinator and the permission of the Department Chair. All repeat fieldwork experiences must be completed within one year.
7. If a student fails a Level II Fieldwork course (OT 550, OT 555), a "U" or unsatisfactory will be recorded as the grade. IF the student is permitted to repeat the Level II Fieldwork course, the student may be required to complete remediation tasks prior to repeating the course. The Academic Fieldwork Coordinator will schedule the repeated fieldwork at the earliest available time, but no later than 12 months following completion of all other academic requirements. A student failing to satisfactorily complete two out of three attempts of the 12 week fieldwork placements (OT 550, OT 555) shall be dismissed from the program.

   Note: In some semesters, courses may not start and/or finish during the regular University beginning and ending dates for the semester. For example, one course may start at the beginning of a semester and finish at the semester midpoint, while another course starts at the midpoint of the semester and finishes at the semester's end.

ACCREDITATION

The Department of Occupational Therapy MSOT Program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, Suite 200, Bethesda, MD 20814. ACOTE's phone number is (301) 652-6611 (x2914). Graduates of the program will be eligible to sit for the national certification examination for the occupational therapist administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be an Occupational Therapist, Registered (OTR). Most states require licensure in order to practice; however, state licenses are usually based on the results of NBCOT Certification Examination. A felony conviction may adversely affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure.

DESCRIPTIONS OF ALL OCCUPATIONAL THERAPY (OT) COURSES BEGIN ON PAGE 281.

DEPARTMENT OF PHYSICAL THERAPY

Chair: Dennis W. Fell (251) 445-9330
Professors: Fell, G. L. Irion, J.M. Irion
Associate Professor: Kennedy
Assistant Professors: Day, Gubler, White
Emeritus: Gray, Wall

Department of Physical Therapy web site http://www.southalabama.edu/alliedhealth/pt/

A physical therapist, also called a PT, is a health care professional who provides direct patient care to persons who have disorders of movement, mechanical, physiological and developmental impairment and functional limitations, whether caused by injury, disease, or pain to help them achieve maximum physical function and mobility. Physical therapists have the necessary training to meet the total range of primary patient care responsibilities involved in preventing disabilities and promoting restoration of function to the physically impaired, including musculoskeletal, neuromuscular, cardiovascular/pulmonary and integumentary disorders that interfere with physical function. The Physical Therapist performs an examination and then uses clinical reasoning to plan and implement patient-centered PT intervention. Physical Therapists practice in rehabilitation centers, private practices, hospital-based and outpatient-based centers, home health care, sports medicine centers, school systems, and in universities to restore movement and function.

As its mission: "The Department of Physical Therapy is 1) dedicated to the education of physical therapists who provide the highest levels of professional care to diverse communities while maintaining a commitment to life-long learning, and 2) committed to service and the advancement of knowledge in the profession through research and scholarly activity."

The degree offered by the department is the Doctor of Physical Therapy (DPT), designed as a first-professional degree for students who want to enter the physical therapy profession.

The entry-level Doctor of Physical Therapy (DPT) program consists of eight consecutive semesters of full-time professional graduate study. The DPT is a clinical doctorate degree, not a research degree, and is awarded after successful completion of the prescribed sequence of 121 semester hours (listed below) including classroom and clinical laboratory course work and 34 weeks of full-time physical therapy internships. As an entry-level program, the DPT is designed as a first PT degree and is not appropriate for students who already hold a PT degree. The goals and objectives of the program are guided by the criteria and guidelines set forth by the Evaluative Criteria for Accreditation of Educational Programs for the Preparation of Physical Therapists (Commission on Accreditation in Physical Therapy Education). Graduates of the program are eligible to take the National Physical Therapy Exam for licensure.

The program begins each year in the Fall semester. The application deadline for Fall semester is **December 15th** of the previous year. All applicants must apply through the Physical Therapy Centralized Application Service (PTCAS) http://ww.ptcas.org/SouthAlabama.html and submit a supplemental application and supplemental application fee directly to the PT department. International Students should carefully review earlier deadlines and additional requirements listed after Minimal requirements for all applicants (see below).

DPT Early Acceptance Program (DPTEAP)

The DPT Early Acceptance Program (DPTEAP) allows for some highly qualified

high school seniors who meet the qualifications to gain early provisional acceptance to the graduate program prior to starting college. Details are described in the Early Acceptance Program section of the Office of Admissions web site at http://www.southalabama.edu/admissions/ppteap.shtml. In addition, a link to the application for this program is also found on this webpage and the "Special Programs" section of the Office of Admissions Website. The application deadline for this program is December 15th of the senior year in high school.

Two categories of applicants are considered for admission:

It is highly recommended, and in most cases required, that applicants complete a bachelor's degree prior to starting the PT program.

1. **Regular Graduate Applicants**:

These applicants must hold a bachelor's degree in any field from a regionally accredited college or university and complete all pre-requisites for regular graduate admission as listed below with a GPA > 3.00. These applicants may apply by December 15th if they will complete their bachelor's degrees before the upcoming Fall semester.

2. **Advanced Undergraduate Applicants**:

This special "advanced" early-entry option is reserved for the highly motivated and academically strong student. Students with at least 96 semester or 144 quarter hours of specific college prerequisites listed below and an overall GPA = 3.50 may apply for entry into the program prior to completion of the bachelor's degree. The student applying with three years of prerequisites is then able to complete the Doctor of Physical Therapy degree with just six years of college. Applicants in this category should carefully review ***Additional Information for Advanced Undergraduates*** that follows the list of prerequisites.

MINIMUM REQUIREMENTS FOR ALL APPLICANTS

1. The applicant must declare one of the above categories on the application form (deadline December 15th) and meet all requirements including prerequisites.
2. Graduate Record Exam (GRE) scores must be officially reported to the University of South Alabama Office of Admissions by December 15th with a minimum score of 300 on the 'new' GRE (use institution code 7799). The GRE must have been taken within the last 5 years. Verbal, Quantitative and Analytical Writing sections will be utilized, as well as the writing component.
3. Regular Graduate applicants must have a minimum 3.0 (A=4.0) overall grade-point average (GPA); Advanced Undergraduate applicants must have a minimum 3.5 overall GPA.
4. All applicants must have a minimum grade of "C" in each of the prerequisite courses.
5. Observation or work experience in Physical Therapy (50 hours minimum) under the supervision of a licensed Physical Therapist must be documented and submitted to PTCAS by the December 15th deadline. A form is available for download from the PTCAS website (http://www.ptcas.org/PTHours/).
6. Beginning with the December 2014 deadline, applicants may only have a maximum of 8 credits of science prerequisites remaining by the application deadline (December 15). The remaining prerequisites must be completed in the spring and summer prior to the start of the program.

International applicants must have a TOEFL score = 600 (250 on computer based or 100 on Internet based tests), TSE = 60 and TWE = 4.5 and must submit the following to the Department of Physical Therapy by **October 15 of the year prior to admission**: TOEFL score, official transcripts with certified translations of transcripts, supplemental application and non-refundable supplemental application processing fee of $75.00. In addition, international students must submit PTCAS application and official GRE scores **by December 15**. Materials being sent by mail carrier must be **postmarked NO later than December 15**. This DPT program is not ideal for students who already have a physiotherapy degree.

NOTE: If selected for interview, the applicant must achieve a satisfactory interview score, and if accepted into the program, must submit a health form and physical examination which includes required immunizations.

PROGRAM PREREQUISITES[a]

Prerequisites Required For All Applicants:

- English Composition (2 courses)
- Social Sciences (3 courses--at least two of which must be Psychology)
- Precalculus Algebra/Trigonometry or Higher Mathematics (1 course)
- Statistics (1 course)
- College Physics - with labs (2 semester or 3 quarter sequence)
- General Chemistry for science majors - with labs (2 semester or 3 quarter sequence)
- General or Cell Biology for science majors - with labs[b] (2 semester or 3 quarter sequence)
- Human Physiology, Mammalian Physiology OR a course sequence in Anatomy and Physiology (minimum 6 credits). Human Physiology is preferred.

Additional Prerequisites for Advanced Undergraduate Applicants

- Fine Arts (History or Appreciation) (1 course)
- Literature I & II (World Lit, American Lit, or British Lit) - both courses must be in the same series
- Oral Communication (Speech) (1 course)
- History of Civilization or U.S. History (1 course)
- Computer Science (1 course)
- Microbiology or Infectious Disease (1 course)
- Electives (21 semester hours)c

For Advanced Undergraduate applicants, prerequisites must total at least 96 semester hours.

a. For all prerequisite courses, credit older than ten years from the application deadline must be repeated or validated by examination or other appropriate mechanism.
b. Botany may not be used to satisfy this prerequisite.
c. Electives should be concentrated in a back-up major of the student's choice.

Additional Information for Advanced Undergraduate Applicants:

Students who have completed 96 semester or 144 quarter hours of prescribed and elective course work and who meet all admission criteria and the terms specified below are eligible for application to the program. Thus, these students may be able to complete the DPT degree in six years from entry into college. Students planning to pursue this category of admission should be working toward a back-up major in a discipline of their choice by the junior undergraduate year. This will insure that students who are not admitted to the graduate program or who elect not to apply will be able to complete a degree within a normal time period. Also, students who go on to complete a bachelor's degree and who meet all admission criteria (GPA = 3.0) will be eligible to apply later as Regular Graduate applicants.

In addition to the minimum admission requirements listed above, advanced undergraduate applicants also must acknowledge an understanding of the following:

- That, according to University policy, no more than 64 semester hours of transfer credit from two-year colleges will be accepted.
- That the student will be officially classified as an undergraduate for the first 2 semesters of the program but will be taking graduate courses of the DPT program.
- That in the first 2 semesters of the program, while classified as undergraduate students, any financial aid is restricted to the types and amounts for which undergraduate students are eligible.
- That upon satisfactory completion (minimum GPA of 3.0 in all course work) of the first 2 semesters of the program, they will be awarded the Bachelor of Science in Professional Health Science degree. These students must then complete application for reclassification and admission to the Graduate School. Upon satisfactory completion of the next 6 semesters of the DPT program, students will be awarded the Doctor of Physical Therapy (DPT) degree.
- That tuition will be assessed at the graduate level for the entire eight semesters of the professional program.
- That the academic program for students in both categories is identical in its entirety.
- That for the entire eight semesters of the program they will be held to the same standards and policies as students enrolled in the graduate school (see the policies of the Graduate School).

ESSENTIAL FUNCTIONS

Core Performance Standards, which are fundamental tasks that must be performed to successfully complete the program, have been outlined and are available upon request from the program and on the department web site.

EXPENSES

Students admitted in the Physical Therapy program will be charged a matriculation deposit of $300 required to secure a seat in the entering class. This amount is not refundable but will be applied towards tuition expenses after registration.

Students should be prepared for extra expenses (estimates available on the web site)

associated with professional studies including books, local travel to and from clinical facilities and for out-of-town travel and living expenses during the 34 weeks of clinical internship in the first year and the final year. It is highly recommended that students have a laptop computer. Special lab fees are assessed for the following courses:

PT 600	Human Anatomy I	$75.00
PT 601	Human Anatomy II	$200.00
PT 603	Neuroscience	$15.00
PT 612	Research Project	$50.00
PT 621	Introductory PT Skills	$20.00
PT 625	Therapeutic Intervention	$20.00
PT 682	PT Internship I	$75.00

A $25.00 professional liability fee is assessed annually ($12.00 each in fall and spring and $1.00 in summer).

A $133.00 Health Sciences simulation fee is added to one course in each semester of the first two years of the program.

REQUIREMENTS FOR THE DOCTOR OF PHYSICAL THERAPY DEGREE

The Doctor of Physical Therapy (DPT) degree requires the following course sequence after admission to the professional program:

Fall Semester - Year I (18 credits)

PT 600	Human Anatomy I*	3
PT 601	Human Anatomy II*	3
PT 610	Principles of Research	2
PT 621	Introductory PT Skills*	4
PT 622	Exercise Physiology*	4
PT 680	Professional PT Practice; W	2

Spring Semester - Year I (18 credits)

PT 604	Pathophysiology I	2
PT 620	Clinical Kinesiology*	3
PT 625	Therapeutic Intervention (EPA/Manual Therapy)*	4
PT 631	PT in Musculoskeletal Disorders I*	4
PT 632	PT in Musculoskeletal Disorders II*	3
PT 681	Clinical Practice Issues; W	2

Summer Semester - Year I (13 credits)

PT 607	Pathophysiology II	2
PT 650	PT in Integumentary Disorders*	4
PT 671	Clinical Case Studies I	1
PT 682	PT Internship I	6

Fall Semester - Year II (16 credits)

PT 602	Life Span Human Development	2
PT 603	Neuroscience*	3
PT 606	Pharmacology	2
PT 611	Research Proposal	2
PT 633	PT in Musculoskeletal Disorders III*	4
PT 634	PT in Musculoskeletal Disorders IV	3

Spring Semester - Year II (16 credits)

PT 612	Research Project	2
PT 628	Mobility, Orthotics, and Prosthetics*	2
PT 640	Neuromuscular PT Adult*	4
PT 641	Neuromuscular PT Pediatrics*	2
PT 660	PT in Cardiovascular and Pulmonary Disorders*	4
PT 672	Clinical Case Studies II	1
PT 687	Professional Behaviors	1

Summer Semester - Year II (9 credits)

PT 627	Medical Screening	2
PT 635	PT in Musculoskeletal Disorders V*	2
PT 642	Neuromuscular PT Intervention*	4
PT 673	Clinical Case Studies III	1

Fall Semester - Year III (16 credits)

PT 605	Human Learning	1
PT 614	Measurement in PT	1
PT 626	Health Promotion and Prevention in PT	1
PT 674	Clinical Synthesis and Patient Management	2
PT 683	PT Internship II	8
PT 685	Management of PT Practice	3

Spring Semester - Year III (15 credits)

PT 613	Critical Analysis	2
PT 675	Comprehensive Capstone	1
PT 684	PT Internship III	6
PT 686	PT Internship IV	6
	Curriculum Total	**121**

*Indicates courses with lab experiences

Accreditation and Licensure

The entry-level Doctor of Physical Therapy program at the University of South Alabama is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE) of the American Physical Therapy Association. CAPTE can be contacted at The Commission on Accreditation in Physical Therapy Education, Department of Accreditation, American Physical Therapy Association, 1111 N. Fairfax Street, Alexandria, VA 22314; Telephone: (703) 706-3245; Web site: www.apta.org/CAPTE

Graduates of the program are eligible to sit for the National Physical Therapy Examination (NPTE) to gain licensure. Applicants are hereby informed that a history of felony conviction, use of drugs or intoxicating liquors which affects professional competence, or narcotic law conviction will prevent physical therapy licensure.

See Alabama Board of Physical Therapy site: http://www.pt.alabama.gov/

DESCRIPTIONS OF ALL PHYSICAL THERAPY (PT) COURSES BEGIN ON PAGE 297.

DEPARTMENT OF PHYSICIAN ASSISTANT STUDIES

Chair: Diane D. Abercrombie, PA.C, Ph.D.
(251) 445-9334
Medical Director: Shannon Tyler, M.D.
Professor: Aliabadi
Associate Professors: Abercrombie, Vetrosky
Assistant Professor: Risling-de Jong
Senior Instructor: Davis

Department of Physician Assistant Studies web site
http://www.southalabama.edu/alliedhealth/pa/

PHYSICIAN ASSISTANT PROGRAM MASTER OF HEALTH SCIENCE DEGREE

WHAT IS A PHYSICIAN ASSISTANT?

Physician Assistants (PAs) are highly skilled health care practitioners who provide medical services traditionally performed only by a physician. The quality and value of the services they provide is well recognized and they are highly sought after by physicians and institutional employers in virtually all medical and surgical specialities and settings.

Physician Assistants take medical histories, perform physical examinations, and order and analyze diagnostic data such as laboratory tests, electrocardiograms and imaging studies. They also perform therapeutic procedures such as suturing, removal of minor lesions and casting. The Physician Assistant develops and implements a treatment plan and makes appropriate decisions regarding referral and findings to the supervising physician and other health professionals in developing a patient treatment plan. Physician Assistants also prescribe medication.

Patient education and counseling are important aspects of a physician assistant's daily activities. Physician Assistants advise patients concerning preventive health care and provide education regarding the patient's medical problems. Physician Assistants also counsel patients regarding the management of health risk behaviors.

To perform at this level of responsibility, much of the education of Physician Assistants is provided by physicians in order to assure that the patient-care functions provided by the Physician Assistant are equivalent in quality to those of the physician who delegates them.

MISSION, VISION, AND GOALS

Mission

The mission of the University of South Alabama Physician Assistant Program is to educate compassionate and competent individuals from diverse backgrounds to become highly qualified physician assistants in accordance with the highest professional standards to provide a broad spectrum of preventative and curative health care to patients in various communities and clinical settings with physician supervision. The emphasis of the program is one of primary care, including a broad foundation in the medical and surgical specialties.

Vision

The Physician Assistant Studies program curriculum is closely related to the goals of the University of South Alabama as well as to the degree. The program fosters an environment that promotes the acquisition and application of culturally sensitive, patient-oriented clinical knowledge and skills to produce a diverse workforce of primary care physician assistants who practice medicine with competence, professionalism, and compassion, driven by academic excellence and a spirit of service to the community.

Goals

The goals of the program are to:

1. Emphasize primary care and a desire among physician assistants toward service in rural and medically underserved communities;
2. Promote excellence in health care by preparing competent physician assistants to practice evidence-based medicine in all clinical settings;
3. Ensure opportunities for placement of qualified military veterans through participation as a PAEA Member Program offering assistance for veteran entry into physician assistant programs;
4. To recruit, select, and educate a highly qualified diverse student body, (i.e., under-represented minorities), and provide fair and equitable admission criteria;
5. Prepare physician assistant students to provide patient-centered health care services as part of an inter-professional, collaborative team in a variety of clinical settings;
6. Charge physician assistant students to become graduates who reflect high standards of legal, ethical, and moral conduct;

7. Foster the growth and development of PA education by preparing physician assistant graduates who possess depth of knowledge, clinical skills and abilities for excellence in practice;
8. Promote in our physician assistant students the importance of life-long learning skills and ongoing professional development to meet and/or exceed contemporary standards within their area(s) of clinical practice.

THE PROGRAM

Degree Earned:	Master of Health Science
Length of Program:	27 months
Matriculation Date:	Annually in mid-May
Undergraduate Degree Required:	Any degree is acceptable with required science prerequisite
Class Type:	On site, no online classes
Curriculum:	121 Credit Hours
Class Schedule:	Mon-Fri, 8:00am-5:00am

Advanced Placement, Deceleration, Dismissal

The program does not offer advanced placement or deceleration. Transfer credits, or credit for experiential learning cannot be substituted for any course in the program, and no transfer credit is accepted from other PA programs. In addition, any grade of D or lower will result in academic dismissal from the program, and withdrawal from any course will automatically result in dismissal from the program.

Clinical Rotations

Clinical rotations are mostly in Mobile, with other locations in Pensacola and the Mississippi Gulf Coast. All rotations within a 70-mile radius (one-way) are considered commutable. Elective rotations may be considered in other locations. Rural rotations for Primary Care and Pediatrics are required. Other core rotations in rural Alabama and/or Georgia may also be considered.

Employment

Program policies strictly prohibit the program and all its academic and clinical affiliates and preceptors from employing any PA students, or utilizing them in lieu of administrative office, or clinical staff, while attending the program. PA students are also strongly discouraged from accepting any other employment while attending the program as this will interfere with their education.

Measures of Success

Please visit our web site for information about the program's success at www.southalabama.edu/alliedhealth/pa/files/MeasuresOfSuccess.pdf.

Mandatory Remediation

Mandatory remediation will be required of any student(s) who are in danger of not meeting the educational goals of the program as stated in student handbooks. The criteria for remediation are set in the "Goal" section below. The student's progress will be subsequently monitored to assure improvement in deficient areas and future remediation will be arranged as needed.

The goal of the didactic remediation policy of the Department of Physician Assistant Studies is to remediate students who are not performing at the optimal level which is defined as any student who has an average of <80% on two consecutive examinations or a single score of <75%.

The goal of the clinical remediation policy of the Department of Physician Assistant Studies is to remediate students who are not performing at the optimal level during the clinical year, which is defined in three areas:

1. Individual "Average," or less, score on mid-rotation evaluation
2. End-of-rotations exam scores more than two standard deviations below the national average
3. A grade of "C" on a final clinical rotation grade.

Residency:

Instate Students who reside in Alabama and the service areas are automatically considered residents and pay in-state tuition. The service areas consist of counties in (1) **Mississippi**: George, Greene, Harrison, Jackson, Perry and Stone, and (2) Florida: Escambia and Santa Rosa.

Out-of-State: For details on establishing residency, visit www.southalabama.edu/registrar/residency.htm.

Tuition and Expenses

In addition to USA tuition and fees, students can expect expenses associated with textbooks, food and lodging. Students will also be required to purchase uniforms, laboratory coats, stethoscopes, otoscopes, ophthalmoscopes, sphygmomanometers and blood pressure cuffs, soft reflex hammers, and tuning forks. Also, students should anticipate extra expenses, particularly related to housing and transportation, during the clinical year.

Estimated tuition and fees for the 2014-2015 academic year are:

In-State: $56,335 Out-of-State: $104,009

For a detailed list of tuition and expenses related to the program, please visit our web site at www.southalabama.edu/alliedhealth/pa/tuition.html.

For a list of university tuition rates and fees, please visit www.southalabama.edu/studentaccounting/tuition.html.

For payment and refund policies, visit www.southalabama.edu/studentaccounting/feepayment.html.

The University reserves the right to change tuition and fees, as deemed necessary by the Board of Trustees, without prior notice.

ACCREDITATION

The University of South Alabama is accredited by the **Southern Association of Colleges and Schools (SACS)** to award baccalaureate, master's, doctor of philosophy and doctor of medicine degrees.

Program accreditation has been granted by the **Accreditation Review Commission for Physician Assistants (ARC-PA)**. The goals and objectives of the program are guided by the criteria set forth in the *Essentials and Guidelines for an Accredited Educational Program for the Physician Assistant*, as established by ARC-PA.

The ARC-PA has granted Continued Accreditation to the Physician Assistant Program sponsored by the University of South Alabama. Continued accreditation is an accreditation status granted when a currently accredited program is in compliance with the ARC-PA Standards.

Continued Accreditation remains in effect until the program closes or withdraws from the accreditation process or until accreditation is withdrawn for failure to comply with the Standards. The approximate date for the next comprehensive review of the Program by the ARC-PA will be September 2014.

COMPETENCIES FOR THE PHYSICIAN ASSISTANT PROFESSION

Graduates are expected to demonstrate the highest level of professionalism, be able to provide excellent comprehensive patient care and have the highest level of medical knowledge and communication skills as outlined at www.nccpa.net/pac/competencies_home.aspx.

MATRICULATION REQUIREMENTS

1. Acknowledgement of acceptance within two weeks of notification, and submission of a signed Statement of Intent Form and a non-refundable $500 matriculation deposit which will be applied toward the first semester's tuition to guarantee a seat in the class.
2. Completion of outstanding required prerequisite course work with a grade of "C" or higher prior to matriculation into the program. Failure to make a grade of "C" or higher in any required prerequisite course will result in nullification of acceptance into the PA program. Updated transcripts will be required.
3. Submission to criminal background checks and urine drug screens before matriculation and prior to beginning clinical rotations. The fees are the student's responsibility. Failure to submit to and satisfactorily pass both screenings can result in dismissal from the program.
4. Completion of immunizations and a physical exam upon acceptance and prior to entering clinical rotations. Forms will be provided with the letter of acceptance.
5. Maintenance of the American Heart Association Health Care Providers BLS Certification throughout the program.
6. Maintenance of adequate health insurance throughout the program. Information regarding health insurance will be provided upon acceptance, and the fees are the student's responsibility.
7. Understanding of duties as stated in the **Technical Standards for Physician Assistants**. (See below.)

PHYSICIAN ASSISTANT NATIONAL CERTIFYING EXAMINATION (PANCE) PASS RATES

Please visit our web site at www.southalabama.edu/alliedhealth/pa/accreditation.html

PROGRAM COMPLETION REQUIREMENTS

The program consists of preclinical and clinical components. The preclinical component is designed to provide a solid foundation for the clinical component. During the clinical component the student refines the medical knowledge and clinical skills needed for professional practice.

Successful completion of the program requires that the student be able to:

1. Complete 121 hours of graduate course work consisting of 73 credit hours of didactic course work and 48 credit hours of clinical course work.
2. Obtain an accurate and detailed patient history.
3. Perform complete and focused physical examinations
4. Establish working and differential diagnosis
5. Order and interpret diagnostic evaluations to include: laboratory tests (blood, urine, spinal fluids, cultures); imaging studies (plain film radiography, radiographic contrast studies, ultrasound studies, computerized tomography studies, MRI studies and electrocardiogram.
6. Develop and manage a treatment plan.
7. Record patient data: (a) Written notes and charting, and (b) Electronic medical record.
8. Order and/or administer therapeutic medications (a) in hospitals and clinics and (b) via written or electronic prescription.
9. Perform therapeutic medical interventions and procedures.
10. Council and educate patients regarding medical, therapeutic, and behavioral problems.
11. Interact with patients and the medical community in a professional manner.
12. Make appropriate referrals.

TECHNICAL STANDARDS

Students in the USA Physician Assistant program must be able to fulfill the program's Technical Standards, which include General, Observational, Communication, Motor, Critical Thinking, and Interpersonal abilities as well as possessing certain Behavioral and Social Attributes.

To evaluate whether you meet the criteria, please visit our web site at www.southalabama.edu/alliedhealth/pa/technical.html for details.

ADMISSIONS

The deadline for receipt of all materials is **November 1**.

Minimum Requirements

The following requirements are necessary to be considered for admission, and no requirement can be waived. As the selection of students is very competitive, please note that accepted students typically exceed the minimum requirements.

1. **Completion of a Baccalaureate degree in any field** with a minimum cumulative undergraduate **GPA of 3.0** as calculated by CASPA, from a regionally accredited institution prior to the starting date of the program. **Applicants may have courses in progress through the spring semester as long as they are completed when the program begins in mid-May**.
2. **Completion of prerequisite course work completed with a grade of "C" or higher**, with one semester of at least 3 credits for each course below.
   - General Biology
   - General Chemistry I and II
   - Human Anatomy and Human Physiology **OR** Anatomy and Physiology I and II
   - Microbiology
   - Organic Chemistry
   - Mathematics (College Algebra minimum)
   - Statistics
   - General Psychology
   - Medical Terminology

   For guidelines on courses accepted, please visit www.southalabama.edu/alliedhealth/pa/admissions.html.
3. **Completion of the General Graduate Record Examination (GRE)** within the past five (5) years. The department accepts:
   - A revised combined score of 290 in both the Verbal and Quantitative sections, with a minimum of 149 in each, and a 3.5 in Analytical Writing

     OR
   - Old combined score of 1000 in the Verbal and Quantitative and a 3.5 in Analytical Writing.

   About the GRE: visit www.ets.org for more information.
   - The highest complete exam score is used in the ranking of applicants: **We do not mix and match scores from different attempts**.
   - The GRE should be taken at least 14 days prior to the application deadline to ensure that official test scores are received by the deadline.
   - Official scores should be sent to Institution Code 1880.
4. **Submission of completed application materials by November 1**. The program will not review applications that are incomplete, received after the deadline, or do not meet the minimum standards.

Application Screening Criteria and Interviews

For all eligible applications, the program conducts an initial assessment of the overall application quality and accuracy, and then ranks qualifying applications by academic score. Academic scores consist of cumulative GPA, science GPA, last 64-hour GPA, and GRE scores. Those who rank in the top 90 are invited for interviews.

The interview process consists of two segments: the Group Interview and the Individual Interview. Both segments of the interview process have been designed to complement the evaluation of an academically-proven applicant by the holistic appraisal of non-academic traits. In the group interview, three applicants will be given a scenario to discuss for 15 minutes. In the individual interview, applicants will answer questions posed by two or more interviewers. Knowledge of the PA profession, maturity, cultural awareness, general attitude and other intangible traits (i.e., emotional intelligence), will be assessed.

Extra points will be given for applicants with rural backgrounds, advanced degrees, certifications, military service, research experience, and disadvantaged backgrounds.

Visit our website at www.southalabama.edu/alliedhealth/pa/admissions.html for more details.

Health Care and Shadowing Experience

Health care experience, especially direct patient care, community service, PA shadowing and/or related health care or work experience required. The program requires at least 250 hours at a minimum. Applicants must show that they are capable of providing culturally sensitive care to adverse patient population and that they understand the role of a physician assistant. Some examples of direct patient care are occupational therapy, physical therapy, respiratory therapy, Emergency Medical Technicians, Certified Nursing Assistant, Medical Assistant, any related healthcare fields involving the hands-on care of patients, or any paid or non-paid work experience.

Residency Preference

Residency preference will be applied only when an Alabama or Service Area applicant and a non-resident applicant receive the same score. This preference will be applied both to the interview invitation list and the accepted list.

HOW TO APPLY

All application materials must be received by the deadline. The program will not review applications that are incomplete, received after the deadline, or do not meet the minimum standards.

The application cycle begins annually on **May 1**, and those who meet the minimum requirements can apply by completing the following three-step process:

1. Apply through the **Centralized Application Service of Physician Assistants** (CASPA) at www.caspaonline.org. Official transcripts and three references, one of which must be from a Medical Doctor, Doctor of Osteopathy, or a Physician Assistant, are considered part of the CASPA application must be sent directly to them. The CASPA application must be e-submitted, completed and verified by November 1.
2. Mail the completed **Supplemental Application**, downloadable on our web site at www.southalabama.edu/alliedhealth/pa/files/ApplicationGuide.pdf, along with a check or money order for $110.00. All fees are nonrefundable.
3. Submit the **Graduate Record Examination Score** directly and electronically to **Institution Code 1880**. For details, visit www.ets.org.

International Students

If an international student, the applicant must also:

1. take all prerequisites in the U. S. to establish a USA GPA.
2. have all international course work and degrees evaluated by World Education Services for submission with CASPA application.
3. apply by **October 1** to the Office of International Services at www southalabama.edu/international/index.html.

If a U.S. student with international course work, the applicant should consult CASPA instructions for clarification on evaluations and submission: **portal.caspaonline.org**.

It is the applicant's responsibility to monitor the delivery of all materials to the program office and to CASPA and to address any issues with them. For convenience, CASPA now offers a smartphone app for monitoring your application at portal.caspaonline.org.

PROGRAM REQUIREMENTS AND COURSE SEQUENCE

Preclinical Component

Summer		Fall	
PA 510	4	PA 520	9
PA 511	4	PA 521	4
PA 512	6	PA 522	4
PA 513	2	PA 525	2
PA 514	1		**19**
	17		

Spring		Summer	
PA 530	9	PA 540	9
PA 531	4	PA 541	2
PA 532	4	PA 542	2
PA 534	2	PA 543	2
	19		**15**

Clinical Component
Fall, Spring and Summer

PA 550	(4 wks)	4	PA 560	(8 wks)	8
PA 555	(4 wks)	4	PA 580	(4 wks)	4
PA 570	(8 wks)	8	PA 591	(4 wks)	4
PA 590	(4 wks)	4	PA 593	(4 wks)	8
PA 592	(4 wks)	4	PA 595		3
					51

At least 16 weeks of the clinical rotations must serve rural/urban under served populations. The USA PA program is a participant with Alabama Statewide Area Health Education Center Program (AHEC) to assist with rural/MUA rotation placement.

DESCRIPTIONS OF ALL PHYSICIAN ASSISTANT STUDIES (PA) COURSES BEGIN ON PAGE 282.

DEPARTMENT OF RADIOLOGIC SCIENCES

Chair: Charles W. Newell, Ed.D., RT(R)(MR)(CT)(CV) (251) 445-9346
Medical Advisor: Jeffrey C. Brandon, M.D.
Associate Professor: Newell
Instructors: Brewer, Cleveland, Cooper, Durick, Jalkh, Pohlmann, Smith
Teaching Technologists: Davis, Farris

Department of Radiologic Sciences web site http://www.southalabama.edu/alliedhealth/radiologicsciences

PROGRAMS OFFERED:
Bachelor of Science in Radiologic Sciences

Since its inception in 1976, the Department of Radiologic Sciences has provided a quality educational program with a sustained emphasis upon graduating competent and compassionate healthcare professionals. In so doing, our graduates are prepared to practice their profession in the often complex and global society of the 21st century.

The baccalaureate program is designed to provide graduates with enhanced career opportunities in radiology as administrators, educators, and advanced imaging specialists. The curriculum provides a broad education in liberal arts and basic sciences and an in-depth study in radiologic sciences.

Educational opportunities in diagnostic imaging and advanced imaging modalities such as mammography, magnetic resonance imaging, vascular radiography, computed tomography, radiology administration, ultrasound, and radiation therapy are offered. Following completion of the pre-professional component and admission to the professional component of the program, students will study general radiography for three semesters. At the end of this first year in the professional component, students will select one of the following tracks to complete: general radiography to include one advanced imaging modality, ultrasound, or radiation therapy.

The general radiography track curriculum includes diagnostic radiology and either mammography, computed tomography, magnetic resonance imaging, vascular radiography, or radiology administration. Students completing didactic and clinical requirements in these tracks will be eligible to seek certification through the American Registry of Radiologic Technologists (ARRT) in radiography and the advanced modality studied (excluding radiology administration).

The other two baccalaureate tracks allow students completing the first year of general radiography curriculum to select either ultrasound or radiation therapy during their senior year. Those who choose one of these tracks will not be eligible to seek ARRT certification in radiography, but will be eligible for ARRT certification in radiation therapy or ARRT and American Registry of Diagnostic Medical Sonographers (ARDMS) certification as an ultrasonographer upon completion of didactic and clinical requirements.

PRE-PROFESSIONAL COMPONENT

Degree seeking students must complete the 58-61 semester hour pre-professional component prior to enrolling in professional component courses.

PROFESSIONAL COMPONENT

The professional component (junior and senior years) consists of two years of academic and clinical study in Radiologic Sciences. The program is six semesters in length, including two summer terms. All candidates must have satisfied the pre-professional component to qualify for the degree-seeking professional component, but completion of that component does not guarantee admission to the professional component. Enrollment in the professional component is limited by the number of clinical positions available. During the professional component, students must be prepared to travel up to 90 miles from campus in order to participate in the clinical education component of the curriculum.

PROGRAM ACCREDITATION

The radiography and radiation therapy programs are accredited by the Joint Review Committee on Education in Radiologic Technology. For more information go to www.jrcert.org.

ADMISSION REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN RADIOLOGIC SCIENCES PROGRAM

1. Completion of all required pre-professional courses by the end of the summer semester prior to desired admission for Fall semester. Students are admitted to the professional component in the Fall semester only.
2. Completion of a Department of Radiologic Sciences application, available at www.southalabama.edu/alliedhealth/radiologicsciences.
3. Submit official college transcripts for all course work not completed at the University of South Alabama. Transcripts are not required if the course work has already been transferred to USA.
4. Application deadline is May 1.
5. Submit official ACT or SAT scores, regardless of previous educational background. If individual scores for Math, English and Natural Sciences on the ACT are below 18, it is strongly advised that the test be retaken. ACT or SAT scores must be submitted by the application deadline of May 1.
6. Submission of three (3) completed personal reference forms by the application deadline. Reference forms are available at www.southalabama.edu/alliedhealth/radiologicsciences.
7. Have a minimum cumulative GPA of 2.0 ("C" average) on previously completed college-level courses. Transcripts must be submitted by the application deadline. For students who are attending or have attended USA, the USA GPA will be used. GPA's from outside courses are not averaged into the USA GPA.
8. Acceptance to the University of South Alabama.
9. Students applying for admission to the professional component must complete four (4) hours of observation in a hospital Radiology department prior to reporting for the admission interview. Following submission of the departmental application, applicants may call the Department of Radiologic Sciences at (251) 445-9346 any time after January 10th during the year in which they plan to apply, and schedule a hospital observation appointment. Observation form and instructions are available at www.southalabama.edu/alliedhealth/radiologicsciences.
10. Meet program technical/core performance standards. Core performance standards are fundamental tasks and skills that are required for successful completion of the program. They have been outlined and are available upon request and on the department web site under Frequently Asked Questions (FAQ).
11. Complete a brief writing assignment conducted on the day of interview.
12. Complete a personal interview with members of the Radiologic Sciences Admissions Committee.
13. Applicants will be screened on the basis of past educational performance and the potential for the number of openings available. **Therefore, acceptance into the University does not guarantee admission into the program. Likewise, admission into the program does not guarantee a position in a particular track/modality for one's senior year**.
14. Student acceptance into the program is provisional pending completion of a drug screen and background check requirements as specified in the acceptance letter. Refusal

to submit will result in nullification of acceptance into the program.

15. Proof of medical insurance must be provided following official notification of acceptance into the program. Due date will be specified in the acceptance letter.
16. ARRT certified radiographers who have completed the pre-professional component and are seeking the baccalaureate degree may apply for admission into the second year (senior year) of the professional component.

SPECIAL FEES

Special lab fees are assessed for the following courses:
RAD 304 - $130
RAD 307 - $15
RAD 308 - $15
RAD 309 - $15
RAD 417 - $15
RAD 418 - $15
RAD 460 - $130

A $25 professional liability fee is assessed annually ($12.00 each in fall and spring and $1.00 in summer)
Traiecsys computer fee - $150.00

REQUIREMENTS FOR A BACHELOR OF SCIENCE IN RADIOLOGIC SCIENCES

Pre-Professional Component
(58-61 semester hours)

English Composition (EH 101)	3
English Composition (EH 102)	3
Biology Elective (BLY 101 or 121)	4
Biology Elective (BLY 102 or 122)	4
Psychology (PSY 120)	3
Humanities Elective (PHL 110, 121, 131, 231, 240, EH 215, 216, 225, 226, 235, 236, LG 111, 112, 211, 212, 131, 132, 231, 232, 151, 152, 251, 252, 171, 172, 271, 272, AFR 101, AIS 105)	3
Public Speaking (CA 110)	3
History Elective* (HY 101, 102, 135, 136)	3
Social Science Elective (HY 101, 102, 135, 136, AN 100, 101, ECO 215, 216, GEO 114, GEO 115, PSC 130, PSY 250, SY 109, 112, AIS 115, 201)	6
Pre-Calculus Algebra (MA 112)	3
Anatomy & Physiology I (BMD 114)	4
Anatomy & Physiology II (BMD 115)	4
Fine Arts Elective (ARH 100, 103, 123, ARS 101, MUL 101, DRA 110)	3
Intro to Computer App (CIS 150) or Gen Elective	3
Physics (PH 104 or 114)	4-5
Literature Elective* (EH 215, 216, 225, 226, 235, 236)	3
Statistics (ST 210)	3
Gen Elective	3

*Must take a sequence in either History or Literature

Professional Component

All students admitted to the professional component are required to complete the following courses during their first year in the B.S. program:

Junior year professional component
(41 semester hours)

Fall: RAD 300, RAD 304, RAD 307, RAD 310, RAD 312 (15 hrs)
Spring: RAD 301, RAD 308, RAD 315, RAD 318, RAD 335 (15 hrs)
Summer: RAD 302, RAD 309, RAD 324, RAD 320 (11 hrs)

Senior year professional component
(35-42 semester hours)

Note: Course requirements and semester hours vary based on the educational track followed.

Track 1: General Radiography to include one advanced modality^. (Study of ultrasound or radiation therapy is not an option in the General Radiography Track)

Fall: RAD 403, RAD 411, RAD 415 AND
Mammography: RAD 472 (total 15 semester hrs) or
Computed tomography: RAD 464 (total 15 semester hours) or
Magnetic resonance imaging: RAD 468 (total 15 semester hours) or
Vascular radiography: RAD 460 (total 15 semester hours) or
Radiology administration: RAD 43 & RAD 432 (total 17 semester hours)

Spring: RAD 404, RAD 437, RAD 499, RAD 496 AND
Mammography: RAD 473 (total 14 semester hours) or
Computed tomography: RAD 465 (total 14 semester hours) or
Magnetic resonance imaging: RAD 469 (total 14 semester hours) or
Vascular radiography: RAD 461 (total 14 semester hours) or
Radiology administration: RAD 433 & RAD 435 (total 16 semester hours)

Summer: RAD 405, RAD 494, RAD 496, RAD 497 AND
Mammography: RAD 474 (total 11 semester hours) or
Computed tomography: RAD 466 (total 11 semester hours) or
Magnetic resonance imaging: RAD 470 (total 11 semester hours) or
Vascular radiography: RAD 462 (total 11 semester hours) or
Radiology administration: RAD 440 (total 8 semester hours)

Track 2: Ultrasound Only (33/35 semester hours)

Fall: RAD 417, RAD 423, RAD 320*, RAD 411 (12/14 hrs)
Spring: RAD 418, RAD 421, RAD 424, AND RAD 496 (12 hrs)
Summer: RAD 425, RAD 427, RAD 497 (9 hrs)

*RAD 320 required if not previously completed

Track 3: Radiation Therapy Only (42/44 semester hours)

Fall: RAD 441, RAD 448, RAD 320*, RAD 446, RAD 450, RAD 452 (15/17 hrs)
Spring: RAD 442, RAD 455, RAD 453, RAD 458, RAD 496 (16 hrs)
Summer: RAD 443, RAD 456, RAD 454, RAD 496, RAD 497 (11 hrs)

*RAD 320 required if not previously completed
*Students who complete Track 1 (Radiography to include one advanced modality) will be eligible to apply for continuation in the program to study any additional modality to include ultrasound and radiation therapy.

Post-ARRT Continuing Education Program (Non-Degree)

The department offers a three semester post-ARRT certification option to former USA certificate graduates and graduates of other radiography programs who want to complete an advanced imaging modality without pursuing the bachelor's degree. The three-semester non-degree option is available only to ARRT-registered radiographers who completed the USA Certificate or B.S. program or completed an associate degree radiography program. There are six advanced imaging modalities available, and include mammography, magnetic resonance imaging, vascular-interventional radiography, computed tomography, radiology administration, or ultrasound. A non-degree option for radiation therapy is not offered. Upon completion of the didactic and clinical education requirements, students are eligible to seek ARRT certification in five of the six advanced imaging modalities offered. At the present time, the ARRT does not offer certification in radiology administration. Students in the non-degree track are required to complete only the advanced imaging modality courses for the modality in which they are admitted. Admission of students to the non-degree option will be limited based on the number of clinical positions available after degree-seeking students have been admitted. Students who complete the non-degree option may later choose to complete requirements to earn the bachelors degree, which would include completion of all general education courses listed in the pre-professional component.

TRANSFER STUDENTS

Students may transfer no more than 60 semester hours from a community college. To earn a B.S. degree, students must complete a minimum of 25 percent of the credit hours required for the degree through instruction in upper level courses (300, 400) at USA, and must complete 15 semester hours in the major. Two "W" (writing component) courses must also be taken at USA.

TOTAL HOURS REQUIRED BY PROGRAM/TRACK

Track 1: Bachelor degree, General Radiography to include either mammography, computerized tomography, magnetic resonance imaging, vascular radiography, or radiology administration: 138-146 semester hrs
Track 2: Bachelor degree, Ultrasound modality only: 136-139 semester hours
Track 3: Bachelor degree, Radiation therapy only: 145-148 semester hours

For more information regarding requirements, admissions, and FAQs, go to http://southalabama.edu/alliedhealth/radiologicsciences.

Department of Radiologic Sciences
5721 USA Drive North, HAHN 3015
Mobile, AL 36688-0002
Telephone: (251) 445-9346
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DESCRIPTIONS OF ALL RADIOLOGIC SCIENCES (RAD) COURSES BEGIN ON PAGE 299.

DEPARTMENT OF SPEECH PATHOLOGY AND AUDIOLOGY

Chair: Robert E. Moore (251) 445-9378
Professor Emeritus: B. Evans, Sellers
Professors: Dagenais, Talbott
Associate Professors: Adams, B. Beverly, Estis, Gordon-Hickey, Moore
Assistant Professors: Beverly, T., Davis, D. Evans, K. Evans, Holston, Ramkissoon
Senior Instructor: Byrd
Instructors: Hudson, Overschmidt, Taylor

Department of Speech Pathology and Audiology web site
http://www.southalabama.edu/alliedhealth/speechandhearing/

The mission of the Department of Speech Pathology and Audiology is to provide undergraduate, master's and doctoral programs that challenge the student to achieve the highest standards of academic learning, scientific inquiry and clinical excellence. The Department of Speech Pathology and Audiology seeks to deliver a comprehensive program of academic, research and clinical training in the areas of speech, language and hearing development and disorders. The Department offers the Bachelor of Science in Speech and Hearing Sciences, the Master of Science in Speech-Language Pathology, the Doctor of Audiology, and the Doctor of Philosophy in Communication Sciences and Disorders.

The undergraduate program readies the graduate to undertake professional study on the graduate level. Students in Speech-Language Pathology who complete the master's program will meet all the academic and practicum requirements to be eligible for the Clinical Fellowship (CF) that leads to national certification (CCC/SLP) by the American Speech-Language-Hearing Association (ASHA) and eligibility for the Alabama State License. Students in Audiology who complete the Doctor of Audiology program will meet all the academic and practicum requirements for national certification (CCC/A) and also be eligible for the Alabama State License. The Graduate programs in both Speech-Language Pathology and Audiology are accredited by the Council on Academic Accreditation (CAA) of ASHA.

Undergraduate students majoring in Speech and Hearing Sciences must complete each SHS course with a grade of "C" or better. Prior to enrolling in SHS courses at the 300 level, students must have achieved an overall GPA of 3.0. Undergraduate speech and hearing majors are expected to maintain an overall grade-point average acceptable for admission to a graduate program.

Course requirements for the baccalaureate degree are outlined below.

REQUIREMENTS FOR A MAJOR IN SPEECH AND HEARING SCIENCES

Area I - Written Composition	**(6)**
EH 101, EH 102	3, 3
Area II - Humanities & Fine Arts	**(12)**
CA 110	3
ARH 100, ARH 103, ARH 123, ARH 240, ARH 242; ARS 101; MUL 101; DRA 110	3
EH 215 or EH 216 or EH 225 or EH 226 or EH 235 or EH 236	3
*Humanities Elective (suggest LG if HY sequence chosen)	3
Area III - Natural Sciences and Math	**(7)**
MA 112	3
BLY 121 & BLY 121L	4
Area IV - History, Social and Behavioral Sciences	**(12)**
History Elective (HY 101, HY 102, HY 135, or HY 136)	3
*Social Sciences Electives (3 courses) (recommend AN 100 & SY 109)	9
Area V - Preprofessional, Major and Electives	**(30)**
CIS 150 or CIS 110 or CIS 250	3
PSY 120	3
BMD 114, BMD 115	4, 4
ST 210 or BUS 245 or ST 305	3
PH 104	4
General Electives (3 courses)	9

*must complete a two course sequence in Literature or History

MAJOR REQUIREMENTS	**(18)**
Human Development (PSY 250, PSY 340, PSY 350; EPY 251, EPY 315) AIS 301	3
Aging (PSY 250, PSY 436; BLY 207; HSC 450, HSC 457; SY 372, SY 472; LS 479, GRN 290; AIS 201, AIS 401), SY 435	3
Multicultural (EDF 315; EPY 315; AN 200, AN 458; SY 315, SY 420, SY 428, SY 445, SY 455; PSY 270, PSY 485; AIS 320; IS 100, IS 200), AN 100, AN 101, AN 210, AN 340, AN 344, AN 397, AN 354, AN 355, AN 356, AN 357, HY 279, AFR 101, LG 110, LG 305, GS 101, PSC 452, REL 352, REL 354, REL 355	3
Psychology (PSY of your choice)	3, 3
SHS 290 or approved elective	3

Students complete BMD 114, BMD 115, CIS 150 or CIS 110 or CIS 250, PH 104 during the first two years. Students must have achieved an overall GPA of 3.0 prior to enrolling in SHS 315 and SHS 341.

REQUIRED SPEECH AND HEARING SCIENCES COURSES (36)
(36 credits as given below)

SHS 301	3	SHS 302	3
SHS 315	3	SHS 331	4
SHS 341	4	SHS 414	3
SHS 453	3	SHS 431	3
SHS 473	3	SHS 474	3
SHS 480	4		

A special course fee is assessed for the following course:

SHS 480 $37.00

DESCRIPTIONS OF ALL SPEECH AND HEARING SCIENCES (SHS) COURSES BEGIN ON PAGE 305.

MASTER OF SCIENCE IN SPEECH-LANGUAGE PATHOLOGY

The Master of Science (MSSLP) in Speech-Language Pathology serves either as a professional preparation for clinical certification by the American Speech-Language-Hearing Association (ASHA) or as preparation for graduate study leading to the Ph.D. degree. The MSSLP program provides a broad range of basic science courses and specialized offerings emphasizing evaluation and treatment of language, articulation, fluency, voice, swallowing, and neurologically-based communication disorders. Students are prepared for careers as clinicians in schools, hospitals, rehabilitation centers, and community clinics. Clinical practicum experiences occur at the on-campus Speech and Hearing Center and many affiliated clinics, rehabilitation centers, schools, and hospitals. Within this framework, students must meet the academic and practicum requirements leading to the Clinical Fellowship (CF) that occurs post graduation. Completion of the CF results in national certification (the Certificate of Clinical Competence (CCC) in Speech-Language Pathology awarded by ASHA) and eligibility for State of Alabama Licensure. The MSSLP program typically extends for five academic semesters, including one partial semester of clinical externship. Graduate assistantships are available annually on a competitive basis. Applications for admission and assistantships are accepted after November 1 with enrollment beginning in the Fall Semester only. The deadline for receipt of all application materials is February 1. Specific information about the Master's program is available from the department.

REQUIREMENTS FOR ADMISSION

Students are admitted in the Fall Semester only.

The following criteria supplement the Graduate School criteria:

REGULAR ADMISSION

1. A baccalaureate degree (or equivalent) in the field of communication sciences and disorders from an accredited college or university is required for admission. This includes all prerequisites for admission into the graduate program. Students who do not hold a baccalaureate degree or meet the prerequisites in the field may be eligible for the Second Bachelor's Degree Program in Speech and Hearing Sciences. (see below).
2. A minimum 3.0 ("A"=4.0) overall undergraduate GPA is required to be considered for regular admission, a minimum of 2.5 overall undergraduate GPA for provisional admission.
3. Completion of the Graduate Record Examination (GRE) within the last five years. In order to be considered for regular admission, a minimum combined score of 290 for the Verbal and Quantitative portions of the GRE is required. In rare instances applicants with a GRE score of less than 290 may be required for provisional admission. The score for the written portion will be evaluated.
4. Three references from faculty at the undergraduate institution are required. It is recommend that two of these references be provided by Ph.D. faculty within the applicant's undergraduate department.
5. A Letter of Intent stating the applicant's reasons for pursuing the degree.

Because the number of applicants is greater than the number of vacancies in the program, students are admitted on a competitive basis, based on the criteria stated above. Because of limited course sequencing, students are admitted

in Fall Semester only. Students must submit complete applications by **February 1** of the year in which they intend to matriculate.

In addition, students should have a course in human anatomy and physiology, an adequate background in psychology, and one course each in basic statistics and computer science. In order to meet ASHA certification requirements, students are strongly encouraged to complete course work in areas dealing with multicultural issues, aging/gerontology, and human development.

REQUIREMENTS FOR DEGREE

The Master of Science in Speech-Language Pathology degree requires:

1. A minimum of five semesters of full-time academic study. A portion of the final semester is spent off campus completing the externship.
2. A minimum GPA of 3.0.
3. A passing grade on a comprehensive examination administered during the final semester before leaving for the externship, or satisfactory completion of a thesis.
4. Demonstration of academic and clinical competencies as reflected in the student's Knowledge and Skills Assessment (KASA) document.
5. 375 clinical clock hours in the required areas as stipulated by ASHA.

TYPICAL COURSE SEQUENCE
Master of Science in Speech-Language Pathology

Year 1

Fall		Spring		Summer	
SLP 541	3	SLP 568	3	SLP 567	2
SLP 533	3	SLP 561	3	SLP 521	2
SLP 565	3	SLP 566	3	SLP 596	3
SLP 596	3	SLP 596	3		

Year 2

Fall		Spring	
SLP 510	3	SLP 534	2
SLP 551	3	SLP 588	2
SLP 532	3	SLP 598	8
SLP 596	3		

A special course fee is assessed for the following course:

SLP 596 $183.00

RETENTION POLICIES

1. Any term in which a graduate student enrolled in the MSSLP program drops below a 3.0 GPA, the student will be placed on probationary status and has a period of one semester to attain a 3.0 GPA or be dismissed from the program.
2. A student in the status of Provisional Admission who has not earned a minimum of a B Grade in all courses completed in their first semester in the program does not have a 3.0 GPA upon completing 15 semester hours of graduate credit toward degree requirements will be academically dismissed from the MSSLP program.
3. Any student who receives a "D" or "F" in a graduate level course will be dismissed from the program.
4. A "C" in any combination of two or more MSSLP courses will result in academic dismissal.
5. Dismissal due to poor performance can occur at anytime during the course of study. Students should understand and agree that they may be required to complete additional and/or augmentative work or clinical experience as determined by the faculty or clinical staff. As such, graduation may be delayed.
6. If for any reason a student must withdraw from the MSSLP program, re-admission will require approval of the department chair and the Dean of the Pat Capps Covey College of Allied Health Professions.
7. If a student is dismissed from a program prior to the end of the regular semester and that dismissal occurs after the University's refund deadline, the student will not receive any type of refund even if the next series of classes have not begun.

SECOND BACHELOR'S DEGREE PROGRAM IN SPEECH AND HEARING SCIENCES

The Second Bachelor's Degree Program in Speech and Hearing Sciences in the Department of Speech Pathology and Audiology offers appropriate prerequisite undergraduate course work to individuals who hold a bachelor's degree in an area other than speech and hearing science, speech language pathology, audiology, or communication disorders. **Students apply directly to the department for admission to this program. Admission is limited and on a competitive basis. Those who meet admission requirements are admitted to the Second Bachelor's Degree program and the graduate MSSLP program**. Admission to the MSSLP program is provisional and contingent on successful completion of the Second Bachelor's Degree Program in Speech and Hearing Sciences. Students may need to successfully complete additional course work outside of the department. All out-of-department coursework must be completed during this initial year. This includes supporting course work in mathematics or statistics, an anatomy and physiology sequence, physics or chemistry, and two psychology courses.

Given the structured curriculum in this special track, students are admitted Fall Semester only. Application procedures are outlined under the program of study.

- A minimum of 33 within-department credit hours consisting of current course work (or equivalent):

To earn a second bachelor's degree, students must complete 25% of the total credits necessary for a first bachelor's degree in that major, and these credits must be from upper division courses. Given this requirement, a typical sequence is as follows:

Fall Semester	Credit Hours
SHS 341 Phonetics	4
SHS 315 Speech Science	3
SHS 453 Intro Speech Dis	3
SHS 473 Audiology I	3
Spring Semester	**Credit Hours**
SHS 302 Fundament Hrg Sci	3
SHS 331 Normal Language	4
SHS 414 Neuro Bases	3
SHS 431 Intro Lang Dis	3
SHS 474 Audiology II	3
Summer Semester	**Credit Hours**
SHS 480 Clinic Practicum	4

Admissions and continuation requirements for the Second Bachelor's Degree Program in Speech and Hearing Sciences are as follows:

- Students contact the Department of Speech Pathology and Audiology directly concerning admission to this program. **Applications must be completed by April 1**.
- Admission decisions are made by the Department of Speech Pathology and Audiology. The admission requirements exceed those of the University of South Alabama by requiring GRE scores, 3 favorable letters of recommendation, and a letter of intent.
- The department application fee ($45.00) must be paid at the time of application to the Second Bachelor's Degree Program. However, the application fee for graduate school does not apply at this time.
- Applicants for the Second Bachelor's Degree Program in Speech and Hearing Sciences are considered in relationship to applicants for the MSSLP degree that year.
- If an applicant is admitted to the Second Bachelor's Degree Program in Speech and Hearing Sciences, then the student will complete the undergraduate application to the University of South Alabama, including submission of all transcripts and provision of proof of the first bachelor's degree.
- Students who are admitted to the Second Bachelor's Degree Program in Speech and Hearing Sciences are granted provisional admission to the MSSLP program. The admission is provisional with the following stipulations: 1. The student must complete the first year of the program with no grade lower than B, and 2. The department must receive two favorable letters of recommendation from two faculty members within the Department of Speech Pathology and Audiology at the time of application for the MSSLP program.
- During the second semester of the Second Bachelor's Degree Program the student can apply for the MSSLP program. This application is made through the online application process used by the department for the MSSLP program. All fees that apply to that application process must be paid. While admission to the MSSLP program is granted during the second semester, it remains provisional until the student has successfully completed that semester.

DESCRIPTIONS OF ALL SPEECH-LANGUAGE PATHOLOGY (SLP) COURSES BEGIN ON PAGE 306.

DOCTOR OF AUDIOLOGY

The Doctor of Audiology (Au.D.) is a professional doctoral degree and is administered through the Pat Capps Covey College of Allied Health Professions. The Doctor of Audiology (Au.D.) serves either as preparation for professional clinical audiologists (including certification by the American Speech-Language-Hearing Association, ASHA) or as preparation for graduate study leading to the Ph.D. degree. The Au.D. program provides a broad range of basic science courses and specialized offerings emphasizing assessment, intervention, and prevention techniques used with patients of

all ages who have hearing or balance related disorders. Students are prepared for careers as clinicians in schools, hospitals, rehabilitation centers, private practice and community clinics. Clinical practicum opportunities occur at the on-campus Speech and Hearing Center and many affiliated ENT clinics, rehabilitation centers, schools, and hospitals. Within this framework, students must meet the academic and practicum requirements for national certification (the Certificate of Clinical Competence, CCC, in Audiology awarded by ASHA) and State of Alabama Licensure. The Au.D. Program typically extends for 11 academic semesters including three semesters of clinical externship. Assistantships are available annually on a competitive basis. Applications for admission and assistantships are available after November 1 with enrollment beginning in the Fall Semester only. The deadline for receipt of all application materials is **February 1**. Specific information about the Au.D. Program is available from the department.

REQUIREMENTS FOR ADMISSION

Students are admitted in the Fall Semester only.

The following describes admission criteria:

REGULAR ADMISSION

1. A baccalaureate degree (or equivalent) from an accredited college or university is required for admission. Students who hold a baccalaureate degree in another field will be considered for admission on an individual basis.
2. A minimum 3.0 (A=4.0) overall undergraduate GPA is required to be considered for regular admission, a minimum of 2.5 overall undergraduate GPA for provisional admission.
3. Completion of the Graduate Record Examination (GRE) within the last five years. In order to be considered for regular admission, a minimum combined score of 290 for the Verbal and Quantitative portion of the GRE is required. In rare instances applicants with a GRE score of less than 290 may be considered for provisional admission.
4. Three references from faculty at the undergraduate institution are required. It is recommended that two of these references be provided by Ph.D. faculty within the applicant's undergraduate department.
5. A Letter of Intent stating the applicant's reasons for pursuing the degree.

Because the number of applicants is greater than the number of vacancies in the program, students are admitted on a competitive basis, based on the criteria stated above. Because of limited course sequencing, students are admitted in fall semester only. Students must submit complete applications by **February 1** of the year in which they intend to matriculate.

In addition, students should have a course sequence in human anatomy and physiology, an adequate background in psychology, and one course each in basic mathematics and physics or chemistry. Students are strongly encouraged to complete course work in areas dealing with multicultural issues, aging/gerontology, and human development.

REQUIREMENTS FOR DEGREE

The Doctor of Audiology (Au.D.) requires:

1. A minimum of eleven full time semesters of academic study. The final three semesters are spent off campus completing externships.
2. A minimum GPA of 3.0.
3. A passing grade on summative assessments administered during the third semester of years one, two, and three of the program. Students must also complete formative assessments throughout the program.
4. Demonstration of academic and clinical competencies as reflected in the student's Knowledge and Skills Assessment (KASA) document.
5. 1820 clinical clock hours (52 weeks X 35 hours per week) in the required areas as stipulated by ASHA.
6. All students must take the Praxis Exam prior to graduation.

TYPICAL COURSE SEQUENCE
Doctor of Audiology

Year 1

Fall		Spring		Summer	
AUD 612	4	AUD 622	3	AUD 642	3
AUD 614	3	AUD 613	3	AUD 643	3
AUD 640	3	AUD 616	3	AUD 630	3
AUD 641	3	AUD 670	2	AUD 670	2
AUD 670	1			AUD 630L	1

Year 2

Fall		Spring		Summer	
AUD 631	3	AUD 647	3	AUD 648	3
AUD 645	3	AUD 649	3	AUD 651	3
AUD 656	4	AUD 657	2	AUD 658	3
AUD 671	3	AUD 671	3	AUD 671	3
AUD 631L	1				

Year 3

Fall		Spring		Summer	
AUD 621	2	AUD 654	3	AUD 675	1
AUD 623	3	AUD 655	3	AUD 676	6
AUD 633	3	AUD 661	3		
AUD 653	3	AUD 672	3		
AUD 672	3				

Year 4

Fall		Spring	
AUD 675	1	AUD 675	1
AUD 676	6	AUD 676	6

A special course fee is assessed for the following courses:

AUD 670	$183.00
AUD 671	$183.00
AUD 672	$183.00
AUD 630L	$25.00
AUD 631L	$25.00

RETENTION POLICIES

1. Any term in which a graduate student enrolled in the Au.D. program drops below a 3.0 GPA, the student will be placed on probationary status and has a period of one semester to attain a 3.0 GPA or be dismissed from the program.
2. A student in the status of Provisional Admission who does not earn all A and B grades in their 1st year of course work (Fall, Spring, and Summer) and/or does not successfully pass 1st year Summative Assessments will be dismissed from the Au.D. program
3. Any student who receives a "D" or "F" in a graduate level course will be dismissed from the program.
4. A "C" in any combination of two or more AUD courses will result in academic dismissal.
5. Dismissal due to poor performance can occur at anytime during the course of study. Students should understand and agree that they may be required to complete additional and/or augmentative work or clinical experience as determined by the faculty or clinical staff. As such, graduation may be delayed.
6. If for any reason a student must withdraw from the Au.D. program, re-admission will require approval of the department chair and the Dean of the Pat Capps Covey College of Allied Health Professions.
7. If a student is dismissed from a program prior to the end of the regular semester and that dismissal occurs after the University's refund deadline, the student will not receive any type of refund even if the next series of classes have not begun.

DESCRIPTIONS OF ALL AUDIOLOGY (AUD) COURSES BEGIN ON PAGE 176.

DOCTOR OF PHILOSOPHY PROGRAM IN COMMUNICATION SCIENCES AND DISORDERS

The Doctor of Philosophy (Ph.D.) Program in Communication Sciences and Disorders offers students specialization in speech and language pathology, communication science, or audiology. The doctoral program is designed to provide a formal course of training and advanced research in communication sciences and disorders that produces significant, original contributions to the professional discipline. Course work in experimental research design, statistics and various out-of-department opportunities maximize the student's ability to engage in original research and scholarship. A doctoral student is admitted to candidacy upon passing a written and oral comprehensive examination.

Applicants wishing to pursue the Ph.D. degree design a program suited to meet their future teaching and research goals in speech-language pathology, audiology, and/or applied speech/hearing sciences within the framework of the core requirements described below. For full-time students, it is anticipated that they can complete the Ph.D. in three years. Students must complete the Ph.D. in seven years from the start of the program. The student may apply for an extension if unable to complete the degree in seven years. All extensions must be approved by the student's committee and the department chair.

There are two tracks that students can choose in pursuit of the Ph.D. degree: Track One is for applicants who have completed both undergraduate and graduate level training in the profession or a related field. For these students, it is assumed that they have either already met course work requirements toward certification by the American Speech-Language-Hearing Association (ASHA), or they are not pursuing certification. Students with bachelor's degrees within the discipline may enter this program but do not complete the clinical requirements for certification through ASHA (i.e., CCC-A or CCC-SLP).

Track Two is designed for students who wish to obtain clinical certification in either discipline as part of their training. This track

is available as a fast-track option to the Ph.D. program and is available to Au.D. and SLP Master's degree students after they have completed one half of their degree programs. That is, Au.D. students can apply to the Ph.D. program after the first two years of their Au.D. training. If accepted, they proceed to complete the requirements for the Au.D. and the Ph.D. programs simultaneously. They are awarded both degrees at the completion of all program requirements, and they are eligible for ASHA CCC-A. Students in the MSSLP program can convert to the Ph.D. program after one year of the master's degree and complete the Ph.D. in three years. They are awarded the Ph.D. only. They will have, however, demonstrated the core knowledge and skills necessary to be eligible for the ASHA CCC-SLP. They will still need to complete the Clinical Fellowship (CF).

REQUIREMENTS FOR ADMISSION

Minimum admission consideration requirements are as follows:

Track One:

1. Bachelor's or graduate degree. If the applicant wants to earn ASHA certification then a graduate degree in speech-language pathology or audiology is needed.
2. For bachelor's applicants, minimum overall undergraduate GPA of 3.2 (based on 4.0) and minimum undergraduate GPA in the professional area of 3.5. For those holding a graduate degree, a minimum overall graduate GPA of 3.5.
3. For Graduate Record Exam (GRE), a combined score of at least 290 on the Verbal and Quantitative portions of the GRE, however, to be competitive a GRE score of 300 or higher is recommended. The writing portion of the GRE must be taken but there is no minimum score.
4. Three letters of reference from faculty at the undergraduate institution are required. At least two references must be provided by the Ph.D. faculty.
5. A Letter of Intent stating the applicant's reasons for pursuing the degree.

Track Two:

1. Bachelor's degree in speech-language pathology or audiology, or successful completion of undergraduate equivalency course work in the area of Speech and Hearing Sciences, or equivalent. (See prerequisite program above.)
2. Current status within the Au.D. or M.S. Speech-Language Pathology program at USA with a minimum graduate GPA of 3.5 (based on 4.0).
3. For Graduate Record Exam (GRE) obtained prior to August 2011, a combined score of at least 1000 on the Verbal and Quantitative portions of the GRE is required. After August 2011, a combined score of at least 290 on the Verbal and Quantitative portions of the GRE is required. However, to be competitive a GRE score of 300 or higher is recommended. The writing portion of the GRE must be taken but there is no minimum score.
4. Three letters of reference from current faculty. All three references must be provided by the Ph.D. faculty.
5. A Letter of Intent stating the applicant's reasons for pursuing the degree.

PROGRAM REQUIREMENTS CURRICULUM

Core Courses (12 hours)

Pre-dissertation course work in experimental design, statistical procedures, and research instrumentation. Includes doctoral colloquia.

CSD 650	Research Methods in Communication Science and Disorders	3
CSD 651	Advanced Speech and Hearing Science and Instrumentation	3
IDE 620	Quantitative Methods I	3
IDE 621	Quantitative Methods II	3

Electives (29 hours)

Electives include directed studies and directed research. Research projects are designed to give the student direct experience in the design, analysis and interpretation of experimental questions. This directed research is intended, in part, to provide the student with a project for their pre-comprehensive examination manuscript and oral presentation. These experiences are also designed as prerequisites to the preparation of the prospectus of the doctoral dissertation. Additionally, students may take course work within and outside the Department of Speech Pathology and Audiology.

Professional Practicum (4 hours)

Professional practicum experiences are designed to give direct experience with, at least, two of the following professional areas: teaching, clinical supervision and administration. These may be repeated but only 4 hours count toward degree requirements.

Dissertation (21 hours)
Total: 66 hours

NOTE: The above represent minimum requirements. A student, with approval or recommendation of the graduate faculty, may take additional course work in a specific area if it is needed to support the student's specialization area or to obtain knowledge in an ancillary area.

The Doctor of Philosophy degree program in Communication Sciences and Disorders requires a minimum of 66 semester hours of approved graduate course work beyond the Master's Speech-Language Pathology degree and a minimum of 50 hours beyond the Doctor of Audiology degree. Refer to the doctoral handbook for specific requirements.

APPLICATION

Applications for Track One of the Ph.D. program are accepted at any time and enrollment can begin any semester. Applications for the Track Two program are accepted after November 1 during the student's first year of the MSSLP program or second year of the Au.D. program.

GRADUATE ASSISTANTSHIPS/ TUITION FELLOWSHIPS

Graduate assistantships and tuition fellowships are available annually on a competitive basis.

TRANSFER CREDIT

Normally, students are not permitted to transfer doctoral level credits. Exceptions to this policy would require approval of the Admissions Committee, Director of Graduate Studies for the Pat Capps Covey College of Allied Health Professions, and the Dean of the Graduate School.

COMPREHENSIVE EXAMINATION

Ph.D. students must pass a comprehensive examination following successful completion of academic work. Subsequent to passing the comprehensive examination and successful presentation of an original research project the student is admitted to candidacy. The content of the student's comprehensive examination is determined by the student's comprehensive examination committee. The comprehensive examination consists of 18 hours of written examination followed by a two hour oral examination.

CANDIDACY

Admission to candidacy will be achieved upon successful completion of the comprehensive examination and professional presentation of a completed research project. The research project is undertaken with the guidance and approval of a pre-dissertation project committee. The doctoral candidate is, therefore, a student who has fulfilled all preliminary requirements for the Ph.D. and has only the dissertation research project as the remaining program requirement.

DISSERTATION/DISSERTATION DEFENSE

While only 21 semester hours of dissertation research may count towards the degree, a student must continually enroll in CSD 799 (Dissertation Research) until the final dissertation document has been approved by the Dean of the Graduate School. The final oral defense of the dissertation is scheduled after the dissertation study is completed and prepared in written form. Additional revisions of the dissertation may be required as a result of the defense or Graduate School evaluation.

TIME LIMIT

After reaching candidacy, students have a maximum of two years to complete the dissertation.

DESCRIPTIONS OF ALL COMMUNICATION SCIENCES AND DISORDERS (CSD) COURSES BEGIN ON PAGE 206.

COLLEGE OF ARTS AND SCIENCES

Dean: Andrzej Wierzbicki (251) 460-6280
Associate Dean: Victoria L. Rivizzigno
Associate Dean: S. L. Varghese
Assistant Dean: Robert L. Coleman
Assistant to the Dean: Donald DeVore
Advisors: Nancy Howell, Kelly Taylor, Lynne Winterton
Manager of Instructional Support and Development: Crystal Thomas

College of Arts and Sciences web site
http://www.southalabama.edu/arts&sci

Departments of Instruction
Air Force Studies
Biology
Chemistry
Communication
Dramatic Arts
Earth Sciences
English
Foreign Languages and Literatures
History
Interdisciplinary Programs
- African-American Studies
- Gender Studies
- Gerontology
- International Studies

Marine Sciences
Mathematics and Statistics
Military Science
Museum Studies
Music
Philosophy
Physics
Political Science and Criminal Justice
Public Administration
Psychology
Sociology, Anthropology and Social Work
Visual Arts

COLLEGE MISSION STATEMENT

The College of Arts and Sciences is the intellectual center of the University of South Alabama and is the foundation for establishing and building the quality of the University's academic programs. In the College of Arts and Sciences, students receive broad exposure to all areas of academic inquiry, as well as in-depth knowledge in their chosen field of study. The College provides every undergraduate student at the University, regardless of major, with the fundamentals of a liberal arts education to enhance students' knowledge and create an atmosphere in which students develop their own critical thinking, communication skills, and the tools with which to carry out independent inquiry. Such an education promotes a heightened sense of intellectual curiosity, an appreciation of the values and accomplishments of the sciences, arts and humanities, and a sense of awareness and responsibility for the well-being of their society.

In achieving these educational goals, the College of Arts and Sciences will:

- offer a full range of subjects in the humanities, fine arts, social sciences, mathematics, and the natural sciences
- encourage breadth of learning and training in the fundamentals of scholarship
- create and apply knowledge in the arts and sciences through dedicated research, teaching, scholarship, and creative works
- maintain a community of teachers and scholars devoted to the preservation and discovery of knowledge and its transmission to students and to the public
- encourage and support the application of knowledge in service to the University, the Mobile metropolitan area, and the wider society
- emphasize the regional uniqueness of southwest Alabama, including its cultural heritage, its natural environment, and its strategic location as a port city on the Gulf of Mexico
- prepare students to participate in the larger world beyond the region by giving them an awareness of the complexity of global issues and contexts
- prepare students for meaningful and productive careers and contribute to the development of an educated work force responsive to the needs of the region

DEGREE REQUIREMENTS

The College of Arts and Sciences offers the following undergraduate degrees:

Anthropology	B.A.
Biology	B.S.
Communication	B.A.
Chemistry	B.S.
Criminal Justice	B.A.
Dramatic Arts	B.A.; B.F.A.
English	B.A.
Foreign Languages and Literatures	B.A.
Geography	B.S.
Geology	B.S.
History	B.A.
International Studies	B.A.
Mathematics and Statistics	B.S.
Meteorology	B.S.
Music	B.M.
Philosophy	B.A.
Physics	B.S.
Political Science	B.A.
Psychology	B.A.
Social Work	B.S.W.
Sociology	B.A.
Visual Arts	B.A.; B.F.A.

Options exist for students to earn dual degrees, double majors, or complete more than one minor. Students interested in these options should contact the Advising Center (251-460-7233) for details.

Degree requirements are to be satisfied with Arts and Sciences courses unless otherwise specified. Credits earned in the Developmental Studies Program or the Department of English as a Second Language (ESL) cannot be used to satisfy degree requirements.

At least 30 hours of course work, which represents 25% of the required 120 hours, must be at the upper division level in order to fulfill the University's residency requirement. At least 15 of the 30 upper-division hours must be in the major or concentration area. If a minor is required in the particular degree program, at least 9 (lower and/or upper-division) hours of courses in the minor must be completed at the University.

An overall grade-point-average (GPA) of 2.0 is required for graduation. In addition, a minimum GPA of 2.0 is required in the student's major or concentration area.

Majors in Arts and Sciences may be completed with a minimum of 120 semester hours unless designated otherwise.

Technology Proficiency

Each department will designate a course that will fulfill the technology requirement.

Mathematics Proficiency

All incoming students who do not have ACT scores must take the Mathematics Placement Test administered in the department.

This is a new Math Placement Test, effective Fall 2011. It replaces the old Math Placement Test and has a different scoring scheme.

Calculators and other outside resources are not permitted during this exam.

Students should complete the exam at least 48 hours prior to coming to campus for orientation. If the exam is not taken, the students will be blocked from registering for all mathematics courses. To take the test, students will need their JAG number and the e-mail address provided by the USA Office of Admissions. The result of the test will be e-mailed to the student's JagMail e-mail address. Students should keep a copy of their Mathematics Placement Test results to take to their academic advisor. Students should anticipate a 48 hour lag time between the time they take the Math Placement Test and the time they register.

The only exceptions to this policy are:

- Students who have ACT scores will be placed in mathematics classes based on their Math-ACT scores as follows:
- ACT-Math 22 or higher MA 112
- ACT-Math 23 or higher MA 120
- ACT-Math 23 or higher MA 267
- ACT-Math 24 or higher MA 113
- ACT-Math 25 or higher MA 115
- ACT-Math 27 or higher MA 125
- Students who have been admitted as Conditional Freshmen must take the Math Placement Exam proctored in the Department of Developmental Studies (251-460-7155) during new student orientation.
- Students who transfer credit for MA 112 or higher with a grade C or better and who plan to take subsequent mathematics courses.
- Students who transfer credit for MA 110 or higher and who DO NOT plan to take any other mathematics courses. NOTE: MA 110 does not fulfill prerequisite requirements for any other mathematics or statistics course.
- Students who disagree with the course placement as determined by their ACT Math score will be allowed to take the Math Placement Test. The Test schedule is available on the Department website www.southalabama.edu/mathstat/. Contact the Department of Mathematics and Statistics (251-460-6264) to register for the Math Placement Test. The test determines the

most appropriate math course for which the student is qualified. A computer-based test will be given at the scheduled time in the Instructional Laboratory Building (ILB room 245 or 405). The test will be proctored and no calculators or outside resources will be allowed.

Questions concerning the Math Placement Exam should be directed to the Math/Statistics Department (251) 4609-62624. The PAWS registration system will enforce the placement and course prerequisites as indicated above.

CAS 100 First Year Experience 2 cr

A course for first-year students majoring in the College of Arts and Sciences that assists with maximizing the student's potential to achieve academic success and to adjust responsibility to the individual and interpersonal challenges presented by college life. Taught in small groups, the course provides an introduction to the nature of higher education and a general orientation to the functions and resources of the University.

All first-time freshmen must successfully complete CAS 100: First Year Experience as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students who must enroll in the fall semester following entry.

BACHELOR OF ARTS AND BACHELOR OF SCIENCE

A minimum of 120 hours in prescribed and elective courses is required for the Bachelor of Arts or Bachelor of Science degrees in the College of Arts and Sciences.

Candidates for these degrees must meet the general education requirements listed below, as well as completing the requirements for a major and minor field. All Bachelor of Arts and Bachelor of Science degrees within the College of Arts and Sciences require a minor with the exception of a B.A. in Foreign Languages and Literatures. Requirements for a major or minor are listed under the departmental headings. A student may count no more than 47 hours in a single discipline toward a degree, and no more than eight hours of directed study toward a degree. Two courses (6 semester hours) may count toward both the major and minor only after approval of the student's advisor, chair of the major department, chair of the minor department, and the dean.

GENERAL EDUCATION REQUIREMENTS

A minimum of 120 hours is required for all bachelors degrees awarded by the College of Arts and Sciences. Candidates for all bachelors degrees must complete the requirements of the general education curriculum, which encompasses four major areas of study:

I. Written Composition
II. Humanities and Fine Arts
III. Natural Sciences and Mathematics
IV. History, Social and Behavioral Sciences

The student should work with an academic advisor to plan his or her course of study in each of these four areas of the general education curriculum. The courses should be planned with an emphasis placed on continuity of information and compatibility with the student's major field(s) of study.

The following section lists the specific general education requirements for each of these four areas. The requirements described below apply to all Bachelor of Arts and Bachelor of Sciences degrees awarded in the College. The general education requirements that apply to the Bachelor of Fine Arts (B.F.A.), the Bachelor of Music (B.M.), and the Bachelor of Social Work (B.S.W.) degrees are described in those sections of the Bulletin: Departments of Visual Arts (B.F.A.), Dramatic Arts (B.F.A.), Music (B.M.), Sociology, Anthropology, and Social Work (B.S.W.)

GENERAL EDUCATION REQUIREMENTS

I. Written Composition (6 HRS)

The written composition component of the general education curriculum is based upon the fundamental literacy in written English. The basic skills for this component are competence in university-level English composition, which includes writing well-organized, effective essays and research papers.

EH 101 EH 102 or EH 105H

Students may exempt the EH 101 requirement with an enhanced ACT English score of 27 or above; SAT score of 550 or above on the verbal portion. Students scoring a minimum of 50 on the CLEP English Examination may satisfy the EH 101 and EH 102 requirement. A score of 4 or higher in the Advanced Placement Program may satisfy the EH 101 requirement.

NOTE: Credits earned in the Department of English as a Second Language or Developmental Studies will not be acceptable toward meeting writing competency requirements.

All undergraduates must complete two designated writing credit (W) courses, at least one of which must be in the student's major or minor.

II. Humanities and Fine Arts (Total of 21 HRS)

The Humanities and Fine and Performing Arts requirements have five components listed below as A, B, C, D and E. The oral communication component addresses the development of skills in the oral communication of English. The Foreign Language component emphasizes an introductory level of proficiency in a foreign language. The Fine and Performing Arts component of the general education curriculum addresses the creative and aesthetic needs of individuals, helping them to achieve an appreciation of art, music, and the dramatic arts. The Literature component of the general education curriculum focuses on American, British, and World Literature. The Humanities component of the general education curriculum focuses on the fundamental ideas, philosophy, and values of civilization. Humanities disciplines include African-American Studies, English, Foreign Languages and Literatures, and Philosophy.

A. Oral Communication (3 HRS)
CA 110

B. Foreign Language (6 HRS) One-year sequence; select from any one group:
LG 101 and LG 102
LG 111 and LG 112 or
proficiency test or LG 113
LG 131 and LG 132 or
proficiency test or LG 134
LG 151 and LG 152 or
proficiency test or LG 153
LG 171 and LG 172 or LG 173
LGS 101 and LGS 102
LGS 106 and LGS 107
LGS 121 and LGS 122
LGS 141 and LGS 142

Students may fulfill the foreign language requirement by passing a proficiency test offered by the Department of Foreign Languages and Literatures at the level equivalent to the second semester of the foreign language sequence, or by passing another test (e.g., AP (Advanced Placement) or CLEP (College Level Examination Program) at the equivalent level). Students who pass a proficiency test at the level equivalent to first semester of the foreign language sequence are required to complete only the second semester and will fulfill the foreign language requirement with 3 credit hours of course work.

No more than 6 hours in any one discipline; this applies to sections C, D, and E.

C. Fine and Performing Arts Component (3 HRS)
ARH 100, ARH 103, ARH 123, ARS 101, DRA 110, MUL 101

D. Literature Component (3 HRS)
EH 215, EH 216, EH 225, EH 226, EH 235, EH 236

Students must complete a six semester hour sequence either in literature or in history. Note that some majors specify the sequence, and the requirements of the major should be referred to before deciding upon either a literature or history sequence. The literature sequences are: EH 215 and EH 216 or EH 225 and EH 226 or EH 235 and EH 236.

E. Humanities and Fine Arts Component (6 HRS)
AFR 101, AIS 105, ARH 100, ARH 103, ARH 123, ARS 101, ARS 121, ARS 123, ARS 124, DRA 110, EH 215, EH 216, EH 225, EH 226, EH 235, EH 236, LG 211, LG 212, LG 231, LG 232, LG 251, LG 252, LG 271, LG 272, LGS 201, LGS 202, LGS 206, LGS 207, LGS 221, LGS 222, LGS 241, LGS 242, MUL 101, PHL 110, PHL 121, PHL 131, PHL 231, PHL 240.

III. The Natural Sciences and Mathematics (14 HRS)

The natural sciences, mathematical, and statistical component of the general education curriculum focuses on the experience of science as a rational search for understanding the natural world, and the appreciation of mathematics and statistics as valuable tools for everyday life and as intrinsically important ways of thinking.

A. Mathematics
Select one course:
MA 110, MA 112, MA 113, MA 115, MA 120, MA 125, MA 126, MA 227, MA 237, MA 238

B. Natural Sciences
Complete either option A or option B below:
Option A: Complete 3 courses with labs.
AN 210, BLY 101 or BLY 121, BLY 102 or BLY 122, CH 101, CH 103, CH 131 or CH 132, GEO 101, GEO 102, GY 111, GY 112, PH 101, PH 104, PH 114 or PH 201, PH 115 or PH 202

BLY 121 and BLY 122 are restricted to Arts and Sciences science majors, Allied Health science majors, Engineering majors, and Computer Science majors.
Option B: Complete 2 courses from list above and ST 210 or a math course above MA 112 except MA 201 and MA 202

IV. History, Social & Behavioral Sciences* (12 HRS)
This component of the general education curriculum focuses upon developing an appreciation of the study of human behavior and its consequences, including the structure and functioning of institutions and the history of cultures. Disciplines include Anthropology, Economics, Geography, History, International Studies, Political Science, Psychology and Sociology. **No more than six hours in any one discipline**.

A. History Component (3 HRS)
HY 101, HY 102, HY 135, HY 136
Students must complete a six semester hour sequence either in literature or in history. Note that some majors specify the sequence, and the requirements of the major should be referred to before deciding upon either a literature or history sequence. The history sequences are: HY 101 and HY 102 or HY 135 and HY 136.

B. History, Social and Behavioral Sciences Component (9 HRS)
AIS 201, AN 100, AN 101, CA 100, CA 211, ECO 215, ECO 216, GEO 114, GEO 115, GS 101, HY 101, HY 102, HY 135, HY 136, IS 100, PSC 130, PSY 120, PSY 121, PSY 250, SY 109, SY 112

MAJORS AND MINORS IN THE COLLEGE OF ARTS AND SCIENCES

Undergraduate students pursuing a Bachelor of Arts or a Bachelor of Science degree in the College of Arts and Sciences are required to have a major and a minor. The exceptions to the minor requirement are: students pursuing Bachelor of Arts degree in Foreign Languages and Literatures, a Bachelor of Fine Arts degree, or a Bachelor of Music degree.

Requirements for a major are determined by the department and are listed under the departmental listing in this **Bulletin**. **At least 15 hours of upper-division course work in the major must be satisfactorily completed in residence at the University of South Alabama**. Courses are chosen in consultation with departmental advisors. Substitutions for stated requirements must be approved by the Chair of the department and the Dean of the college.

Requirements for a minor are determined by the department and are published in this **Bulletin**. **At least 9 hours of (lower and/or upper-division) course work in the minor must be satisfactorily completed in residence at the University of South Alabama**.

Students may not choose a major and a minor in the same department unless they are clearly separate disciplines that fall administratively under a single department and have been approved by the Dean. Two courses (6 semester hours) may count toward both the major and minor only after approval of the student's advisor, chair of the major department, chair of the minor department, and the Dean.

Minors available to Arts and Sciences students include: Air Force Studies, Anthropology, Art, Art History, Biology, Classics Communication, Chemistry, Composite Sciences, Criminal Justice, Dramatic Arts, English, Foreign Languages and Literatures, Geography, Geology, History, Interdisciplinary Studies (African-American Studies, Gender Studies, Gerontology), International Studies, Mathematics, Meteorology, Military Science, Music, Philosophy, Physics, Political Science, Psychology, Related Sciences, Sociology, and Statistics.

Minors are also available in other colleges.

DOUBLE MAJOR

Undergraduate students may elect to fulfill the requirements for two majors simultaneously. To do so, the student must declare a primary major and a second major on the Declaration of Major form that is filed with the Registrar's Office. The student's academic file will be maintained in the department of the primary major. Students who complete the requirements for a second major are not required to complete a minor.

Students may count related courses from one major toward the fulfillment of the requirements for the other major, provided that the total number of credit hours counted toward both majors does not exceed twelve. Written permission of the student's academic advisors, the Chair or Director of each major department or program and the Dean is required for all courses double-counted.

BACHELOR OF FINE ARTS IN STUDIO ART

The degree requirements and admission requirements to the B.F.A. program in studio art are listed under the Department of Visual Arts.

BACHELOR OF FINE ARTS IN THEATRE ART

The requirements for the B.F.A. degree in theatre arts are listed under the Department of Dramatic Arts.

BACHELOR OF MUSIC

The requirements for the B.M. degree in performance and music education are listed under the Department of Music.

BACHELOR OF SOCIAL WORK

The requirements for the B.S.W. degree in social work are listed under the Department of Sociology, Anthropology, and Social Work.

PROGRAMS IN OTHER COLLEGES AND DIVISIONS

Students in the College of Arts and Sciences may elect to pursue a second major or a minor in other colleges and divisions of the University.

Students seeking dual degrees or second degrees must have a **course of study** approved in advance by the student's advisor, department Chair, and the Dean.

INTERNATIONAL PROGRAMS

The College participates in a number of international programs: summer sessions in England, and Mexico; student exchange programs and seminars in France, Germany, Russia and Greece; as well as the International University Consortium.

For further information about these programs, contact the Department of Foreign Languages and Literatures, or the Office of International Programs in the School of Continuing Education.

TEACHER CERTIFICATION FOR ARTS AND SCIENCES STUDENTS

Students in the College of Arts and Sciences may participate in the program leading to teacher certification in middle and high school education.

See College of Education for Teacher Certification Requirements.

COOPERATIVE EDUCATION PROGRAM

Students in the College of Arts and Sciences may participate in the Cooperative Education Program, which is described in a later section of the **Bulletin**. For further information, write to the Director, Career Services Center, University of South Alabama, Mobile, Alabama 36688-0002.

GRADUATE STUDIES

The College of Arts and Sciences offers programs leading to a Master of Arts degree in Communication, English, History, or Sociology; a Master of Public Administration degree; a Master of Science degree in Biology, Marine Sciences, Mathematics, or Psychology; and to Doctor of Philosophy degrees in Marine Sciences and Clinical and Counseling Psychology.

REQUIREMENTS FOR ADMISSION

Each applicant to a graduate program must meet the general Graduate School standards stated in the Graduate School Admission Requirements and Procedures. Individual programs may have additional requirements for admission and may be restricted because of capacity limitations. Consult departmental descriptions for additional information.

DEPARTMENT OF AIR FORCE STUDIES (AFROTC)

Chair: Lt Col Eric J. Wittendorfer
(251) 460-7211
Professor: Wittendorfer
Assistant Professors: Brewer
E-mail: afrotc@southalabama.edu

Department of Air Force Studies web site
http://www.southalabama.edu/afrotc/

Air Force ROTC offers students a course of study leading to a commission as a second lieutenant. Designed to complement individual academic majors, AFROTC courses can be applied toward minor requirements. Cadets enrolled in the program represent a broad cross section of the student body. The student/cadet has an opportunity to explore and evaluate Air Force career opportunities while earning a college degree. Completion of the AFROTC curriculum is the initial step in the education of the professional officer and provides a firm understanding of basic aerospace doctrine and the Air Force missions, organization, and operation.

The Air Force ROTC program consists of two phases: the General Military Course (GMC) and the Professional Officer Course (POC). Each phase requires four (4) semesters of study.

GENERAL MILITARY COURSE (THE BASIC COURSE)

Students may enroll in the General Military Course with no military obligation. The GMC courses deal primarily with the various Air Force organizations and their missions, as well as the history of the Air Force. Communication skills are also emphasized.

PROFESSIONAL OFFICER COURSE (THE ADVANCED COURSE)

Enrollment in the POC is limited to those students who have applied and been accepted for the course. Selection is based on interest in the Air Force together with academic records, observed leadership abilities, physical fitness, and SAT/ACT scores. Application is normally made while a member of the GMC. Individuals entering the POC must have two academic years remaining in college as full-time students at the undergraduate and/or graduate level. Upon completion, all POC students are obligated to accept a commission and enter the active-duty Air Force.

Junior-year materials emphasize student involvement in learning and practicing management and leadership techniques. Leadership and management skills as they apply to a Junior officer in the Air Force are emphasized, and communication skills are stressed throughout the entire AFROTC curriculum. The senior-year course deals extensively with the political, economic, and social factors relating to the formulation and implementation of national security policy.

Cadets receive a nontaxable allowance monthly while on contract (normally during the two academic years in the POC). This stipend is in addition to any other scholarship benefits.

FIELD TRAINING COURSE

All students must complete one field training course, conducted at an active Air Force base during the summer months. The program requires a four-week course to be completed, normally, between the sophomore and junior years.

When attending field training, a student is furnished transportation or payment for travel plus pay at the current rate of approximately $600 per month. Uniforms and free medical care are furnished while at field training.

AFROTC COLLEGE SCHOLARSHIP PROGRAM

The Professor of Air Force Studies (PAS) can nominate qualified freshmen, sophomores, and juniors to compete for three and two-year scholarships. The scholarship entitlement pays full tuition and fees at USA, a textbook allotment, and the monthly allowance mentioned above. Scholarship consideration is predicated on student ability, performance, and potential needs of the Air Force. Interested students need to contact the Department of Air Force Studies.

Three and four-year scholarships are also available to high school students. High school students interested in applying should call the Department of Air Force Studies at (251) 460-7211 or write the Department of Air Force Studies (AFROTC), University of South Alabama, SRH 156, Mobile, AL 36688-0002.

Also, you can apply via the Internet at http://www.afrotc.com.

AIR FORCE ROTC UNIFORMS

Students in Air Force ROTC will be issued uniforms to wear to class and leadership laboratory. They must be turned in upon completion of the year or when the cadet drops or is dropped from the program.

COURSES OF INSTRUCTION

The GMC course is normally completed during the freshman and sophomore years. This basic course consists of four semesters of study with one hour of classroom work and two hours of leadership laboratory per week.

The POC consists of four semesters of study, and this advanced course leads to a commission in the United States Air Force. Three classroom hours and two hours of Leadership Laboratory are required weekly. Students interested in this program should contact the Professor of the Air Force Studies.

REQUIREMENTS FOR A MINOR

Completion of the 16 hours of Arts and Sciences course work included in the GMC (Basic Course) and the POC (Advanced Course) are required for a minor in Air Force Studies. In addition, students must complete all commissioning requirements.

DESCRIPTIONS OF ALL AIR FORCE STUDIES (AS) COURSES BEGIN ON PAGE 175.

DEPARTMENT OF BIOLOGY

Chair: John A. Freeman (251) 460-6331
Graduate Coordinator: Brian Axsmith.
Professors: Axsmith, Boettcher, Freeman, McCreadie, Sherman
Associate Professors: K. Major, Mata
Assistant Professors: Borchert, Ni Chadhain, O'Brien
Senior Instructors: Delaney-Tucker, C. Major
Instructor: Hamil
Emeriti: Boyles, Lelong, Miller, Nelson

Department of Biology web site
http://www.southalabama.edu/biology

UNDERGRADUATE STUDIES

The program of the Department of Biology is designed to contribute to a scientific background as part of a liberal education. The department offers a diversified, broadly based program, which can be designed to satisfy many areas of study. Our multitrack major can provide the traditional student with a well-rounded background in biology, or students may select courses to prepare them for a particular area of study. The multitrack curriculum can prepare students for graduate study, pre-health professional fields (such as medicine or dentistry), marine biology, or environmental science. The department has persons trained to advise in each of these areas. A list of advisors for a specific track or area of study can be obtained from the departmental office.

All first-time freshmen must successfully complete CAS 100: First Year Experience as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students, who must enroll in the fall semester following entry.

Biology majors are required to take CIS 150 to fulfill the technology proficiency requirement, which was formerly known as the computer proficiency requirement.

REQUIREMENTS FOR A MAJOR IN BIOLOGY

Students desiring to major in biology must meet the general requirements for a degree of Bachelor of Science in addition to the following requirements.

1. **At least 37 hours of biology, including**:
   a. BLY 121 (L) and BLY 122 (L)..... 8 hrs
   b. BLY 301, 302, 303 ..... 9 hrs
   c. Upper level courses ..... 20 hrs
   The upper-level choices will be based on career counseling provided by advisors using models of tracks including (but not limited to) Botany, Ecology and Evolution, Environmental Science, Marine Biology, Cell/Microbiology, and Zoology (see department web site for examples).
   NOTE: A "C" or better in BLY 121, BLY 121L, BLY 122, BLY 122L, or the equivalents, are prerequisites to all courses numbered 300 or above except by permission of the Chair of the Department of Biological Sciences. A year of college chemistry, or advanced high school preparation in biology and chemistry is highly recommended for these two introductory courses. Credit will not be allowed for both the non-major sequence (BLY 101, BLY 101L, and BLY 102, BLY 102L) and the major/minor sequence (BLY 121, BLY 121L, BLY 122, BLY 122L.)
   A "C" or better is required in BLY 301, BLY 302, and BLY 303 before any other BLY 300-400 level courses can be taken.

Upper level courses not listed here will count towards a biology major, but do not satisfy the requirements above.

2. Chemistry (CH 131, CH 132, CH 201)
3. A year of Physics (PH 114, PH 115) or Geology (GY 111 and GY 112)
4. Mathematics through Calculus (MA 115 and 125) or Statistics (MA 115 and ST 210)

MARINE BIOLOGY CONCENTRATION

Biology majors desiring a concentration in marine biology should follow the recommended four-year curriculum for biology majors. At least one term must be spent at the Marine Environmental Sciences Consortium at Dauphin Island or other approved marine lab, after the sophomore year. The department recommends that students select courses from: BLY 360, BLY 367, BLY 368, BLY 369, BLY 370, BLY 371, BLY 372, BLY 430, BLY 451, BLY 466, BLY 471, BLY 474 and BLY 475.

Dauphin Island Sea Laboratory publishes an Information Bulletin each year. Students may request a copy of the Information Bulletin by contacting the Registrar, Dauphin Island Sea Laboratory, Post Office Box 369-370, Dauphin Island, AL 36528, (251) 861-2141 or downloading from http://www.disl.org/.

Biology majors may select a traditional minor offered by departments in the College of Arts and Sciences or the Mitchell College of Business or select a minor in **Related Sciences** by taking CH 131/CH 131L, CH 132/CH 132L, CH 201/CH 201L and any two courses (a

lecture and its laboratory component count as one course) from the following:

CH 202/CH 202L, CH 265/CH 265L, CH 414 CH 414L, CH 440, CH 441

GY 111/GY 111L, GY 112/GY 112L, GY 413, GY 461

GENERAL EDUCATION REQUIREMENTS FOR BIOLOGY MAJORS

Areas I, II, and IV of the General Education Requirements for Biology are specified in the College of Arts and Sciences section. Note that Area III requirements (Mathematics and Natural Sciences) are fulfilled by the major requirements specified above.

UNDERGRADUATE SENIOR THESIS IN BIOLOGY

The Biology Senior Thesis Program offers bright, academically motivated undergraduate students the opportunity to develop research and communication skills in preparation for a graduate or professional career. To apply for admission into the program, a student must:

1. Have completed BLY 121, 121L, BLY 122, 122L, CH 131, CH 132, plus one more upper division biology course.
2. Have earned a 3.25 GPA or better in biology courses attempted.
3. Have earned a 3.0 GPA or better overall.
4. Obtain a recommendation from a faculty member.

In addition to fulfilling the requirements of the standard biology program, senior thesis students must complete:

1. Participate in the Undergraduate Senior Thesis in Biology program for four terms; this may include summer terms.
2. Complete a minimum of six credits of directed research, three credits of which must be Honors Research in Biology (BLY 499).
3. Complete a formal research prospectus including an introduction, proposed methods, and relevant literature citations. The prospectus must be submitted and approved during the first term of participation in the program.
4. Complete a formal written report of the final research project in the form of a scientific paper.
5. Present a formal oral defense of the final research project for the Department of Biology Sciences.
6. Complete a poster presentation at the USA Annual Research Forum or the UCUR Annual Research Forum.

Students participating in the **Biology Senior Thesis Program** who have a 3.5 GPA will also be eligible for **Departmental Honors** status.

Biology students who are part of the University Honors Program will meet requirements for the Undergraduate Biology Senior Thesis as well as those of the University's program.

REQUIREMENTS FOR A MINOR IN BIOLOGY

Twenty-one hours of biology are required, including:

1. BLY 121, BLY 121L, BLY 122, BLY 122L (General Biology).
2. BLY 301, BLY 302, BLY 303
3. One 4 hour upper level course taken in the Biology department at the University of South Alabama.

Credit will not be allowed for both the non-major sequence (BLY 101, BLY 101L and BLY 102, BLY 102L) and the major/minor sequence (BLY 121, BLY 121L, BLY 122, BLY 122L.)

GRADUATE STUDIES

The Master of Science degree in Biology is designed to provide qualified students the opportunity to further their knowledge in generalized and specialized areas of biology, as indicated by course offerings and research interests of the faculty. In addition, the Department incorporates into its offerings some areas of study leading to a concentration in Marine Biology (through cooperative agreement with the Department of Marine Sciences and/or the Dauphin Island Sea Laboratory).

Admission to the M.S. Program does not automatically qualify a student for entry into the special areas of concentration; students desiring such entry should familiarize themselves with the special conditions noted below and contact the Department for special rules and conditions.

REQUIREMENTS FOR ADMISSION

Students are admitted each semester.

The following criteria supplement the Graduate School criteria (see Categories of Admission):

REGULAR ADMISSION

1. Undergraduate major in Biology, Botany, or Zoology with a minimum GPA of 2.8 (on a 4-point scale) in all biological courses taken.
2. One year of freshman chemistry and at least one semester of organic chemistry.
3. One year of physics or geology.
4. Mathematics at least through calculus or statistics.
5. Graduate Record Examination (GRE) score of at least 306 on the Verbal and Quantitative portions, with at least a score of 150 on Verbal. (An MCAT score of 24 may be substituted for the GRE by persons intending to enter a cellular/molecular area.)
6. Students who do not speak English as their native language must submit a minimum TOEFL score of 600.
7. Three letters of reference.
8. A letter from the student indicating their research interests.
9. A willing mentor from Biology (in this regard the student should contact the Graduate Coordinator before applying to the program).

PROVISIONAL ADMISSION

1. Undergraduate major or minor (or equivalent) in Biology, Botany, or Zoology.
2. A minimum undergraduate GPA of 2.5 (on a 4-point scale), with a minimum of 2.8 on all biological courses taken.
3. Submission of GRE (or MCAT) score as outlined above, but without minimum score requirements, and a minimum TOEFL score of 600.
4. Three letters of reference.
5. A letter from the student indicating their research interests.
6. A willing mentor from Biology (in this regard the student should contact the Graduate Coordinator before applying to the program).

NON-DEGREE ADMISSION

The Department of Biology accepts Non-Degree Graduate Students within the general admission and credit regulations of the University of South Alabama with certain reservations and limitations. Students should consult the Department concerning these limitations **before** applying for such status. Included, but not limited to, are the following:

1. Students are restricted to enrollment in courses prefixed BLY that the Chair determines will advance their career development in biological sciences. Only in exceptional cases wherein it is determined to the satisfaction of the Chair that the aforementioned career goals are enhanced will a non-degree student be permitted to enroll in courses in other departments.
2. Students must confer with the Chair or the Graduate Coordinator of the Department of Biological Sciences before attempting to enroll in any class.
3. Students seeking to change from non-degree status to a degree-granting program must reapply and be evaluated as any other student who has not previously applied to such program.

CONCENTRATION IN MARINE BIOLOGY

Dauphin Island Sea Laboratory

The Dauphin Island Sea Laboratory is supported by nineteen colleges and universities in Alabama to form one marine campus. Students in the MS program Biological Sciences at the University of South Alabama may take courses through the sea laboratory and apply credits earned toward fulfilling requirements for the MS degree. Students frequently choose to spend part of their time, particularly in the summers, at Dauphin Island and the rest of their time on the main campus in Mobile. Other arrangements are also possible.

GRADUATE ASSISTANTSHIPS

The Department offers several types of assistantships to qualified students. Application forms for assistantships with primary responsibilities in teaching and preparing laboratories are available from the departmental office. In addition, some assistantships with primary responsibility in research are usually available each year. These assistantships are associated with grants and contracts that support the research of individual faculty members. In all cases, assistantships are approved by the Dean of the Graduate School upon recommendation of the appropriate sponsor within the University. To be eligible for an assistantship, MCAT or GRE scores must be submitted to the Biology Department.

REQUIREMENTS FOR DEGREE FOR ALL STUDENTS

1. Complete, with a minimum grade of "B", thirty hours of course work at the 500 level. All Biology graduate students, including those with a BMS or Marine Biology concentration, must complete at least 18 hours

of formal course work in BLY (excluding directed studies and thesis) listed courses. No course at the 400 level or below may be taken for graduate credit. A maximum of six credit hours may be granted for Directed Studies (BLY 594). All courses must be accepted by the student's graduate advisory committee. The student's graduate committee may, at its option, after consultation with the student, require demonstration of additional proficiency in mathematics, computer skills, statistics, and/or require the student to take additional course work.

2. Complete a thesis representing original research. A maximum of nine hours credit will be granted for the thesis. Enrollment in BLY 599 (Thesis) is not permitted until the student's research prospectus has been approved by the advisory committee and the Directory of Graduate Studies, College of Arts and Sciences.
3. After submission of the written research prospectus to the committee, students will schedule a committee meeting and comprehensive qualifying exam. The exam will be oral and will start with a presentation of the prospectus and, where applicable, a progress report. Students will first be examined on the prospectus and progress report, and then any area of study closely or broadly related to the student's area of specialization. The exam committee will consist of the student thesis committee. The student will be graded by all committee members, following a rubric that considers various aspects of the presentation and has three possible scores for each category: 1 (insufficient), 2 (meets expectations), and 3 (above expectations). In order to pass the exam, a student will have to score an average of 2 or higher. Students are encouraged to look at the rubric before the presentation to be aware of the committee's expectations. Students who fail the exam will be given a second opportunity.
4. Make an oral defense of the thesis.

The curriculum for each student will be developed by the student's advisory committee in view of the student's professional goals. If, in the opinion of a student's committee, the student lacks adequate undergraduate preparation or English skills, the student will be required to make up such deficiencies.

All requirements must be met in five years. In addition to satisfying the general requirements of the Graduate School, the candidates for the Master of Science degree in Biology must satisfy the following requirements:

Thesis Program

1. Complete, with a minimum grade of "B", thirty hours of course work at the 500 level. All Biology graduate students, including those with a BMS or Marine Biology concentration, must complete at least 16 hours of formal course work in BLY (excluding directed studies and thesis) listed courses. No course at the 400 level or below may be taken for graduate credit. A maximum of six credit hours may be granted for Directed Studies (BLY 594). All courses must be accepted by the student's graduate advisory committee. The student's graduate committee may, at its option, after consultation with the student, require demonstration of additional proficiency in mathematics, computer skills, statistics, and/or require the student to take additional course work.
2. Complete a thesis representing original research. A maximum of nine hours credit will be granted for the thesis. Enrollment in BLY 599 (Thesis) is not permitted until the student's research prospectus has been approved by the advisory committee and the Directory of Graduate Studies, College of Arts and Sciences.
3. Enroll in Biology Seminar during at least one semesters of residency.
4. Enroll in Professionalism in Science course during residency.
5. After submission of the written research prospectus to the committee, students will schedule a committee meeting and comprehensive qualifying exam. The exam will be oral and will start with a presentation of the prospectus and, where applicable, a progress report. Students will first be examined on the prospectus and progress report, and then any area of study closely or broadly related to the student's area of specialization. The exam committee will consist of the student's thesis committee.
   The student will be graded by all committee members, following a rubric that considers various aspects of the presentation and has three possible scores for each category: 1 (insufficient), 2 (meets expectations), and 3 (above expectations). In order to pass the exam, a student will have to score an average of 2 or higher. Students are encouraged to look at the rubric before the presentation to be aware of the committee's expectations.
   Students who fail the exam will be given a second opportunity.
6. Make an oral defense of the thesis.

DESCRIPTIONS OF ALL BIOLOGY (BLY) COURSES BEGIN ON PAGE 178.

DEPARTMENT OF CHEMISTRY

Chair: David C. Forbes (251) 460-6181
Professors: James Davis, Forbes, Wierzbicki
Associate Professors: Barletta, Coym, Stenson, Sykora
Assistant Professors: Battiste, O'Brien, Perine, Reichert, Yet
Senior Instructor: Patricia Davis
Instructors: Jennifer Coym, O'Brien, Roe

Department of Chemistry web site
http://www.southalabama.edu/chemistry

UNDERGRADUATE STUDIES

The chemistry curriculum is designed for students seeking a liberal education as well as for those students requiring more specialized training and skills. The courses provide the foundation necessary for those planning careers as chemists and biochemists following graduation, for students planning to further their education through advanced degrees in chemistry, biochemistry, related sciences, and for those in other professional fields. Two basic curricula are offered for chemistry majors:

1. **the American Chemical Society certified degree program in Chemistry** is available for those students seeking technical positions in chemistry, as well as for those planning to attend graduate school, or
2. a **Biochemistry Option track** is available for students strongly interested in the interface of chemistry and biomedical or biological sciences, especially for students anticipating going to graduate school in medical sciences, biochemistry, biophysics, or other life sciences.

Students pursuing a degree in Chemistry also must have minor in another discipline.

All first-time freshmen must successfully complete CAS 100: First Year Experience as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students who must enroll in the fall semester following entry. CH 150 will fulfill the technology proficiency requirement.

REQUIREMENTS FOR A MAJOR IN CHEMISTRY (ACS CERTIFIED CHEMISTRY)

A minimum of 40 semester hours in Chemistry beyond the CH 132 and CH 132L course level as listed below:

CH 131, 131L	3, 1 hrs
CH 132, 132L	3, 1 hrs
CH 150	2 hrs
CH 201, 201L 202, 202L	3, 1, 3, 1 hrs
CH 265, 265L	3, 1 hrs
CH 301, 301L, 302, 302L	3, 1, 3, 1 hrs
CH 401, 401L	3, 2 hrs
CH 440	3 hrs
CH 465, 465L	3, 2 hrs
CH 492	1, hr
CH 494	4 hrs

Electives: In addition to these courses above, a student must choose one (1) other 300/400 level Chemistry, physical science, or life science course (no less than 3 hrs) with prior approval of their advisor and department chair to satisfy the degree program requirements.

Mathematics: Two semesters of Calculus (MA 125, MA 126).

Physics: Two semesters of calculus-based Physics (PH 201, PH 202). Students can alternatively satisfy this requirement with PH 114, PH 115, and MA 227 or PH 114, PH 115, and either PH 201 or PH 202 with the prior approval of the physics department chair.

REQUIREMENTS FOR A MAJOR IN CHEMISTRY (BIOCHEMISTRY TRACK)

A minimum of 39 semester hours in Chemistry beyond the CH 132 and CH 132L course level, as listed below:

CH 131, 131L	3, 1 hrs
CH 132, 132L	3, 1 hrs
CH 150	2 hrs
CH 201, 201L, 202, 202L	3, 1, 3, 1 hrs
CH 265, 265L	3, 1 hrs
CH 300, CH 300 L	3, 1 hrs
CH 301, 301L	3, 1 hrs
or CH 302, 302L	
CH 440, 441	3, 3 hrs
CH 443	3 hrs
CH 465, 465L	3, 2 hrs
CH 394/494	4 hrs
CH 492	1 hr

Electives: In addition to those courses above, a student must choose one (1) other 300/400 level Chemistry, physical science, or life science course (no less than 3 hrs) with the prior approval of their advisor and department chair to satisfy the degree program requirements.

Mathematics: Two Semesters of Calculus (MA 125, MA 126)

Physics: Two semesters of calculus-based Physics (PH 201, PH 202). Students can alternatively satisfy this requirement with PH 114, PH 115, and MA 227 or PH 114, PH 115, and either PH 201 or PH 202 with the prior approval of the physics department chair.

Students in the Biochemistry track who desire ACS Certification of their degree must take CH 401 and 401L as their elective course.

GENERAL EDUCATION REQUIREMENTS FOR CHEMISTRY MAJORS

Areas I, II, and IV of the General Education Requirements for Chemistry are specified in the College of Arts and Sciences section. Note that Area III requirements (Mathematics and Natural Sciences) are fulfilled by the major requirements specified above.

UNDERGRADUATE SENIOR THESIS IN CHEMISTRY

The *Chemistry Senior Thesis Program* is designed to stimulate analytical and critical thinking and as such offers motivated and focused undergraduate students the opportunity to develop research and communication skills in preparation for a graduate or professional career. To apply for admission into the program, a student must:

1. Have Junior Chemistry Major status or above.
2. Have completed CH 131, CH 132, CH 201, CH 202, plus one (1) more lower or upper division chemistry course.
3. Have earned a 3.25 GPA or better in chemistry courses attempted.
4. Have earned a 3.0 GPA or better overall.
5. Obtain a recommendation from a faculty member who will serve as research mentor for senior thesis.

In addition to fulfilling the requirements of the standard chemistry program, senior thesis students must complete:

1. A minimum of six (6) semester hours of Honors Research (CH 499). Upon successful completion of six (6) hours of CH 499 the requirement for four (4) hours of Directed Studies (CH 494) will be waived.
2. A formal research Project Prospectus needs to be submitted and approved by the student's research mentor during the first term of participation in program. The prospectus will be prepared under the supervision of the student's research mentor and should include an introduction to the proposed research project, proposed research methods, and relevant literature citations.
3. Complete a written research thesis.
4. The formation of a thesis committee will be at the discretion of the faculty mentor.
5. Present a formal oral defense of the research work to Chemistry Department faculty and students.
6. Complete a poster presentation at national, regional, or local research forum. Examples being an ACS National meeting, the USA Annual Research Forum (Spring term) or the UCUR Annual Research Forum (Fall term).

Students participating in the ***Chemistry Senior Thesis Program*** who have a 3.5 GPA will also be eligible for ***Departmental Honors*** status.

Chemistry majors who are part of the University Honors Program will meet the requirements for the Undergraduate Chemistry Senior thesis as well as those of the University's program.

REQUIREMENTS FOR A MINOR IN CHEMISTRY

A minimum of 12 semester hours in Chemistry beyond the CH 132 and CH 132L course level is required. This minor will consist of CH 201 and CH 201L, CH 202 and CH 202L, and CH 265 and CH 265L. Students are advised to consult with the Chair of the Department of Chemistry.

GRADUATE STUDIES

Although the Department of Chemistry has no graduate degree programs, courses are offered at the graduate level for those students who need such work.

DESCRIPTIONS OF ALL CHEMISTRY (CH) COURSES BEGIN ON PAGE 193.

DEPARTMENT OF COMMUNICATION

Chair: James L. Aucoin (251) 380-2800
Professors: Aucoin, Wilson
Associate Professors: Mark, Moody, Rockwell, Ward
Assistant Professors: Anderson, DuPree Taylor, Glover, Sheffield
Senior Instructors: Dardeau
Instructors: Bush, Huling, Rigsby, Sellers, Sparks

Department of Communication web site http://comm.southalabama.edu

The primary objectives of the Communication Department are: to understand and teach the functions, processes, and effects of communication; to attempt to influence communication environments in which we live in a contributory way; and to provide professional preparation for communication-oriented careers, including advertising, communication technology, journalism, public relations, and the mass media of digital cinema and television.

Given these goals, the Department attempts to meet individual performance and career needs with a flexible curriculum. Students select one of the five concentrations offered and confer with their advisors to plan their courses of study. These focused areas of study are not a vocational education, but they will help to prepare students for several employment possibilities.

The five concentrations of study offered in Communication are: Advertising and Brand Communication, Journalism (Print Journalism and Broadcast Journalism), Communication Studies, Public Relations, and Digital Cinema and Television. Students pursuing a degree in Communication also must have a minor in another discipline.

All first-time freshmen must successfully complete CAS 100: First Year Experience as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students who must enroll in the fall semester following entry.

REQUIREMENTS FOR A MAJOR IN COMMUNICATION

Communication majors must complete the College of Arts and Sciences Written Composition requirement (EH 101 and EH 102/105H) and the Public Speaking requirement (CA 110) and 5 additional Communication Core classes: CA 101, Introduction to Communication Media or CA 100, Introduction to Communication; CA 220-W, Introduction to Writing and Reporting for the Media (W) or CA 210, Argumentation; CA 260, Digital Writing and Production; CA 300, Foundations of Communication Research; and CA 445, Ethics and Social Responsibility in Communication.

In addition to these 8 courses, all communication majors must complete 27 semester hours in one of the department's 5 concentrations listed below. At least 5 communication classes (15 hours) must be numbered 300 or higher and must be taken at USA. Only 3 hours of credit from CA 394 or CA 494 can be used to satisfy this requirement.

SPECIAL REQUIREMENTS FOR MASS COMMUNICATION CONCENTRATIONS: ADVERTISING, JOURNALISM, PUBLIC RELATIONS, AND DIGITAL CINEMA AND TELEVISION

At least 72 hours in courses outside the Department of Communication are required, including general education requirements required by the College of Arts and Sciences.

GENERAL EDUCATION REQUIREMENTS FOR COMMUNICATION MAJORS

General Education Requirements for Communication are specified in the College of Arts and Sciences Section. Communication majors and minors may use CA 222, Rhetoric Culture and Society, in the Humanities and Fine Arts Section.

GENERAL EDUCATION TECHNOLOGY REQUIREMENT

Students in the Department of Communication may take CA 260 or CIS 150 to fulfill the College's General Education Requirement for a technology training course.

HONORS IN COMMUNICATION

The Communication Departmental Honors program offers undergraduate students an opportunity to prepare for a graduate program or professional career. Students in this program will utilize their communication skills to develop a formal research project.

To be awarded department honors in communication, students must:

1. Complete the standard requirements for the major in communication.
2. Have an overall institutional GPA of 3.5 or higher (University requirement).

3. Have a minimum 3.5 GPA in all communication courses (Department requirement).
4. Complete a communication research method course (CA 300, mass communication concentrations or CA 424, interpersonal and rhetoric concentration) with an earned grade of "B" or higher. This course may be counted toward the communication degree and toward 3 hours of upper division credit.
5. Complete a minimum of 3 credit hours, and no more than 6 credit hours in the Senior Honors Project, CA 499. Students receiving honors in communication will be required to take a total of 45-48 hours of communication (including CA 110, public speaking).
6. Successfully defend the final research project during an oral presentation to a faculty committee. It is recommended that the student present a summary of the project during the Department's colloquium series and/or another appropriate public forum.

Application procedure: Students must:
1. Have earned an overall institutional GPA of 3.5 or higher and a minimum 3.5 GPA in all communication courses.
2. Apply by April 1 of their junior year.
3. Receive agreement of a tenure-track faculty member of the Communication Department to serve as mentor, and obtain a letter of recommendation from that faculty member.
4. Receive permission of the Department Chair.

REQUIREMENTS FOR A MINOR IN COMMUNICATION

Minors in Communication must complete a total of 21 hours including CA 110 (Public Speaking), CA 200 (Communication Theory), and 15 additional hours in communication including 9 upper division hours. Students may elect to focus on a communication track as listed below, but no course except CA 110 and CA 200 will be considered as required:
- Advertising: CA 221, 300, 310, 321, 322
- Broadcast Journalism
  - Broadcast News: CA 220, 250, 350, 450, 451
  - Documentary News: CA 220, 250, 350, 451, 452
- Interpersonal Communication: CA 211, 275, 315, 330, 411
- Media/Film Studies: CA 101, CA 222; choose 3 from CA 343, 344, 351, 352
- Multimedia Story Telling: CA 220, 350, 370, 382, 482
- Print Journalism: CA 220, 281, 370, 445; choose 1 from CA 385, 455, 472
- Public Relations: CA 220, 286, 386, 484, 486
- Digital Cinema/TV: CA 241, 244, 340, 440; choose 1 from CA 441, 343, 344, 351
- Rhetoric: CA 210, 222, 422, 424; choose 1 from CA 310, 410, 425

COMMUNICATION CONCENTRATIONS

Advertising and Brand Communication

This concentration focuses on all aspects of advertising in American society, including creative, media and research, as well as advertising's impact on audiences and institutions. Students in this track will be asked to choose a specialization of Account Planning and Management or Visual Communication. Students will be prepared to develop and implement advertising campaigns.

Required: CA 221, CA 310, CA 322-W, CA 476, CA 478

Choose all classes from Group A or Group B:

A. Account Planning and Management: CA 321, CA 384, CA 474; Choose 1 from CA 455, CA 470, CA 496
B. Visual Communication: CA 271, CA 371, CA 471; Choose 1 from CA 358, CA 383, CA 496

Communication Studies

The communication studies concentration allows students to analyze, evaluate, and critique human communication practices in a variety of contexts such as the workplace, the family and the community. Students will develop skills that can be used in many fields or careers.

Required: CA 200, CA 222

Choose all classes from Group A or B:

A. Human and Organizational Communication: CA 211, CA 230, CA 275; Choose 4 from CA 310, CA 315, CA 330-W, CA 410, CA 411, CA 430, CA 453, CA 475, CA 496
b. Rhetoric and Culture: CA 310, CA 422, CA 424-W; Choose 4 from CA 315, CA 330-W, CA 343, CA 352, CA 425, CA 453, CA 496

Digital Cinema and Television

This track focuses on the practical aspects of digital television and film production. Students will gain a broad theoretical understanding of media while participating in hands-on field and high definition studio production. Students will also gain an understanding of the historical, aesthetic, and management side of media production.

Required: CA 241, CA 320, CA 340, CA 341, CA 356, CA 440

Choose 1: CA 343, CA 344

Choose 2: CA 240, CA 244, CA 275, CA 284, CA 343 (if not chosen above), CA 344 (if not chosen above), CA 352, CA 382, CA 383, CA 424-W, CA 441, CA 452, CA 496

Journalism

Backed by the First Amendment to the U.S. Constitution, journalism promises to provide citizens with useful information about public issues and be a watchdog on powerful institutions, including government and business. Students in the journalism track choose between print - newspapers, magazines and newsletters - and broadcast news, but also receive cross-training to provide them with as broad a range of skills as possible within the confines of an academic degree.

Required: CA 350, CA 370-W, CA 455

Choose all classes from Group A or B:

Print Journalism: CA 281, CA 382, CA 385/387, CA 472/482; Choose from CA 288, CA 481-W, CA 496

Broadcast Journalism: CA 250, CA 450, CA 451, CA 452; Choose 2 from CA 288, CA 382, CA 496

Public Relations

Public relations involves creating and maintaining beneficial relationships between organizations and their audiences. The public relations track provides students an understanding of audience analysis, research methods, ethics, public relations theories and principles; public relations techniques and tactics; and strategic planning. Practitioners counsel organizations in fields such as corporations, non-profit, government, healthcare and media organizations.

Required: CA 286, CA 381, CA 386-W, CA 470, CA 484, CA 486

Choose 3: CA 221, CA 230, CA 271, CA 288, CA 370-W, CA 382, CA 383, CA 455, CA 482, CA 496

GRADUATE STUDIES

The Master of Arts degree in Communication is a broad-based degree program that integrates theoretical and research components of mass communication and organizational and rhetorical communication. The program is designed to prepare recent graduates and experienced professionals for doctoral studies, professional advancement, and personal enrichment.

The department's graduate faculty combines applied knowledge with communication theory and works to engage students to think critically as they address communication practices and issues. Courses examine how communication creates, sustains, and changes personal lives, organizations, political and cultural institutions, and society.

The program curriculum consists of 34 credit hours, including a 10 hour core, elected courses from the communication and other university departments, a written comprehensive examination, and a final project or thesis.

REQUIREMENTS FOR ADMISSION

All applications must receive approval from the Graduate Program Coordinator, the Director for Graduate Studies for the College of Arts and Sciences, and the Graduate Dean. Students are admitted each semester and must meet the following requirements:

REGULAR ADMISSION

GRE/GMAT Scores

Students must submit a satisfactory score on the general portion of the Graduate Record Examination or the Graduate Management Admissions Test. The scores required for regular admission are:
- GRE - For exams taken after November 1, 2011, the required score is 297 or more combined points on the quantitative and verbal portions. For exams taken prior to November 1, 2011, the required score is 1,000 or more combined points on the quantitative and verbal portions.
- GMAT - A combined score of 1000 or more when calculated as follows: 200 x undergraduate GPA + GMAT score.
- Earned graduate degree - An earned graduate degree may substitute for graduate entry exam scores. Students must submit a written request along with evidence of the degree to the graduate coordinator for review.

Undergraduate requirements

Students must submit official copies of undergraduate transcripts indicating the following:
- A minimum grade point average of 3.0.
- A major in communication or 15 semester hours in communication. A bachelor's degree in a field related to communication

or a master's degree earned in a field other than communication may be offered as a substitute for a major in communication. Students must submit written request for review to the graduate coordinator.

International Students

- International students must submit documentation of TOEFL test scores of at least 525 (197 on computer based test) or 71 on internet based test..
- Students who are required to take the English Language Proficiency Examination and whose scores suggest an English language deficiency must take the appropriate English as a Second Language courses. These courses are not counted as part of the 34-hour degree program.

PROVISIONAL ADMISSION

Students who do not meet the requirements for regular admission may apply for provisional admission if they meet the following standards:

GRE/GMAT Scores

- GRE - For exams taken after November 1, 2011, the required score is 286 or more combined points on the quantitative and verbal portions. For exams taken prior to November 1, 2011, the required score is 800 or more combined points on the quantitative and verbal portions.
- GMAT - A combined score of 800 or better when calculated as follows: 200 x undergraduate GPA + GMAT score.

Undergraduate requirements

Students must submit official copies of undergraduate transcripts indicating the following:

- A minimum grade-point average of 2.5 on all undergraduate work or a 2.75 on the last 64 hours of undergraduate work. Students with a GPA below 2.5 may want to consider enrolling in undergraduate classes to increase their GPA average before applying to graduate school. Students with less than a 2.5 undergraduate GPA will not be admitted under any circumstances. USA course work completed after graduation is automatically averaged into the final GPA. The USA Office of Academic Records computes transfer credit averages and can advise students in determining when the minimum GPA has been met.
- An undergraduate minor in communication or 15 semester hours in communication or a related field.

Provisional students will be eligible for regular standing after accruing at least 9 500-level semester hours (usually 3 courses) taken for graduate credit toward the degree requirements with at least a 3.0 GPA. Applications for regular status must be submitted prior to completion of 16 credit hours. Provisional students who do not have a 3.0 GPA after completing 16 hours of course work will be subject to dismissal from the program.

NON-DEGREE ADMISSION

Students may register for and complete up to 15 hours without formal entrance into the program.

DEGREE REQUIREMENTS AND COURSES

Students must complete a minimum of 34 semester hours of credit in approved 500-level courses. This includes three hours for thesis or project work. A minimum of 25 semester hours must be completed at the University of South Alabama. At least 25 semester hours must be taken in communication. All students are required to pass a written comprehensive examination and to complete a thesis or a final project.

Core Courses

For students with an undergraduate degree in communication, the normal requirements consist of the following four courses. These courses must be completed at the University of South Alabama.

- CA 500, Introduction to Graduate Studies in Communication. Students must take CA 500 before or concurrently with their first 500-level classes, or be given permission by the graduate studies coordinator to delay enrollment in CA 500.
- CA 501, Communication Research Methods (generally offered in the fall semester)
- CA 502, Communication Theory (generally offered in the fall semester)
- CA 503, Communication Research Methods II (generally offered in the spring semester)

Although students are advised to take CA 501, 502, and 503 sequentially, they are not required to do so.

Remaining Courses

- With advisor approval, students may take up to 9 of the 34 required graduate hours outside of the Communication Department. Students should work closely with their advisors to develop a plan of study.

Directed Studies - CA 594

Directed study courses involve independent study of a communication topic. The purpose is to provide study in an area of specialization not covered by an existing course.

- The student must submit a topic proposal to a graduate faculty member. Once the topic is approved, both the faculty member and the student must sign a contract describing student expectations and outcomes and grading criteria.
- The student can register for between 1 and 3 credit hours in CA 594 courses with course requirements determined accordingly.
- The student may take a maximum of 6 hours in directed study coursework.

Grade Requirements

- A minimum of a 3.0 GPA on all work attempted is required for graduation.
- Courses in which a student receives a "D" or below will not be counted toward the degree program.
- A maximum of two courses with a grade of "C" will be counted toward the degree program.
- Students receiving three grades of "C" or below, regardless of the overall GPA, will be dismissed from the program.
- A student who receives a failing grade in a course for graduate credit may be dismissed from the program.

Time Limitations

- All degree requirements must be completed within seven calendar years.
- Most students who take nine hours per semester complete the degree within a two-year period.
- The time required for degree completion depends on how many courses a student can take each semester and the ability of that student to complete the thesis or final project.

Course Load

- Two or three courses (6-10 credit hours) per semester constitute a full-time course load.

WRITTEN COMPREHENSIVE EXAMINATIONS

All degree candidates must successfully complete a written comprehensive examination at least one semester prior to graduation. The exam may be taken after the student has completed a minimum of 25 graduate hours in the program (including all core requirements). It lasts six hours and covers material from department graduate courses offered during the latest three-year period.

The examination provides an opportunity for students to demonstrate independent thought and depth of understanding of the discipline. Using examples from the area of specialization, students should be prepared to demonstrate the ability to:

- Conceptualize problems.
- Create and critique research designs
- Evaluate literature, research theories, models, and methodologies
- Discern, discuss, and explain substantive issues, problems, trends, alternative perspectives and research approaches in both general and specific areas.

The comprehensive examination may be attempted no more than two times. A student who fails this examination must wait until the next, regularly scheduled examination before repeating it. Failure of the examination on the second attempt will result in dismissal from the program.

DESCRIPTIONS OF ALL COMMUNICATION (CA) COURSES BEGIN ON PAGE 183.

DEPARTMENT OF DRAMATIC ARTS

Chair: Leon Van Dyke (251) 460-6305
Professors: Miller, Van Dyke
Associate Professor: Britton
Assistant Professor: Burns

Department of Dramatic Arts web site
http://www.southalabama.edu/drama

The programs are designed to provide students with a theoretical foundation and a practical proficiency in the arts of theatre.

The Bachelor of Arts (B.A.) allows the student to gain a better understanding of the theatre, while the Bachelor of Fine Arts (B.F.A.) provides professional training in the same field. Both include lectures, workshops, and practical experience in all phases of the theatre.

All first-time freshmen must successfully complete CAS 100: First Year Experience as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students who must enroll in the fall semester following entry. DRA 150 will fulfill the technology proficiency requirement for Drama majors.

REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE IN DRAMA

A minimum of 42 semester hours in Dramatic Arts, including DRA 100, DRA 101, DRA 103 (every semester), DRA 120, DRA 150, DRA 210, DRA 340, DRA 350, DRA 351; also one additional hour selected from DRA 100, DRA 101, DRA 102, DRA 300, DRA 301 or DRA 302; one additional three-hour acting course; six hours selected from DRA 130, DRA 131, and/or DRA 132; three hours selected from DRA 330, DRA 431, or DRA 432; and remainder of elective hours in Drama except DRA 100, DRA 101, DRA 102, DRA 103, DRA 300, DRA 301 or DRA 302. Students pursuing a degree in Drama also must have a minor in another discipline.

REQUIREMENTS FOR THE MINOR IN DRAMA

A minimum of 21 semester hours in Dramatic Arts, including DRA 100, DRA 101, DRA 110 or DRA 115, DRA 120, DRA 210 either DRA 350 or DRA 351; three additional hours selected from DRA 130, 131, 132; and 6 elective hours in Drama.

REQUIREMENTS FOR THE MINOR IN DRAMA WITH A CONCENTRATION IN DANCE

Those interested in pursuing this minor should contact the Department of Dramatic Arts for minor requirements.

REQUIREMENTS FOR THE BACHELOR OF FINE ARTS DEGREE IN THEATRE ARTS

General Education and Core requirements as listed here and other theatre courses as approved. In addition to the Drama core requirements, an emphasis must be selected in either Acting, Tech/Design or Music Theatre. An additional six hours are required and may be selected from any remaining courses in Dramatic Arts. Students pursuing the BFA in Theatre are not required to have a minor.

GENERAL EDUCATION REQUIREMENTS FOR BFA

I. Communication (6 HRS)
EH 101, EH 102

II. Humanities (6 HRS)
Dramatic Literature: EH 302, EH 322, EH 323, EH 460, EH 461, EH 462, EH 463, EH 472 or 390 w/ Drama Topic

III. Natural Sciences and Mathematics (11 HRS)
1. Select 3 hours: MA 110, or higher
2. 2 Lab Sciences (8 hrs.): AN 210, BLY 101, BLY 102; CH 101, CH 103, CH 131 or CH 141, CH 132 or CH 141, GEO 101, GEO 102, GY 111, GY 112, PH 101, PH 104, PH 114 or PH 201, PH 115 or PH 202

IV. History, Social and Behavioral Sciences (12 HRS)
Anthropology, Geography, History, International Studies, Political Science, Psychology, Sociology

V. BFA in Theatre Arts

A. Dramatic Arts Core Requirements (37 hrs)

	DRA 100	1 hr		DRA 101	1 hr
*	DRA 103	4 hrs	**	DRA 104	3 hrs
	DRA 120	3 hrs		DRA 150	3 hrs
***	DRA 330	3 hrs	***	DRA 130, 131, 132	9 hrs
	DRA 352	3 hrs		DRA 210	1 hr
	DRA 350	3 hrs		DRA 340	3 hrs

*DRA 103 is required every semester.

**Option for Acting and Music Theatre Concentrations: DRA 131 and DRA 431, or DRA 132 and DRA 432

B. Select one group:

Group 1: Performance Concentration (52 hrs)

DRA 100	1 hr	DRA 300	2 hrs
DRA 101/301 or DRA 102/302			1 hr
DRA 222	3 hrs	DRA 221	3 hrs
DRA 220	3 hrs	DRA 320	6 hrs
DRA 321	3 hrs	DRA 480	3 hrs
DRA 351	3 hrs	DRA 496	6 hrs
Art and/or Music electives			6 hrs
Additional elective hours in DRA			3 hrs
DRA 320 (Must be repeated with different topic)			6 hrs

*An additional 3 hrs in Dance may be substituted for DRA 220

Group 2: Theatre Design and Technology Concentration (53 hrs)

DRA 101	1 hr	DRA 301	2 hrs
DRA 102/302	1 hr	DRA 130, 132	3 hrs
DRA 132	3 hrs	DRA 496	6 hrs
DRA 233	1 hr	DRA 331	3 hrs
DRA 351	3 hrs	DRA 333	1 hr
DRA 431	3 hrs	DRA 433	3 hrs
DRA 480	3 hrs	DRA 435	3 hrs
DRA 490	3 hrs	ARH 100	3 hrs
DRA 494	3 hrs	ARH 121	3 hrs
Additional elective courses in DRA			16 hrs
DRA 433 (may be repeated)			3 hrs
DRA 435 (may be repeated)			3 hrs

Group 3: Musical Theatre (56 HRS)

DRA/MUO 116/416	Music Theatre Workshop	3 hrs (6 sem)
DRA 220	Stage Movement	3 hrs
DRA 221	Voice for the Actor	3 hrs
DRA 222	Acting II	3 hrs
DRA 320	Acting Styles Variable Topics (To be repeated with different topics)	6 hrs (2 sem)
DRA 480	Theatre Capstone	3 hrs
DRA/ MUL 315	History of the Broadway Musical (W)	3 hrs
DRA 496	Professional Internship	6 hrs

Music Courses

MUA 100	Recital Class	0 hrs (2 sem)
MUE 102	Elementary Class Piano	1 hr
MUE 103	Elementary Class Piano	1 hr
MUO 111/ 411	Concert Choir	2 hrs (2 sem)
MUT 112	Music Theory I	3 hrs
MUT 113	Music Theory II	3 hrs
MUA 222	Applied Voice	12 hrs (6 sem)
ELECTIVES in Theatre, Music, or Dance (including PE Activity Dance Classes)		4 hrs

DESCRIPTIONS OF ALL DRAMATIC ARTS (DRA) COURSES BEGIN ON PAGE 206.

DEPARTMENT OF EARTH SCIENCES

Chair: Miriam L. Fearn (251) 460-6381
Professors: Kimball, Ryder
Associate Professors: Allison, Blackwell, Clark, Fearn, Haywick, Rivizzigno
Assistant Professors: Sawyer, Shafer, Terwey
Instructors: M.A. Connors, Jordan, Mujica, Murray, Stutsman
Emeriti: Dilsaver, Isphording, Lamb, Sebastian, Williams, Wilson

Department of Earth Sciences web site
http://www.southalabama.edu/earthsci

The Department of Earth Sciences includes the disciplines of Geography, Geology, and Meteorology, and it offers a B.S. degree as well as a minor in each of these three majors. Students can also earn a GIS Certificate or a minor in Geographic Information Technology (GIT).

Geography, which is both a natural and a social science, studies the location, spatial distribution, and spatial interaction of Earth's natural and human environments. Courses cover the subfields of Human Geography, Physical Geography, Regional Geography, and Geographic Information Science.

Geology is the study of Earth, its composition, and the forces that form and change it, as well as the natural mineral resources it contains. As such, it encompasses a broad spectrum of studies and draws from the other basic sciences: chemistry, physics, and biology.

Meteorology is the study of atmospheric phenomena and the processes that cause weather. The science of meteorology is firmly rooted in basic physical laws governing mass, momentum, and energy. Many weather processes are simulated by complex computer models; however, accurate weather analysis and forecasting often requires meteorologists to identify and conceptualize weather patterns often missed by automated techniques.

The programs of the Department of Earth Sciences are designed to give the non-major a background in Earth and atmospheric science and the human impact on the landscape as part of a general education. Students pursuing a degree in Geography, Geology, or Meteorology must also have a minor in another discipline.

The Earth Sciences Department offers a departmental honors program that allows exceptional students to pursue independent research. Students work with a faculty committee to choose an Earth Sciences research project (Geography, Geology, Meteorology), develop a prospectus, and complete a senior thesis. Students completing this program graduate with departmental honors.

Requirements for successful completion of an honors degree in Geography, Geology, or Meteorology require a GPA of at least 3.50 at graduation and completion of ES 492 (Honors Earth Sciences Seminar), ES 497 (Senior Thesis Prospectus), and six hours of ES 499 (Senior Honors Thesis). These classes are in addition to those required for the major in Geography, Geology, or Meteorology. All

honors courses are listed under the prefix ES. Students interested in Earth Sciences honors must apply for the program by their junior year. Complete requirements are available on the departmental web page.

All first-time freshmen must successfully complete CAS 100: First Year Experience as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students who must enroll in the fall semester following entry. Students must demonstrate technology proficiency by passing the designated class in their major. GEO 331 for Geography majors, GY 301 for Geology majors, or MET 455 for Meterorology majors.

GRADUATE STUDIES

Although the Department of Earth Sciences has no graduate degree program, courses are offered at the graduate level for students enrolled in Marine Sciences and Ecotoxicology, and others who need such course work. Contact the Department for more information.

REQUIREMENTS FOR A MAJOR IN GEOGRAPHY

A student with a major in geography must take a group of required core geography courses as well as six (6) additional upper division courses for a total of 48 semester hours. The six (6) additional upper division courses must be chosen from at least three (3) of the following categories: Human, Physical, Regional, and Technical. **Geography 101 and 102 are prerequisites to most upper level physical geography courses and Geography 114 and 115 are prerequisites to most upper level human geography courses listed below**.

A. Geography Major Requirements (48 HRS)

Core requirements for a geography major (30 HRS):

GEO 101 & 101L	4 hrs		
GEO 102 & 102L	4 hrs		
GEO 114	3 hrs	GEO 115	3 hrs
GEO 201	1 hr	GEO 331	4 hrs
GEO 332	4 hrs	GEO 435	3 hrs
GEO 480	3 hrs		

B. One additional natural science course, one additional social science course outside of geography, ST 210, and CIS 150.

C. Select six courses (for at least 18 hrs) from a minimum of three groups.

Human Geography Courses::

GEO 312	3 hrs	GEO 321	3 hrs
GEO 365	3 hrs	GEO 370	3 hrs
GEO 381	3 hrs		

Physical Geography Courses:

GEO 310	3 hrs	GEO 341	3 hrs
GEO 342	3 hrs	GEO 353	4 hrs
GEO 410	3 hrs	GEO 411	3 hrs
GEO 412	3 hrs	GEO 440	2 hrs
GEO 441	2 hrs		

Regional Geography Courses:

GEO 313	3 hrs	GEO 314	3 hrs
GEO 315	3 hrs	GEO 320	3 hrs

Technical Geography Courses: *

GIT 460	4 hrs	GIT 462	4 hrs
GIT 462	4 hrs	GIT 462	4 hrs
		GIT 490	4 hrs

*Only two courses in the GIT minor may be counted toward the Geography major.

D. Complete at least 15 semester hours in residence in major at the 300 and/or 400 level. A minimum GPA of 2.0 is required in major.

GENERAL EDUCATION REQUIREMENTS FOR GEOGRAPHY MAJORS

Areas I and II of the General Education Requirements for Geography are specified in the College of Arts and Sciences section. Note that a portion of Area IV (GEO 114, GEO 115) and the Natural Sciences portion of Area III (GEO 101, GEO 102, ST 210) are fulfilled by the major requirements specified above.

REQUIREMENTS FOR A MINOR IN GEOGRAPHY

A student must take 20 semester hours of Geography, including 101, 102, 114, and three electives at the 300 or 400 level.

REQUIREMENTS FOR A MINOR IN GEOGRAPHIC INFORMATION TECHNOLOGY

A minimum of 22 hours of Geographic Information Technology related classes. The student must take all three core classes (GIT 460, GIT 461 or 462, and CIS 110) and three additional electives from the following: GEO 331, GEO 332 or MET 370, GY 301, GIT 442, GIT 461, GIT 462, or other GIT electives.

REQUIREMENTS FOR A GIS CERTIFICATE

Students who want to earn a GIS (Geographic Information Science) Certificate must take all six of the following courses. GEO 331, GEO/GY 332, GIT 442, GIT 460, GIT 461, and GIT 462.

REQUIREMENTS FOR A MAJOR IN GEOLOGY

Students should complete a minimum of 44 semester hours in Geology. GY 111 and GY 112 are prerequisites for most upper level geology courses. The core requirements for a degree in Geology are listed below:

Core requirements for a geology major

GY 111 & 111L	4 hrs	GY 112 & 112L	4 hrs
GY 301	3 hrs	GY 302	4 hrs
GY 303	4 hrs	GY 304	3 hrs
GY 401	3 hrs	GY 402	3 hrs
GY 403	4 hrs	GY 480	6 hrs
GY Elective 1	3/4 hrs	GY Elective 2	3/4 hrs

Total 44-46

Additional requirements from other disciplines

MA 125, MA 126, CH 131, CH 132, and a minimum of 8 hours of Physics (algebra/trigonometry-based; PH 114 and PH 115, or calculus-based; PH 201 and PH 202). Students can elect to substitute GY 305 for PH 115/PH 202 and/or substitute GY 420 for MA 126; however, those intending to pursue graduate study are encouraged to complete a full year of calculus and physics at the University of South Alabama.

A minor in **Composite Sciences** has been approved as an acceptable minor for Geology majors, See Composite Science Minor under Arts and Sciences Interdisciplinary Programs. A Geology major may also seek a traditional minor. A Certificate in Geographic Information Science (GIS) can be obtained simultaneously with a B.S. in Geology if the student elects to minor in Geography or GIT. Contact the Department of Earth Sciences for information concerning the GIS certification program, the composite sciences minor, Geology elective courses, and Department Honors opportunities in Geology. An overall GPA 2.0 is required for the major.

GENERAL EDUCATION REQUIREMENTS FOR GEOLOGY MAJORS

Areas I, II, and IV of the General Education Requirements for Geology are specified in the College of Arts and Sciences section. Note that Area III requirements (Mathematics and Natural Sciences) are fulfilled by the major requirements specified above.

REQUIREMENTS FOR A MINOR IN GEOLOGY

A student must take a minimum of 20 semester hours of Geology courses including GY 111, GY 111L, GY 112, GY 112L and a minimum of two courses from the following list: GY 301 (Geomorphology), GY 302 (Crystallography and Mineralogy), GY 304 (Stratigraphy), GY 401 (Paleontology), and GY 425 (Hydrology). Any GY courses numbered 300 and higher may be used to satisfy the remainder of the 20 hour requirement. A geology faculty advisor is recommended for planning an appropriate minor curriculum past the initial introductory sequence.

REQUIREMENTS FOR A MAJOR IN METEOROLOGY

A student with a major in Meteorology must take a group of required courses totaling at least 47 semester hours. Meteorology students must take a core of 32 semester hours of meteorology courses, plus one of the three specialty tracks listed below. Each specialty track allows for flexibility with required course selections and electives.

The meteorology degree also requires MA 125, 126, 227, 238, PH 201, 202; ST 315.

Meteorology Major Requirements (47 HRS)

A. Meteorology Core Courses:

MET 140	4 hrs	MET 341(W)	3 hrs
MET 353	4 hrs	MET 354	3 hrs
MET 355	3 hrs	MET 356	4 hrs
MET 454	6 hrs	MET 455	6 hrs

Total 33 hrs

B. Select one group:

Group 1 - Professional Meteorology Track:

MET 357 2 hrs.

Select from one of the following:

MET 358	4 hrs	MET 370	3 hrs

Select from one of the following:

MET 420	4 hrs	GIT 460	4 hrs

Choose 5-6 hrs of electives from the list in Part C below.

Total 15 hrs

Group 2 - Graduate School Meteorology Track:

MET 420 4 hrs

Select from one of the following:

MET 358	4 hrs	MET 370	3 hrs

Choose 7-8 hrs of electives from the list in Part C below including at least one 2+ hour 400-level class.

Total 15 hrs

Group 3 - Broadcast Meteorology Track:

MET 342	3 hrs	MET 358	4 hrs
MET 359	2 hrs	MET 496	1 hr
MET 497	3 hrs		
Total	**13 hrs**		

Choose 2 hours of electives from the list below

Total 15 hrs

C. Choose from these electives as directed from the respective groups above:

MET 191	1 hr	MET 342	3 hrs
MET 357	2 hrs	MET 358	4 hrs
MET 360	1 hr	MET 370	3 hrs
MET 410 (W)	3 hrs	MET 420	4 hrs
MET 430	3 hrs	MET 440	2 hrs
MET 442	2 hrs	MET 456 (W)	3 hrs
MET 490	1-3 hrs	MET 492	1-3 hrs
MET 495	1-2 hrs	MET 496	1-2 hrs
GY 425	4 hrs	GIT 460	4 hrs
MGT 300	3 hrs	MKT 320	3 hrs
MET 359	2 hrs		

Additional electives may be approved on a case by case basis.

MET 191 may be taken up to three times for credit but will only count once toward a meteorology elective.

D. Complete at least 15 semester hours in residence in major at the 300 and/or 400 level. A minimum GPA of 2.0 is required in major.

GENERAL EDUCATION REQUIREMENTS FOR METEOROLOGY MAJORS

Areas I, II, and IV of the General Education Requirements for Meteorology are specified in the College of Arts and Sciences section. Note that Area III requirements (Mathematics and Natural Sciences) are fulfilled by the major requirements specified above.

REQUIREMENTS FOR A MINOR IN METEOROLOGY

A student must take 20 semester hours of Meteorology, including MET 140, MET 353, MET 341 and 9 semester hours of electives from MET 191, MET 342, MET 354, MET 355, MET 356, MET 357, MET 358, MET 360, MET 370, MET 401, MET 402, MET 410 (W), MET 420, MET 430, MET 440, MET 442, and MET 456 (W). MET 191 may be taken up to 3 times for credit but will only count once toward the meteorology minor.

DESCRIPTIONS OF ALL EARTH SCIENCES (ES) COURSES BEGIN ON PAGE 227.

DESCRIPTIONS OF ALL GEOGRAPHY (GEO) COURSES BEGIN ON PAGE 229.

DESCRIPTIONS OF ALL GEOLOGY (GY) COURSES BEGIN ON PAGE 231.

DESCRIPTIONS OF ALL METEOROLOGY (MET) COURSES BEGIN ON PAGE 263.

DEPARTMENT OF ENGLISH

Chair: Steven Trout (251) 460-6146
Stokes Distinguished Professor of Creative Writing: Walker
Professors: Trout, Walker
Associate Professors: Amare, Beason, Cesarini, Coleman, Guzy, Halbrooks, Harrington, Hillyet, Hollingsworth, McLaughlin, Payne, Raczkowski, St. Clair
Assistant Professors: Haines, Jackson, Norris
Senior Instructors: Spain, Peterson
Instructors: Cowley, Daley, deGruy, Knox, Lowe, Meyers, Norris, Peterson, Roy, Volf
Emeriti: Hamner, McDonald, McIver, Varnado, Wilson

Department of English web site
http://www.southalabama.edu/english

Through its focus on the interpretation, analysis, and production of literary and other texts, the English Department teaches students how those texts shape and are shaped by the world around them. In so doing, the Department helps students acquire the critical skills they need to analyze and participate in these interactions and contribute to the shaping of their worlds. The faculty's teaching and research in literature, creative writing, and composition/rhetoric combine to foster excellence in critical reading, creative thinking, and effective writing.

For all students, the Department provides the composition skills essential for success at the University and offers courses introducing the cultural diversity and historical breadth of British, American, and world literatures. For students majoring or minoring in English, the Department teaches critical strategies needed for intensive study in creative writing, professional writing, and in diverse literatures in English. For students pursuing graduate study in English, the Department provides advanced training in creative writing, literary analysis, rhetoric, methods of scholarly research, and critical theory. In all cases, by asking students to read, discuss, and write about a wide variety of texts, the Department promotes an inclusive and evolving understanding of English Studies.

All first-time freshmen must successfully complete CAS 100, First Year Experience, as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students who must enroll in the fall semester following entry. EH 300 will fulfill the technology proficiency requirement.

REQUIREMENTS FOR A MAJOR IN ENGLISH

A minimum of 39 semester hours, exclusive of freshman English. Majors are required to take at least one survey sequence (EH 215/216 or EH 225/226 or EH 235/236), and EH 300, which must be completed prior to taking any 400-level courses. Any additional 200-level courses may be used to fulfill the 36-hour requirement; however, no more than four 200-level courses can count toward the major. The remaining hours must come from courses at the 300 level or above and include:

1. At least one course in literature prior to 1660 (EH 314, EH 315, EH 321, EH 322, EH 323, EH 324, EH 461, EH 465, EH 467, EH 470, EH 471, EH 472).
2. At least one course in British or American literature from 1660 to 1900 (EH 331, EH 332, EH 334, EH 340, EH 342, EH 343, EH 351, EH 352, EH 353, EH 354, EH 462, EH 474, EH 475).
3. At least one course in literature after 1900 (EH 360, EH 362, EH 363, EH 364, EH 365, EH 366, EH 369, EH 380, EH 463, EH 468, EH 476, EH 478, EH 479).
4. One of the following courses: EH 402, EH 421, or EH 422.
5. At least three 400 level English courses are required.
6. A writing portfolio, to be submitted in the student's senior year, that includes two critical essays written for course work in the Department as well as one reflective synthesis letter (details and deadlines are available in the English Department office).

A student wishing to deviate from the standard curriculum and devise a unique program of study must demonstrate in writing to the English Advising Committee that such a program best serves that student's intellectual needs or career goals.

REQUIREMENTS FOR A MAJOR IN ENGLISH WITH A CONCENTRATION IN CREATIVE WRITING

To major in English with a concentration in creative writing, all requirements for the major must be met. In addition, at least five of the following electives must be taken: EH 391, EH 392, EH 393, EH 394, EH 395, EH 396, EH 484, EH 485, EH 486, EH 487, EH 488, EH 497, EH 498.

HONORS IN ENGLISH

To be awarded Departmental Honors in English a student must:

1. Complete all the standard requirements for the major in English.
2. Maintain a 3.5 overall GPA (University requirement) and a 3.5 GPA in all course work in English.
3. Receive permission from the Department Chair and agreement from a Department member to serve as mentor.
4. Complete a Senior Honors Thesis (EH 499), with a grade of "A" or "B" in addition to the standard requirements for the English major. EH 499, Senior Honors Thesis (six semester hours credit), may be counted toward three hours of the 36 hours required for the major and toward three hours of the nine 400-level hours required for the major. Thus, the student receiving honors in English will be required to take a total of 39 hours in English instead of 36. In EH 499 the student will normally take three hours in the Fall semester for research and three in the Spring for writing. A final committee of three or more faculty members, including a representative of the University Honors Program, will conduct an oral defense. The thesis must be approved by the director of the University Honors Program.

GENERAL EDUCATION REQUIREMENTS FOR ENGLISH MAJORS

General Education Requirements for English with a concentration in creative writing are specified in the College of Arts and Sciences section. Note that Area II requirements are partially satisfied and the Sequence Requirement is fully satisfied by the major requirements specified above.

REQUIREMENTS FOR A MINOR IN ENGLISH

A minimum of 21 semester hours in English is required, exclusive of freshman English. The

minor requires at least four courses at the 300 level or above. Students who wish to take 400-level courses must first take EH 300.

REQUIREMENTS FOR A MINOR IN ENGLISH: PROFESSIONAL WRITING

The minor in English: Professional Writing provides students with the conceptual foundations and hands-on practice necessary for communicating and writing proficiently in technical and professional contexts. The minor is intended to prepare students for producing the forms of writing they will encounter in the workplace (feasibility studies, technical reports, business letters, and grants, for example), and to provide a broad understanding of the rhetorical dimensions of written communication, especially nonacademic texts.

Requirements (21 hours)
Core Courses (9 hours):

1. EH 372: Technical Writing (W) or EH 373: Writing in the Professions (W)
   EH 402: Rhetoric: Ancient & Modern (W)
   EH 481: Studies in Composition/Rhetoric (W)
2. One of the following (3 hours):
   EH 371: Approaches to English Grammar (W)
   EH 372: Technical Writing (W) or EH 373: Writing in the Professions (W)*
   EH 401: Theory & Practice in Composition (W)
   EH 403: Art of the Essay (W)
   EH 496: Professional Studies Internship
3. Three additional 300- or 400-level English courses (9 hours) including but not limited to courses in the second section above.
   *Students can take either or both of these two courses.

GRADUATE STUDIES

The Master of Arts degree program in English is designed to meet the needs of students pursuing a terminal M.A. and of those planning to work toward the Ph.D. and a career in university teaching. The terminal M.A. serves such career tracks as junior college or secondary-school teaching and writing or editing in the business or corporate community. Creative writers find the degree meaningful in careers both in and out of the academic community.

REQUIREMENTS FOR ADMISSION

Students are admitted each semester. The following criteria supplement the Graduate School criteria (see Categories of Admission):

REGULAR ADMISSION

1. For the Literature Concentration, an undergraduate major in English or at least 30 semester hours of course work in English beyond the freshman level. For the Creative Writing Concentration, at least 15 semester hours of course work in English beyond the freshman level.*
2. A minimum GPA of 3.0 in junior and senior level courses presented in fulfillment of requirement 1.
3. A score of at least 500 or 153 on the new score scale on the Verbal sub test of the GRE General Test taken within the past seven years.
4. For all applicants, a personal statement of no more than 500 words, a writing sample of 5-15 pages in the area of concentration (creative writing or literature) and three letters of recommendation.
5. For applicants for whom English is a second language, a TOEFL IBT score of at least 79 or IELTS score of at least 6.5.

PROVISIONAL ADMISSION

1. For the Literature Concentration, a minor in English or at least 21 semester hours of course work in English beyond the freshman level, at least 12 of these hours in upper-division literature courses. Students lacking the literature component can qualify by completing additional upper-division courses in literature. For the Creative Writing Concentration, 15 semester hours of course work in English beyond the freshman level.* Provisional Admission with fewer semester hours than those stipulated requires specific approval of the Department's Graduate Committee.
2. A minimum GPA of 2.50 in junior and senior level courses presented in fulfillment of requirement 1.
3. To be admitted provisionally, applicants should have taken the GRE General Test in the past seven years. Applicants presenting a score of less than 500 or 153 on the new score scale on the Verbal sub test of the GRE General Test must enter in the Provisional category. In rare cases applicants may be admitted provisionally without submitting a score, but one must be submitted before the student can advance to Regular Status.
4. Same as requirements 4 and 5 for Regular Admission.
   *Students must specify their concentration at the time of application and may not thereafter change concentrations without the specific approval of the English Department's Graduate Committee.

NON-DEGREE ADMISSION

Applicants for non-degree status in English will normally be admitted only if they meet admission standards for provisional admission. That is, they must have a 2.5 GPA overall and in junior-level and senior-level courses presented to meet the 21 hour (15 hours for creative writing) course work in English requirement. Following admission, non-degree students must have the permission of the Department Chair and the Director of Graduate Studies of the College for each course in which they wish to enroll. Enrollment will be on a space available basis with preference being given to degree students. Non-degree students must satisfy the same prerequisites as degree students to enroll in a course. Non-degree students may not enroll in directed studies courses. Non-degree students can change their status to Regular Admission by reapplying to the program after two semesters. Non-degree students can transfer up to 15 credit hours they earned as non-degree students.

GRADUATE ASSISTANTSHIPS

The English Department awards both teaching assistantships and research assistantships. Teaching assistantships involve responsibility for freshman composition classes. Graduate students holding research assistantships are usually assigned tasks involving tutoring, research, editing, or administrative/clerical tasks. Awards are normally made for the academic year; occasionally, assistantships become available for spring semester. Applications are taken continuously; competition for appointments begins in May for the following year. See Graduate Coordinator for information and application. (See also **Bulletin** section on Graduate School, "Assistantships and Fellowships.")

REQUIREMENTS FOR DEGREE

1. **Concentration in American and British Literature**
   A. A minimum of thirty-six semester hours of credit is required beyond the bachelor's degree with a grade of "A" or "B", to include EH 501: Intro to Literary Theory and EH 502: Graduate Writing in English, in the first year of course work, two courses from literary periods pre-1800, and two courses from literary periods post-1800. No more than 18 hours of dual-listed courses (400 and 500 level listing for the same course) may be counted towards meeting the minimum hours required for a degree. Graduate students will receive graduate credit only for the 500 level versions of dual-listed courses.
   B. At least one semester before graduation, literature students must successfully complete a literature thesis and oral thesis defense to meet their comprehensive examination requirement. Students write a thesis, which may draw on a student's previous written work in courses, but which must also involve substantial further research under the supervision of a thesis director. Students take three to six semester hours of credit toward the graduation requirement, which will be granted upon successful completion and defense of the thesis, thus leaving a minimum of thirty hours of credit to be accomplished in course work. An oral exam or defense, which will situate the thesis in the comprehensive objectives of the literature concentration, will be required one to two weeks prior to the Thesis First Submission Deadline for the Graduate School.
   C. Demonstrated proficiency in a foreign language is required (see 3 listed below).
2. **Concentration in Creative Writing**
   A. A minimum of thirty hours credit in English course work, to include eighteen hours of courses in literature, and twelve hours of courses in writing, is required beyond the bachelor's degree with a grade of "A" or "B". EH 502: Graduate Writing in English is required in the first year of course work. No more than 18 hours of dual-listed courses (400 and 500 level listing for the same course) may be counted towards meeting the minimum hours required for a degree. Graduate students will receive graduate credit only for the 500 level versions of dual-listed courses. The required thesis (six hours thesis credit to be granted on successful completion and oral defense of the thesis) will serve as the student's exit evaluation along with an oral defense.
   B. Students may concentrate on fiction, nonfiction, or poetry writing or other genres.

C. This concentration requires a thesis. For the thesis, a book-length work of fiction, non-fiction, or poetry is required. An oral exam or defense, which will situate the thesis in the comprehensive objectives of the creative writing concentration, will be required one to two weeks prior to the Thesis First Submission Deadline for the Graduate School.

D. Demonstrated proficiency in a foreign language is required (see 3 listed below).

3. **Foreign Language Proficiency Requirement** All students pursuing the M.A. in English must demonstrate a reading proficiency in Spanish, French, German, or Latin before registering for the comprehensive exam or for thesis hours. Foreign nationals for whom English is not native may offer their native language. Credit in reading courses in acceptable languages may not count toward the 36 hour credit requirement for the M.A. in English.

DESCRIPTION OF ALL ENGLISH (EH) COURSES BEGIN ON PAGE 221.

DEPARTMENT OF FOREIGN LANGUAGES AND LITERATURES

Chair: Isabel Z. Brown (251) 460-6291
Professors: McCready, Mozur
Associate Professors: Brown, Khan, Perez Pineda, Marin, Roddy
Assistant Professors: Rinne, Robles-Valencia
Senior Instructors: Britt, Rice
Instructor: Faile
Emeriti: Jones, Lomangino, Quinn

Department of Foreign Languages and Literatures web site: http://www.southalabama.edu/languages

The department contributes to the liberal education of all students by helping them to improve their ability to communicate with and understand other cultures in an increasingly interdependent world. The study of foreign languages provides students with additional basic knowledge of their own language, allows them to escape a narrow, monolingual view of the world, and offers them the opportunity to develop proficiency in a second or third language. In addition to introductory and intermediate level courses in Arabic, Chinese, Greek, Japanese, Italian, Portuguese, and Latin, Korean, Hindi, and ASL, the department offers a major in Foreign Languages and Literatures with concentrations in French, German, Russian, and Spanish. Minors are also available in those four languages.

In the first-year sequences (Introductory) the student is given a basic foundation in listening, speaking, reading, and writing. Typically, the emphasis is on listening and oral practice followed by development of reading and writing skills. The second-year courses (Intermediate) build upon the skills acquired in the first year. Upper-level courses provide students with comprehensive knowledge of the important writers and movements of each language area's literary legacy, while other courses concentrate on language and culture, and history. Students with previous language training will be placed at the appropriate level.

All first-time freshmen must successfully complete CAS 100: First Year Experience as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students who must enroll in the fall semester following entry.

Foreign Language majors are required to take LG 480 to fulfill the technology proficiency requirement, which was formerly known as the computer proficiency requirement.

REQUIREMENTS FOR A MAJOR IN FOREIGN LANGUAGES AND LITERATURES

In addition to fulfilling the general education requirements specified, students majoring in Foreign Languages and Literatures will complete 25 hours of core courses and 24 hours of study in an area of concentration (French, German, Russian, or Spanish). The required core courses include: IS 100: Global Issues, LG 110: World Languages, LG 205: Foreign Literatures in Translation - W, EH 235: World Literature I, IS 391: Study Abroad, LG 480: Senior Seminar

STUDY ABROAD COMPONENT

As part of their core requirement majors will earn a minimum of 9 semester hours at the upper level in the language of their concentration in an approved study abroad program. During their stay abroad students will be required to maintain on-line contact with their advisors, keep a journal of their activities, and gather materials to be used in LG 480 Senior Seminar upon their return. Subject to availability of funding, grants are awarded to help off-set some of the costs of the Study Abroad program to qualified majors.

REQUIREMENTS FOR A CONCENTRATION

A minimum of 24 semester hours in one language is required, in addition to the 9 hour upper-level study abroad component. After completing the lower-division courses (**Introductory** and **Intermediate** sequences) the following specific upper-division courses are required depending upon the language in which the student wishes to concentrate: **French** - LG 311, 312, 326, 327; **German** - Six hours from each of the following groups: LG 366, 367, 368, and LG 361, 362, 363, 364; **Russian** - LG 374 or LG 376 and the remaining nine hours selected from the following courses: LG 374, 376, 381 and 375 (to be taken three times for a minimum of three course credits), 372 and 380. **Spanish** - LG 334, 336, 431, and one of the following: LG 432, or 433. Remaining credits needed to complete the concentration will be selected from additional upper-division courses offered in the respective languages. Please note: LG 335 and LG 337 do not count toward the concentration in Spanish.

GENERAL EDUCATION REQUIREMENTS FOR FOREIGN LANGUAGES AND LITERATURE MAJORS

Areas I, III, and IV of the General Education Requirements for Foreign Languages and Literatures majors are specified in the College of Arts and Sciences section. Note that a portion of Area II requirements for Foreign Language Proficiency, Intermediate Language courses and EH 235 are fulfilled by the major requirements specified above.

REQUIREMENTS FOR MINOR IN A LANGUAGE

Students must complete a minimum of nine semester hours beyond the Introductory and Intermediate sequences. The student must complete the following upper-division courses depending on the language in which the student elects to minor: **French** - LG 326 and 327 and either 311 or 312; **German** - LG 366 and either 367 (to be taken three times for a minimum of three course credits), or 368; **Russian** - LG 374 or 376; **Spanish** - three upper division courses (LG 333 and LG 334 recommended). Remaining credits, if any, are to be selected from the upper division courses in the appropriate language. Native or near-native speakers of a language may not enroll in upper-level conversation courses. Note: The Minor in Language cannot fulfill the minor requirement for Language Majors.

MINOR REQUIREMENT FOR FOREIGN LANGUAGE MAJORS

Language Majors can fulfill the College's minor requirement by taking either 1) another language concentration, or 2) a minor in a program outside of the Department of Foreign Language and Literatures.

RETROACTIVE CREDIT POLICY

It is to the advantage of students to begin their study of a foreign language at the highest possible level because they can gain college credits through appropriate placement. Students who have had three to five years of a foreign language in high school may wish to take the CLEP examination in that language and earn as many as (12) semester hours of lower-division credit based on the Foreign Language Department at USA's recommendation. Students participating in the International Baccalaureate Program (IB) will be granted 6 semester hours of credit in the corresponding language Freshman Language Sequence with a score of "5" or higher on the International Baccalaureate Program examinations. On the basis of the Foreign Language department's evaluation of their previous foreign language training students may also elect to begin in the second semester of the introductory sequence, or the first semester of the intermediate sequence, and qualify for retroactive credit. By earning a "C" or better in the higher level course the student may petition the department for either 3 or 6 semester hours of introductory-level credit. Native speakers are not eligible.

LESSER TAUGHT LANGUAGES PROGRAM (LTLS)

Besides its four main languages, the Department also offers four semesters of instruction for several other languages as part of its Lesser Taught Languages Program. LTLS classes meet three times a week and are conducted by native-speaker coaches. Mid-term and final student performance evaluations are administered by nationally certified external examiners. As in all language classes, success in these courses requires a high degree of motivation, self-discipline, and a long-term commitment to

developing oral/aural proficiency in the target language. Students must be willing to assume responsibility for learning appropriate listening and speaking skills. Before enrolling in a LTLS course students are urged to discuss course requirements and testing procedures with the program coordinator. Call (251) 460-6291 for more information. Fee.

GRADUATE STUDIES

Although the Department of Foreign Languages and Literatures has no graduate degree program, graduate-level course work is offered in several languages under the rubrics of "Special Topics," "Seminar," and "Directed Studies" in conjunction for completing requirements in the Alternative Master's Program.

DESCRIPTIONS OF ALL LANGUAGES (LG) COURSES BEGIN ON PAGE 245.

DESCRIPTIONS OF ALL LESSER TAUGHT LANGUAGES (LGS) COURSES BEGIN ON PAGE 249.

DEPARTMENT OF HISTORY

Chair: Clarence L. Mohr (251) 460-6210
Graduate Coordinator: Martha Jane Brazy
Professors: Mohr, Rogers
Professors Emeriti: Brandon, Holmes, Thomason
Associate Professors: Brazy, DeVore, Hamilton, McKiven, Miller, Monheit, Kozelsky, Strong, Williams
Associate Professor Emeritus: Houston
Assistant Professors: Cage, Nouwen, Good
Senior Instructor: Faust

Department of History web site
http://www.southalabama.edu/history

UNDERGRADUATE STUDIES

Knowledge and awareness of history and society are important ingredients of a liberal education. The Department of History offers general courses for all students, a major and a minor in history, and preparation for students who plan to continue study at the graduate level, to teach history, or to enter related fields.

REQUIREMENTS FOR A MAJOR IN HISTORY

A minimum of 36 semester hours in History, including HY 101, 102, 135, 136, one course in African (HY 362), Asian (HY 103, 104, 283, 284, 366, 367, 368, 461), Latin American (HY 228, 321, 323, 325, 326, 429), or Middle Eastern History (HY 364, HY 365, HY 465); one research seminar (HY 441, 442, or 443); and 18 semester hours of electives. These electives must include a minimum of fifteen semester hours in courses numbered 300 or above taken at this University, of which six semester hours must be in courses at the 400 level. Majors should seek as broad an acquaintance with the varieties of historical experience as possible. A strong major program should include upper-level courses numbered 300 or above in the history of Europe, the United States, Latin America, and non-Western societies. Students pursuing a degree in History also must have a minor in another discipline.

All first-time freshmen must successfully complete CAS 100: First Year Experience as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students who must enroll in the fall semester following entry. CIS 150 will fulfill the technology proficiency requirement for History Majors.

GENERAL EDUCATION REQUIREMENTS FOR HISTORY MAJORS

General Education Requirements for History are specified in the College of Arts and Sciences section. Note that Area IV requirements are partially satisfied and the Sequence Requirement is fully satisfied by the major requirements specified above.

REQUIREMENTS FOR A MINOR IN HISTORY

A minimum of 21 semester hours in History. Students must complete a six hour sequence in either Western Civilization (101 and 102) or US History (135 and 136) and 15 semester hours of electives, of which nine semester hours must be taken in courses numbered 300 or above at this University.

HONORS IN HISTORY

To be awarded Honors in History, a student must:

a) complete the standard requirements for a major in History
b) have a 3.5 overall GPA (University requirement)
c) have a 3.5 History GPA (Department requirement)
d) receive agreement of a member of the History Department to serve as mentor
e) receive permission of the Department Chair to undertake this program
f) complete a Senior Honor Paper (HY 499), with a grade of "B" or "A", in addition to the standard History requirements. HY 499: Senior Honors Paper (six semester hours credit) may be counted toward three hours of the 36 required for a major and toward three hours of the six 400-level hours required for the major. Thus, the student receiving honors in History will be required to take a total of 39 hours in History instead of 36 (In HY 499, the student will normally take three hours in Fall Semester for research and three in Spring for writing, though occasionally this may be spread out over a longer period. A final committee of three or more faculty, which may include a representative of the University Honors Program, will conduct an oral defense)

NOTE: 1) one need not be receiving University Honors to obtain Honors in History; 2) a certificate will be awarded to the student indicating that they have been awarded "Honors in History."

GRADUATE STUDIES

The Master of Arts degree in History is designed to meet the varied needs of students. There are two study tracks or plans for completion of the degree: thesis, non-thesis.

Normally, those who wish to enter a Ph.D. program, law school, or certain positions in archives, government, and community college teaching positions pursue the thesis option. Other students pursuing positions where a thesis is not needed often study in the non-thesis track.

For further information on the M.A. program, see the departmental booklet **Graduate Program in History, which can be found on the Department website or request one from the Department**.

REQUIREMENTS FOR ADMISSION

Students are admitted each semester. In addition to Graduate School requirements, all applicants must submit GRE scores, a statement of purpose for undertaking graduate work in History and provide three academic letters of recommendation directly to the Office of Admissions. A writing sample is also required and should be sent directly to the History Graduate Coordinator. Please contact the History Department Coordinator of Graduate Studies for more information. The following criteria supplement Graduate School criteria (see Categories of Admission).

REGULAR ADMISSION

1. At least twenty-one semester hours of college work in History approved by the Graduate Committee of the Department of History.
2. An average of "B" (3.0) or better in the junior- and senior-level history courses presented in fulfillment of requirement 1.

PROVISIONAL ADMISSION

Applicants whose undergraduate preparation in History does not meet the Graduate History Committee's full approval may, at the discretion of the Committee and under the regulations of the Graduate School, be admitted provisionally and may be required to make up deficiencies in undergraduate course work in addition to fulfilling the regular degree requirements listed as follows.

To qualify for Regular Standing, a Provisional Admission student must satisfy the general requirements of this **Bulletin** and achieve a grade of "A" or "B" in nine consecutive semester hours of acceptable graduate course work.

NON-DEGREE STUDENTS

Students holding baccalaureate degrees from accredited institutions of higher education who are not interested in earning an MA degree, or who are not yet ready to apply for Regular Admission may enroll in a Non-Degree status. A suitable background for the courses to be taken is expected. Non-Degree students may enroll only in courses offered at specific times and places. They may not enroll in directed studies courses.

GRADUATE ASSISTANTSHIPS

A limited number of assistantships are awarded to incoming and returning graduate students on a competitive basis. Assistantships include a tuition waiver and a stipend, for which students are asked to work 20 hours a week, usually as teaching assistants, in public history, or assisting in the University Archives. Applications for each academic year are due in the department no later than **March 15**.

REQUIREMENTS FOR DEGREE

All candidates for the Master of Arts degree in History, regardless of which of the two tracks they are following, must complete the following requirements:

- A minimum of 33 credit hours with grade of "A" or "B".
- A minimum of 20 credit hours completed at the University of South Alabama.
- A maximum of 9 credit hours of 500 level courses that are dual-listed at the 400 level. Graduate students will only receive graduate credit for the 500 level version of dual-listed courses. These courses will require extra work beyond that expected of undergraduates in the 400 level course.
- Take at least 24 credit hours at the 500 level courses that are not dual-listed with the 400 level.
- Complete HY 593 Research, Comprehensive Exam and Thesis Preparation
- Complete HY 530 American Historiography.
- Complete HY 540 Modern European Historiography, or HY 542 World Historiography (except for students taking the Public History topical field).
- Complete one of the following research seminars: HY 546, HY 580, HY 581 or HY 586. Other courses may be substituted if a research paper is completed (students must check with graduate coordinator for specific requirements).
- Choose two of the following fields and complete 12 credit hours in each: American History
  European History or World History
  Topical Fields

Note: A grade of "C" or below is not considered a passing grade by the Department of History. Students receiving such a grade in a required course must make-up the hours.

Requirements for topical fields vary. Students must check with graduate coordinator for specific requirements.

The remaining requirements are dictated by the track in which students choose to study:

Non-Thesis

- Complete comprehensive examinations in two fields choosing from American; European or World; or topical field.

Thesis

- Complete a comprehensive examination in one field (see list of fields above) other than the thesis field.
- Complete six credit hours of HY 599 Thesis.
- Submit an approved thesis prospectus.
- Formally defend their thesis. (Students must be enrolled in at least one hour of HY 599 when they defend.)
- Submit an approved thesis in accordance with Graduate School regulations.

DESCRIPTIONS OF ALL HISTORY (HY) COURSES BEGIN ON PAGE 235.

INTERDISCIPLINARY PROGRAMS

Interdisciplinary programs are designed to combine several disciplines in their curriculum. Several interdisciplinary programs are offered by the College.

1. a minor in African-American Studies,
2. Composite Science Minor (24 hrs.)
   Choose three laboratory science sequences:
   a. BLY 101/BLY 102L and BLY 102/ BLY 102L
      or BLY 121/BLY 121L and BLY 122/ BLY 122L
   b. CH 131/CH 131L and CH 132/CH 132L
   c. GEO 101/GEO 101L and GEO 102/ GEO 102L
   d. GY 111/GY111L and GY 112/GY 112L
   e. PH 114/PH 114L and PH 115/PH 115L
      or PH 201/PH 201L and PH 202/PH 202L

   Students cannot choose a laboratory sequence in their major.
   Geology majors are required to take a Physics laboratory sequence.
3. a minor in Gender Studies,
4. an undergraduate and graduate certificate in Gerontology,
5. a major in International Studies,
6. a double major in International Studies and International Business,
7. a double major in International Studies and Foreign Languages and Literatures,
8. a minor in International Studies,
9. a minor in Museum Studies.
10. a minor in Related Sciences. A student must take a minimum of 20 semester hours by taking CH 131/CH 131L, CH 132/CH 132L, CH 201/CH 201L and any two courses (a lecture and its laboratory component count as once course) from the following.
    CH 202/CH 202L
    CH 265/CH 265L
    CH 414/CH 414L
    CH 440
    CH 441
    GY 111/GY 111L
    GY 112/GY 112L
    GY 413
    GY 461

The requirements for each of these programs are listed as follows.

African-American Studies
Gender Studies
Gerontology
International Studies
Museum Studies

DESCRIPTIONS OF ALL INTERDISCIPLINARY STUDIES (IDS) COURSES BEGIN ON PAGE 240.

AFRICAN-AMERICAN STUDIES

Director: Dr. Kern M. Jackson (251) 460-6146
Faculty Affiliates:
Dr. Martha Jane Brazy, History
Dr. Donald Devore, History
Mr. W. Frye Gaillard, History
Dr. Henry M. McKiven, Jr., History
Dr. Clarence L. Mohr, History
Dr. Gloria J. Palileo, Sociology, Anthropology and Social Work
Dr. Christopher Raczkowski
Dr. Cornia Schulze
Dr. Betty Trout-Kelly
Dr. Sue Walker, English
Dr. Susan Youngblood, Philosophy
Dr. Joycelyn Finley-Hervey, Interdicipline Studies

The minor in African American Studies provides an interdisciplinary investigation of the experiences, conditions, origins, accomplishments, and contributions of people of African ancestry in the United States. Students may deepen their appreciation and understanding of African-Americans by studying their earlier history in Africa, their transition to the New World, and their diasporic experiences in other parts of the world. The African-American Studies Program is comprised of eighteen courses offered through seven departments of instruction within the College of Arts and Sciences.

The minor in African-American Studies takes advantage of those characteristics of the African-American experience that make it uniquely valuable for serious academic study and teaching, for it exposes students to the diversity and unity of the African-American experience as well as to the similarities and differences among the cultures of Africa.

Core Requirements

1. AFR 101, Introduction to African-American Studies (three semester hours). This course is to be taken immediately after the African-American Studies minor is declared.
2. At least one humanities and one social science course selected from the offerings below.
3. The election of additional courses to bring the total credits to at least 21 hours.

African-American Studies Course Offerings
AFR 101 (Required)

Humanities Courses

EH 242	EH 468	PHL 331
EH 477	EH 492	

Social Science Courses

HY 362	HY 479	HY 435	GS 290
HY 377	HY 477	HY 478	GS 492
HY 485	PSY 270	SY 220	PSC 340
SY 315	SY 435	SY 445	

Other

ARH 250	ARH 343	AIS 320

A description of these courses may be found under the appropriate departments.

DESCRIPTIONS OF ALL AFRICAN-AMERICAN STUDIES (AFR) COURSES BEGIN ON PAGE 166.

GENDER STUDIES

Director: Martha Jane Brazy (251) 460-7540

Department of Gender Studies web site: http://www.southalabama.edu/genderstudies

The Gender Studies Program offers a minor in the interdisciplinary study of contemporary and historical gender theory and gender issues on a global level. The program allows students to acquire depth of knowledge in specific areas of gender-related focus and gender theory, as well as a wide range of research skills and methodologies from across the disciplines. The program offers courses from eleven departments within the College of Arts and Sciences, as well as service learning and community internship opportunities.

Gender Studies deepens students' understanding of areas of study such as historical/

cultural constructions of femininity and masculinity and their representations; sexuality; feminist theory; LGBTQ studies; male and female physiology; gender and health, business and politics; and the intersection of race, class, gender and sexuality. The Gender Studies Program encourages students to become actively engaged in gender-focused research and its practical applications, and provides numerous opportunities for students to interact with faculty members to discuss their current research.

CORE REQUIREMENTS

1. Students minoring in Gender Studies must complete a total of 18 semester hours in approved courses.
2. Students are required to complete two courses in the Humanities and two courses in Social Sciences.
3. Minor courses must also represent four different disciplines.
4. Approved Variable and Special Topics Courses that focus on gender studies can also be taken to complete the 18 semester hour requirement. For information on upcoming variable and special topics courses, consult the Director.
5. GS 101 Introduction to Gender Studies.
6. One 400 level course with a focus on gender studies. This can be a GS course (i.e. GS 490) or an approved 400 level course in another discipline.

CORE COURSES

Gender Studies Courses

GS 101 Introduction to Gender Studies
GS 290 Special Topics
GS 390 Special Topics
GS 490 Gender Studies Special Topics
GS 492 Gender Studies Seminar
GS 494 Directed Studies
GS 496 Internship

*Please note that there are frequent offerings in approved special topics. Check course schedule on the Gender-Studies Website.

Humanities Courses

AFR 101 Introduction to African-American Studies
EH 207 Literature and Gender
EH 480 Studies in Gender and Literature
LG 305 Studies in Gender and Writing

Social Science Courses

AN 355 Gender and Anthropology
CA 315 Gender and Communication
CJ 372 Gender and Criminal Justice
HY 343 Witchcraft and Magic in Medieval and Early Modern Europe
HY 377 African American Experiences
HY 485 History of American Feminist Movements
PSC 340 Race, Gender and Politics
PSY 485 Psychology of Gender
SY 200 Social Factors in Sexual Behavior
SY 220 Marriage and the Family
SY 418 Advanced Family Studies
SY 428 Gender and Society

Natural Science Course

BLY 215 Human Genetics

Fine Arts Course

ARH 480 Women in Art

Other Courses

AIS 315 Women's Issues in the Workplace and Community
AIS 320 Cultural Diversity
HS 463 Human Sexuality: Some Health Education Perspectives

For a description of these courses, please refer to the appropriate departments. For further information about the program contact Dr. Martha Jane Brazy, Gender Studies Program, Department of History, HUMB 344, University of South Alabama, Mobile, AL 36688-0002. Phone (251) 460-7540; FAX: (251) 460-6750; E-mail address: mjbrazy@southalabama.edu.

DESCRIPTION OF ALL GENDER STUDIES (GS) COURSES BEGIN ON PAGE 230.

GERONTOLOGY

Program Director and Academic Advisor:
Roma Stovall Hanks (251) 460-6347 or (251) 460-6020
Email: rhanks@southalabama.edu

Department of Gerontology web site
http://www.southalabama.edu/gerontology

The University of South Alabama offers Certificates in Gerontology at the Graduate and Undergraduate levels and an Interdisciplinary Minor in Gerontology.

Gerontology is the interdisciplinary study of:

1. the human life cycle,
2. issues related to aging, and
3. the relationships between the generations.

The Gerontology program is designed to establish an expertise that will enhance and compliment the analytical skills that the student acquires as part of the major area of study. This expertise may be used as preparation to specialize within the career area related to the student's major area of study or to pursue further academic training in graduate or medical school. Special topics courses and online instruction are available.

Depending on their specific needs and interests, students may be able to complete requirements for the Undergraduate Certificate in Gerontology through distance learning options. Students who are interested in pursuing the undergraduate certificate online should speak with their academic advisor and the Gerontology program director.

The Degree Works audit tool lists the Gerontology Certificates as programs. Students should alert their advisors to check that they are enrolled in a Gerontology Certificate program (Graduate or Undergraduate). In order to receive the Gerontology Certificate, the student must submit a completed Data Sheet and Application available at www.southalabama.edu/gerontology. The certificate is not automatically issued without an application.

UNDERGRADUATE PROGRAM IN GERONTOLOGY

REQUIREMENTS FOR THE UNDERGRADUATE GERONTOLOGY CERTIFICATE

Students who wish to earn an Undergraduate Certificate in Gerontology must complete 21 semester hours, including an internship that will expose the student directly to older people and their families. The internship must be approved by the program director during the semester prior to placement. Prior to the start of the internship, students must provide documentation that the supervising agency assumes liability for interns, or they must carry their own liability insurance during the internships.

Approved courses are offered in various departments as well as in Gerontology. Students are encouraged to pursue the Gerontology Certificate in conjunction with degree programs.

CORE COURSES (UNDERGRADUATE)
(Required)

SY 372, BLY 207 (SY 435 or equivalent may be substituted with permission of Program Director)

Select One

AIS 201, AIS 401, PSY 456, PSY 250 (These courses may also be used as electives, if not selected to fulfill a requirement).

INTERNSHIP (Required)

Internship in Gerontology (GRN 496) or equivalent (for example, Sociology majors may substitute SY 496 with Director's approval). Internships in other disciplines may be substituted for GRN 496 if the director and the student's academic advisor approve. The placement must provide significant contact with older people, their families or appropriate service agencies. Proof of insurance is required. Three semester hours required; up to six semester hours may by accepted. The three hour internship requires 100 contact hours; the six hour internship requires 200 contact hours.

ELECTIVE COURSES
(Select three)

Note: Any required course option that is not chosen from the list above to fulfill a requirement may be used as an elective. Other elective choices include:
GRN 290, GRN 490, GRN 494, AIS 425, IST 210, LS 397, LS 479, PSC 481, PSY 416, PSY 428, PSY 456, PSY 475, SY 435, SY 472, and SY 490. When the course topic is appropriate for gerontology. Special topics courses and directed studies may be taken as electives for example; SY 290, SY 490 and PSC 440. Please note: GRN 290 and GRN 490 are variable topics courses. Check the class schedule each term to determine which topic is being offered. Sample topics include: Gender and Aging; Leadership and Advocacy in Gerontology; Housing and Lifestyle Changes across the Life Course; and Aging and Public Policy. Additional courses may be used as electives, if approved by the Gerontology program director. Students should meet with the program director to discuss specific questions about elective courses.

PROGRAM ENHANCEMENT

Research opportunities, service learning, and scholarships may be available for students in Gerontology. Contact the Program Director for details.

APPLICATION FOR THE CERTIFICATE

Gerontology certificates are not sent automatically to students. The application is available at the Gerontology web site: www.southalabama.

edu/gerontology/. An exit interview may be required. Contact the program director at least six weeks prior to completion of requirements for the certificate.

REQUIREMENTS FOR THE INTERDISCIPLINARY MINOR IN GERONTOLOGY

The Interdisciplinary Minor in Gerontology requires 21 semester hours. It is designed for those Arts and Sciences majors who are interested in obtaining jobs in agencies that provide services for older individuals and their families or in pursuing graduate degrees that involve research on aging and intergenerational relationships. Majors in other colleges may also pursue the Interdisciplinary Minor in Gerontology, but should discuss this option with an advisor from the major field. It is possible to obtain the Undergraduate Certificate in Gerontology as part of the Minor, provided all requirements for the Certificate are met. The same course may not be used to fulfill requirements of both a major and a minor. Students who complete requirements for the Gerontology minor maybe eligible to receive the Undergraduate Certificate in Gerontology as well. Students should consult their advisor and the Program Director to discuss this dual credential option.

CORE COURSES (UNDERGRADUATE)
(Required)
SY 372
BLY 207 Or SY 435
PSY 456 Or PSY 250
Additional course in policy, methodology, or professional ethics.

INTERNSHIP (Required)

Internship in Gerontology (GRN 496 or equivalent). With permission of the program director and the student's academic advisor, an internship in the student's primary discipline may be substituted if the internship provides significant contact with older people, their families, or appropriate service agencies. Three semester hours required; up to six semester hours may be accepted. Approval of the internship placement must be obtained at least six weeks prior to registration. The three hour internship requires 100 contact hours; the six hour internship requires 200 contact hours. Proof of insurance is required. If you plan to substitute an internship from another discipline, you must obtain written approval from the Gerontology Program Director or Academic Advisor prior to registration.

ELECTIVE COURSES
(Select three)

Any required course option that is not chosen from the list above to fulfill a requirement may be used as an elective, other elective choices include:
GRN 290, GRN 490, SY 472, PSY 456, PSY 416, PSY 428, PSY 475, IST 210, LS 397, LS 479, GRN 494, PSC 440, SY 490, may be taken as electives when the course topic is appropriate for gerontology. Please note: GRN 290 and GRN 490 are variable topic courses. Check the class schedule each term to determine which topic is being offered. Sample topics include: Gender and Aging; Leadership and Advocacy in Gerontology; Housing and Lifestyle Changes across the Life Course; and Aging and Public Policy. Other electives may be taken from the student's degree discipline with approval by the student's advisor and the Gerontology Director. Content of the elective must include substantial focus on aging.

GRADUATE PROGRAM IN GERONTOLOGY

The aim of this certificate program is to transmit a core of cognitive knowledge and skills in Gerontology. Requirements for admission are the same as those of the Graduate School. Students seeking to obtain Graduate Certification in Gerontology should either hold a graduate degree, or concurrently be enrolled in a graduate program.

REQUIREMENTS FOR THE GRADUATE CERTIFICATE IN GERONTOLOGY

The Graduate Certificate Program at USA requires a minimum of seven courses (21 hours) with grades of "A" or "B", including Aging in American Society (SY 523) and an approved internship. It is strongly recommended that students take a course in public policy; a research methods course appropriate to the student's primary discipline and/or gerontology; and a course in professional ethics. All courses not specifically listed in this section must be approved by the Gerontology Program Director and the student's advisor prior to registration for the course.

The Gerontology internship (GRN 596) is required or an equivalent internship experience within the student's discipline. The internship must allow the student to apply skills to work with older individuals and their families. Research shows that positive, supportive attitudes toward aging are best developed through personal involvement with older people. The skill of applying knowledge to the problems of the elderly is developed in experiential learning situations. Therefore, an internship is required unless the student demonstrates substantial previous experience with the client population. In that event, a directed study or an additional academic course in aging may be substituted for the internship. A maximum of six credit hours of internship and six credit hours of directed study may be applied toward the requirements for the Graduate Certificate in Gerontology. The internship must be approved by the program director during the semester prior to placement. Proof of insurance is required for the internship. If you plan to substitute an internship from another discipline, you must obtain written approval from the Program Director or prior to registration.

All course waivers and substitutions must be approved by the program director. The student must work closely with the director and with the advisor in the major area of specialization to develop the best program possible to meet career goals. Directed studies, special topics courses, and online courses may be used to fulfill program requirements if approved by the director.

Following are the courses approved for the Graduate Certificate in Gerontology:

(Required)
SY 523
GRN 596 or equivalent

(Elective Courses)
CED 564, GRN 594, HSC 524, HSC 550, PSC 587, PSY 516, PSY 528, PSY 556, SY 572, GRN 597

Graduate level Special Topics courses and Directed Studies may be taken as electives when the course topic is appropriate for gerontology. Distance learning options may be offered for some courses. Check with the program director for information about online courses and other distance learning opportunities.

Other electives may be taken from the student's degree discipline with approval by the student's graduate advisor, the Gerontology program director, and the Graduate School (Examples: courses in Advanced Geropsychiatric Nursing and courses in the College of Allied Health Professions where the focus is on aging and age-related health conditions). Students should meet with the Gerontology program director to discuss specific questions about elective courses.

Courses which are taken as part of a degree program may be considered for credit toward the certificate provided they are approved by the Director of the University Programs in Gerontology, the Director of Graduate Studies in the College offering the degree, and the Dean of the Graduate School. In order to receive the Graduate Certificate in Gerontology, you must submit a completed application form. Certificates are not issued automatically. Forms are available on the program web site at: http://www.southalabama.edu/gerontology/.

For further information about the program contact Dr. Roma Stovall Hanks, Director, USA Programs in Gerontology, 5991 USA Dr. N., HUMB 34, University of South Alabama, Mobile, Alabama 36688-0002; phone: (251) 460-6020; FAX (251) 460-7925
e-mail: rhanks@southalabama.edu.
web site: www.southalabama.edu/gerontology/

APPLICATION FOR THE CERTIFICATE

Gerontology certificates are not sent automatically to students. The application is available at the Gerontology web site: www.southalabama.edu/gerontology/. An exit interview may be required. Contact the program director at least six weeks prior to completion of requirements for the certificate.

DESCRIPTION OF ALL GERONTOLOGY (GRN) COURSES BEGIN ON PAGE 230.

INTERNATIONAL STUDIES

Director: Susan McCready (251) 461-1456
Faculty Affiliates:
Ms. Kristy Britt, Foreign Languages (Latin America)
Dr. Isabel Z. Brown, Foreign Languages (Latin America)
Dr. Claire Cage, History (Europe)
Dr. Erwei Dong, Leisure Studies (Asia)
Dr. Nader Entessar, Political Science (International Relations, Middle East)
Dr. Elwood Hannum, History (Europe)
Dr. Robert Houston, History (International Relations)
Dr. Zohair Husain, Political Science (Asia, International Relations, Middle East)

Dr. Zoya Khan, Foreign Languages (Latin America)
Dr. Mara Kozelsky, History (Asia, Europe)
Dr. Konrad Kressley, Political Science (Europe)
Dr. Christine Lindeman,Visual Arts (Europe)
Dr. Eric Loomis, Philosophy (Asia)
Dr. Mihaela Marin, Foreign Languages (Europe)
Dr. Mark Moberg, Anthropology (Latin America)
Dr. Genevra Murray, Anthropology (Asia and IR)
Dr. Mollie Nouwen, History (Latin America)
Dr. Roberto Robles-Valencia, Foreign Languages (Europe)
Dr. Harry Roddy, Foreign Languages (Europe)
Dr. Christine Rinne-Eaton, Foreign Languages (Europe)
Dr. Victoria Rivizzigno, Geography (International Relations)
Dr. Daniel Rogers, History (Europe)
Dr. Roy Ryder, Geography (Latin America)
Dr. Alex Sharland, Marketing (International Business)
Dr. Michele Strong, History (Europe)
Dr. James Swofford, Economics (International Economics)
Ms. Terri Rice, Foreign Languages (Latin America)
Dr. Rebecca Williams, History (Asia, Middle East)

International Studies web site http://www.southalabama.edu/internationalstudies/

The International Studies major is a rigorous interdisciplinary program designed for students who wish to build a solid foundation for a career in international affairs. The program combines language fluency, international/area studies, and international business, and, as such, fulfills the requirements for both the major and minor. The faculty directing the major is drawn mostly from the departments of foreign languages and literatures, geography, history, philosophy, political science, sociology and anthropology.

All first-time freshmen must successfully complete CAS 100: First Year Experience as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students who must enroll in the fall semester following entry. GEO 312 will satisfy the technology requirement for International Studies majors.

USA EDUCATION/STUDY ABROAD

Students in International Studies are strongly encouraged to incorporate international experiences as part of their academic activities. Study, research, and internships as well as service learning and community service abroad are available options. For more information contact the IS Office and/or the USA Office of International Education.

REQUIREMENTS FOR A MAJOR IN INTERNATIONAL STUDIES

Students majoring in International Studies should complete the 15 hours of core courses, one of five tracks of study, and a pre-professional program. The pre-professional program takes the place of a traditional minor. IS majors must also take AN 100, GEO 114 and HY 102 as part of their general education requirements since these courses are prerequisites for upper division courses in the major.

CORE COURSES
(Required of all majors) (15 hrs)

- IS 100 Global Issues
- PSC 250 Comparative Politics
- PSC 270 International Relation
- GEO 312 World Economic Geography (W)
- IS 495 Senior Research Seminar*

*All IS majors must take this research seminar in their senior year. Students can opt to do a study abroad research project in place of the seminar.

AREA CONCENTRATIONS (24 hrs)
(majors must complete one of the following tracks of study)

Asian Studies (24 hrs)

- 6 hours of Asian Language at the 200 level (LGS 201, LGS 206, LGS 221)
- HY 104 Asian Civilization since 1800
- 3 hours 300-400 level course on Asian history (HY 367(W), HY 368, HY 461)
- 3 hours in Asian Philosophy (PHL 354, PHL 355)
- PSC 368 Politics of South Asia (W)
- 6 hours of electives from among the following: HY 367, HY 368, HY 461 (not taken above); PHL 354, PHL 355 (not taken above); PSC 365 (W); IS 492, IS 496; or any approved Special Topics course or Directed Studies focusing on contemporary Asia or Asian country.

European Studies (24 hrs)

- Six hours of a European language at the 200 level* (LG 211 and LG 212, LG 231 and LG 232, LG 241, LG 242, LG 251 and LG 252, or LG 271 and LG 272)
- GEO 314 Geography of Europe
- HY 357 Europe since 1918
- PSC 360 Politics of Europe
- 9 hours of electives from among the following: any 300-400 level course in European language or literature (if not in language pre-professional or double major program); EH 216, EH 349; HY 246, HY 333, HY 334, HY 335, HY 336, HY 337, HY 338, HY 347, HY 348, HY 457; PSC 313; IS 492, IS 496; or any approved Special Topics course or Directed Studies focusing on contemporary Europe or European country.

*Students selecting the pre-professional program in Language should take an additional six hours of non-language electives.

International Relations (24 hrs)

- Six hours of a foreign language at the 200 level* (LG 211 and LG 212, LG 231 and LG 232, LG 251 and LG 252, LG 271 and LG 272, LGS 206 and LGS 207, LGS 221 and LGS 222, LGS 241 and LGS 242, or LGS 201 and LGS 202)
- PSC 251 World Leaders
- PSC 372 American Foreign Policy
- IS 492 Seminar 9 hours of electives from among the following: ECO 330, ECO 363 (if not taken as part of a pre-professional program), ECO 371; HY 303, HY 305,
- HY 405; PSC 313, PSC 365 (W), PSC 470, PSC 484; IS 473, IS 475, IS 492 (when content varies), IS 496; or any approved Special Topics course or Directed Studies focusing on International Relations.

*Students selecting the pre-professional program in Language should take an six hours of electives.

International Political Economy

See International Business/International Studies Double Major below.

Middle East Studies (24 hrs)

- Six hours 200 level Arabic language
- HY 365 History of Islamic Civilization from 1453
- PSC 365 Politics of the Middle East
- PSC 452 Muslim World
- 9 hours of electives: HY 364, HY 465, IS 492, IS 496 or any approved Special Topics course of Directed Studies focusing on contemporary Middle East or Middle Eastern country.

Latin-American Studies (24 hrs)

- Six hours of Spanish at the 200 level*
- AN 347 Latin American Cultures and Societies
- GEO 315 Geography of Latin American
- HY 228 Latin America PSC 363 Politics of Latin America
- 6 hours of electives from among the following: any 300-400 level course in Spanish language or literature (if not in language pre-professional or double major program); HY 321, HY 323, HY 325, HY 326, HY 429; PSC 450 (appropriate content), PSC 470 (appropriate content); or any approved Special Topics course or Directed Studies focusing on contemporary Latin America or Latin American country.

*Students selecting the pre-professional program in Language should take an additional six hours of non-language electives.

General Education Requirements for International Studies Majors:

Areas I, II, and III of the General Education Requirements for International Studies are specified in the College of Arts and Sciences section. Intermediate level language courses required for the major also help fulfill general requirements under Area II. International Studies majors must take AN 100, GEO 114 and HY 102 as partial fulfillment of Area IV General Education requirements.

PREPROFESSIONAL PROGRAM

Students should complete one of the following programs to help prepare them for a career in international business or international affairs. The pre-professional course of study takes the place of a traditional minor. Students taking a double major are not required to take the pre-professional program.

International Business (21 hrs)

The International Business option provides students with a basic foundation in business and best equips the student to enter the field of international business or related areas upon graduation.

- ECO 330 Global Economic Issues or
- ECO 363 International Economics
- MKT 320 Principles of Marketing
- MKT 374 Consumer Behavior
- MKT 380 Integrated Market

- 9 hrs electives from the following: FIN 332; MGT 334; MGT 465; MKT 336; MKT 384; MKT 390; MKT 477; MKT 492; IS 496; IS 475

Language Specialization (21 hrs)

The Language Concentration option allows students to acquire a professional level of fluency in a foreign language as a complement to their international studies training. The requirements are 21 hours of study in a selected foreign language. Students wishing to concentrate in language should consider the FL/IS double major described below. Note: This option may not be available for all languages.

Personalized Preprofessional Program (21 hrs)

The Personalized Preprofessional Program is designed primarily for students who wish to pursue graduate study and need a special program tailored to the needs of their expected graduate area. A preprofessional program consisting of a minimum of 21 semester hours including at least one upper-level seminar, directed studies, or internship. Proposals for a personalized program, drawn up by the student in consultation with his or her advisor, must be submitted for approval to the Program Director and the Dean of Arts and Sciences before the first semester of the student's junior year.

FOREIGN LANGUAGE/ INTERNATIONAL STUDIES DOUBLE MAJOR

This program allows students to maximize their international training and experience. In addition to completing the 39 hours requirements for the International Studies major, the student will complete the program of study set out by the Department of Foreign languages. This option allows the student to develop language skills well beyond the pre-professional component of the program. Moreover, Foreign Language majors enjoy additional and special opportunities to participate in study abroad programs.

INTERNATIONAL BUSINESS / INTERNATIONAL STUDIES DOUBLE MAJOR

A joint initiative of the College of Arts and Sciences and the Mitchell College of Business, this program maximizes a student's preparation for a career in international business or for advanced study in business. In addition to completing the IS core, students take a special area concentration in International Political Economy and complete all of the required courses for a degree in International Business. The program requires a total of 140 credit hours and meets the requirements of both colleges. Students must designate either International Studies or International Business as their primary major and receive the degree from the college of the primary major. Interested students should consult the program director for advisement.

General Education Requirements

- EH 101, EH 102
- CA 110
- 6 hours Foreign Language (100 level)
- 3 hours Fine Arts
- 6 hour sequence in Literature
- MA 120 (prerequisite MA 112)
- 8 hours Natural Science with Lab
- AN 100, GEO 114, HY 102
- BUS 101 (3 credit hours) or CAS 100 (2 credit hours)

Business Core

- ACC 211 Principles of Accounting I
- ACC 212 Principles of Accounting II
- BUS 150 Introduction to Business
- BUS 245 Applied Business Statistics I
- BUS 255 Applied Business Statistics II
- CIS 250 Advanced Computer Applications (prerequisite CIS 150)
- ECO 215 Principles of Microeconomics
- ECO 216 Principles of Macroeconomics
- BUS 305 Information Systems and Technology
- FIN 315 Business Finance
- MGT 300 Management Theory and Practice
- MGT 305 Organizational Communication (W)
- BUS 265 Legal Environment of Business I
- MGT 325 Operations Management
- MKT 320 Principles of Marketing
- MGT 485 Business Policy in a Global Economy (W)
- MGT 486 Undergraduate Comp Exam (co-requisite MGT 485)

International Studies Core

- IS 100 Global Issues
- PSC 250 Comparative Politics
- PSC 270 International Relations
- GEO 312 World Economic Geography (W)
- IS 495 Senior Research Seminar

Area Concentration: International Political Economy

- 6 hours 200 level LG or LGS
- 1 of the following: ECO 321 Econ Systems or ECO 371 Econ Development
- (if transfer student, both courses required)
- FIN 332 Multinational Finance
- IS 475 International Political Economy

International Business - Marketing Concentration

- ECO 330 Global Economic Issues
- ECO 363 International Economics
- MGT 334 International Management
- MKT 336 International Marketing
- MKT 374 Buyer Behavior
- MKT 384 Market Research
- MKT 477 Export-Import
- MKT 479 Marketing Policy
- MKT 492 Seminar: International Business

REQUIREMENTS FOR A MINOR IN INTERNATIONAL STUDIES

A minimum of 21 hours, including at least 9 hours at the 300-400 level. Students must complete: IS 100, PSC 250, PSC 270, GEO 312 and 9 hours from the following: AN 347; GEO 314, 315, 316; HY 104, 228, 246, 303, 321, 323, 325, 326, 333, 334, 335, 336, 337, 338, 347, 348, 356, 357, 362, 367, 368, 405, 429, 457, 461; IS 490, 492, 495; LG 200 or higher; PHL 354, 355; PSC 251, 360, 363, 364, 365, 368, 372, 450, 452, 470, 473, 475, 490 (appropriate area) or any IS-related course (upon approval of the Director).

DESCRIPTIONS OF ALL INTERNATIONAL STUDIES (IS) COURSES BEGIN ON PAGE 240.

DEPARTMENT OF MARINE SCIENCES

Chair: Sean P. Powers
Professors: Cebrian, Heck, Kiene, Park, Powers, Shipp, Valentine
Associate Professors: Patterson, Carmichael
Assistant Professor: Ortmann

Department of Marine Sciences web site
http://www.southalabama.edu/marinesciences

MASTER OF SCIENCE (M.S.) DEGREE

The Master of Science (MS) Program in marine sciences is designed to train and prepare superior students for a career in this field. The marine sciences program offers courses and opportunities for research in four main areas: biological, chemical, physical, and geological oceanography. Each MS student receives formal training in at least three of these disciplines while concentrating in a specific research area. Thus, the program is structured to develop the capacity for productive and innovative research, founded on a solid background of broad scientific knowledge. The requirements and procedures that follow are specifically for the Department of Marine Sciences. However, the general rules and policies of the Graduate School also apply.

MINIMUM REQUIREMENTS FOR ADMISSION

Application before January 15 is encouraged; beginning February 1, the admission committee will make initial recommendations about applicants for the following Fall class, with formal letters sent to applicants by the end of March. Although students are normally admitted in the Fall Semester, depending on availability of space and funding, applications may be approved and students admitted throughout the year. In addition to the general admissions requirements of the Graduate School, minimal requirements for admission in full standing to the Marine Sciences MS Program are:

1. A baccalaureate degree in marine sciences or in a discipline related to marine sciences (e.g., biology, chemistry, geology, physics) from an accredited four year college or university.
2. An undergraduate minimum grade-point average of 3.0 overall (4.0 point system).
3. A minimum score of 300 combined on the verbal and quantitative subtests of the Graduate Record Exam (GRE).

The applicant will be required to submit:

1. A completed application including a statement indicating the student's interests and professional goals.
2. Official transcripts from all undergraduate institutions attended.
3. Three letters of recommendation.
4. Official scores from the Graduate Record Exam (General Test).

Assessment of credentials will be supplemented by evaluation of letters of recommendation and the educational background of the student. Foreign applicants will be required to pass the TOEFL exam with a score of 525 or greater, or equivalent score on computer administered tests.

Provisional admission may be granted upon recommendation of the departmental admissions committee. Full standing can be attained after conditional admission by satisfactorily completing (with a grade of no lower than "B") nine (9) semester hours of course work in marine sciences at USA.

To insure compatibility between the student's research interests and the faculty expertise in the Marine Sciences Department, particular attention will be given to the statements of research interests. A faculty member will be asked to act as a "mentor" for the applicant based on the statement of interest and, if necessary, a personal interview. Through this process the student's interests will be matched to the expertise available within the faculty. Moreover, the mentor also may be able to offer the student financial support if a departmental stipend is not available. Students whose interests do not correspond to those of a faculty member and/or have not identified a faculty willing to serve as a mentor, will not be admitted into the MS degree program in marine sciences.

Application forms for admission to the program and for fellowships (see below) are obtained by writing to: Chair, Department of Marine Sciences, University of South Alabama, Mobile, AL 36688-0002 or visit the web site at http://www.southalabama.edu/marinesciences.

FELLOWSHIPS AND ASSISTANTSHIPS

The Department of Marine Sciences offers at-large fellowships to MS students annually on a competitive basis. In addition, there are a variable number of research assistantships that are sponsored by externally funded grants and contracts. The current stipend for MS students is $17,000 per year and waiver of out-of-state fees. Additional funding for tuition fellowship may also be available through extramural grants. Prospective students must submit applications by February 1 to receive consideration for at-large fellowships. Information about assistantships is available from the Office of the Dean of the Graduate School, Mobile Townhouse 222, University of South Alabama, Mobile, AL 36688-0002.

DEGREE REQUIREMENTS

The Master of Science degree in Marine Sciences is awarded in recognition of the student's demonstrated ability to successfully complete a prescribed program of courses. It also is preferred that students undertake original scholarly research, which culminates in writing and defending an acceptable thesis.

GENERAL

Required Credit

A minimum of thirty-two (32) semester hours of course credit beyond the baccalaureate degree is required for students pursuing an MS degree. Details about the curriculum are given as follows.

Transfer Credit

A maximum of eight (8) semester hours of graduate courses taken at another accredited university in the same (or closely related) subject as that of the masters program may be considered as part of the MS degree requirements at USA. Only grades of "A" or "B" may be accepted as transfer credits. The student's mentor (major professor), in consultation with the Chair, and if necessary, the student's advisory committee, will evaluate transfer credit; the transfer credit is approved by the Dean of the Graduate School only after completion of a minimum of eight semester hours of graduate course work in the MS program in marine sciences at USA.

Residence, Full-Time Study, and Continuous Registration

A minimum of two consecutive semesters of full-time study in residence is required. The residency requirements may be met at USA or the Dauphin Island Sea Lab.

Employment other than University activities directly associated with graduate study is not allowed during full-time study, unless specifically approved by the Chair.

Time Limit

All requirements for the MS degree must be completed within five years from the date of matriculation. A student who has not satisfactorily completed a M.S. degree in a five-year period must apply for a **defined** extension to complete the degree. This request must be recommended by a major professor, the Chair, the Director of Graduate Studies, and approved by the Dean of the Graduate School. If the student does not complete the degree requirements in the defined extension period, the Director of Graduate Studies may recommend, and the Dean of the Graduate School may take, whatever action is necessary up to and including dismissal.

Failure to complete the work within the periods specified shall necessitate reevaluation of the student's program, and may result in a recommendation of dismissal by the Director of Graduate Studies to the Graduate Dean.

COURSE REQUIREMENTS

A field of specialization is required of all candidates for the MS degree. In addition, all students must have formal course work in at least three (3) of the following general areas of marine sciences; biological, chemical, geological, and physical oceanography. This requirement is normally met by completion of three of the four (4) core courses (see below), representing twelve (12) credit hours.

Core Courses

The four (4) core courses consist of four (4) semester hours each for a total of 16 semester hours in physical (MAS 601), chemical (MAS 602), geological (MAS 603), and biological oceanography (MAS 604), or equivalent transfer hours. At least two (2) semester hours of seminar (two, one (1) semester hour enrollments) are required.

The remaining course work will be determined by the student's advisory committee, but must include six (6) semester hours of marine sciences electives. Although a thesis is not an absolute requirement, this program is oriented toward research, and students will be expected to demonstrate research capability, preferably through completion of an acceptable thesis. For students pursuing a thesis program, the MS degree program of study may include up to nine (9) hours of thesis credit toward the minimum requirements of thirty-two (32) semester hours.

Schematic of Typical Program

Core Courses (3 of 4)

MAS 601	4	MAS 602	4
MAS 603	4	MAS 604	4

Seminar (two enrollments) 2

Marine Sciences Electives (as determined by advisory committee, but at least six (6) semester hours)	**6**
Directed Studies	6 (maximum)
Thesis	9 (maximum)
	(minimum of 32 hours)

COMPREHENSIVE EXAMINATIONS

Grades of "B" or better in all core courses will satisfy the requirement of a comprehensive exam.

NON-THESIS PROGRAM

Students pursuing the MS degree in Marine Sciences are encouraged to follow the thesis option. However, a non-thesis curriculum is available for students, upon agreement of the major professor and advisory committee, who so elect. The student will be required to complete the same degree requirements as those for a student who chooses the thesis option, with the following exceptions:

1. A thesis will not be required, consequently MAS 599 (Thesis) may not be taken, and the nine (9) semester hours normally associated with it must be earned through formal course work.
2. Course work must include all four core courses.
3. The student must take an oral comprehensive exam, to be given by the advisory committee, in addition to the written exam.
4. The student must complete MAS 594 (Directed Studies) under the direction of the major professor. The student must also have an advisory committee whose members will decide if the student's report relating to the directed study is satisfactory. The committee normally will consist of the major professor and two others. The student is required to present an open seminar about the directed study during the last semester of residency.

DEFENSE OF THESIS (when applicable)

The final oral defense of the thesis is scheduled after the thesis is completed except for such revisions as may be necessary as a result of the defense. The final oral defense will not be given before all required course work has been completed or is currently in progress.

DOCTOR OF PHILOSOPHY (Ph.D.) PROGRAM

The Doctor of Philosophy (Ph.D.) Program in marine sciences is designed to provide formal course work and advanced research in marine sciences that produces significant, original contributions to knowledge. The Ph.D. degree is awarded to students who have reached and formally demonstrated a level of competence and accomplishment that enables them to pursue careers as marine science professionals. The Ph.D. degree confers eligibility for many positions in academia, industry, and government.

The marine sciences program offers courses and opportunities for research in four

main areas: biological, chemical, physical, and geological oceanography. Each student receives formal training in each of these disciplines while concentrating in a specific research area. The requirements and procedures that follow are specifically for the Department of Marine Sciences. However, the general rules and policies of the Graduate School also apply.

MINIMUM REQUIREMENTS FOR ADMISSION

Students are normally admitted in the Fall Semester. Although applications for admission and fellowships are accepted throughout the year, application before February 1 is encouraged; beginning February 15 the admissions committee will make initial recommendations about applicants for the following Fall class, with formal letters sent to applicants by the end of March. Depending on availability of space and funding, applications may be approved and students admitted throughout the year. In addition to the general admissions requirements of the Graduate School, requirements for admission to the Marine Sciences Ph.D. program are:

1. A narrative statement indicating the student's research interests, professional goals and commitment to full-time study for completion of degree requirements.
2. Three letters of recommendation.
3. For students with baccalaureate degrees:
   A. Official scores from the Graduate Record Examination General Test with a minimum score of 300 combined on the verbal and quantitative subtests.
   B. A baccalaureate degree in a discipline related to marine sciences (e.g., biology, chemistry, geology, physics) from an accredited four-year college or university.
   C. An undergraduate minimum grade-point average of 3.0 overall (A=4).
4. For students with MS degrees:
   A. An MS degree in a discipline related to marine sciences (e.g., biology, chemistry, geology, physics) from an accredited college or university.
   B. A graduate minimum grade-point average of 3.25 overall (A=4).
   C. For fellowship applicants, official GRE scores are required.
5. International students must submit an official score of at least 525 on the Test of English as a Foreign Language (TOEFL), or equivalent score on computer administered tests.

To insure research compatibility between the student and the faculty in the marine sciences program, attention will be given to the statement of research interests. A faculty member will be asked to act as a mentor for the applicant based on the statement of interests and, if necessary, a personal interview. Through this process, the student's interests will be matched to the expertise available within the faculty. Moreover, the mentor may also be able to offer the student financial support if a stipend is not available. Students whose interests do not correspond to those of a particular faculty mentor, and have not identified a faculty member willing to serve as a mentor, will not be admitted into the Ph.D. degree program in marine sciences.

Application forms for admission to the program and for fellowships (see below) are obtained by writing to: Chair, Department of Marine Sciences, University of South Alabama, Mobile, AL 36688-0002.

FELLOWSHIPS AND ASSISTANTSHIPS

The Department of Marine Sciences offers at-large fellowships to Ph.D. students annually on a competitive basis. In addition, there are a variable number of doctoral assistantships that are sponsored by externally funded grants and contracts to faculty. The current stipend for Ph.D. fellowships is $20,000 per year plus a tuition fellowship and waiver of out-of-state fees. Prospective students must submit applications by February 1 to receive consideration for at-large fellowships. Information about assistantships is available from the Office of the Dean of the Graduate School, Mobile Townhouse 222, University of South Alabama, Mobile, AL 36688-0002.

DEGREE REQUIREMENTS

The Doctor of Philosophy degree is awarded in recognition of the student's demonstrated ability to conduct original, scholarly research at the highest levels without extensive supervision. The degree is not granted upon completion of a stated amount of course work, but rather after demonstration by the student of a comprehensive knowledge and research capability in a specialized field of study. The student must demonstrate this ability in writing and by defending a dissertation based upon the results of an original investigation.

GENERAL

Required Credit

A minimum of 60 semester hours of approved graduate credit is required. Details about the curriculum are given below.

Transfer Credit

Graduate courses taken at another accredited university, such as for students with MS degrees in the same (or a closely related) subject as that of the Ph.D. program, may be considered in the Ph.D. plan of study up to a maximum of 32 semester hours. Only grades of "A" or "B" may be accepted as transfer credit. The student's mentor, in consultation with the Chair, and if necessary, the advisory committee, will evaluate transfer credit; the transfer credit is approved by the Dean of the Graduate School only after completion of a minimum of eight semester hours of graduate course work in the doctoral program at USA.

Residence, Full-time Study, and Continuous Registration

A minimum of two consecutive semesters of full-time study in residence is required. The residency requirement may be met at USA or the Dauphin Island Sea Lab.

Employment other than University activities directly associated with graduate study is not allowed during full-time study, unless specifically approved by the Chair.

Time Limit

All requirements for the Ph.D. degree must be completed within eight years from the date of matriculation. A student who has not satisfactorily completed a dissertation in an eight-year period must apply for a **defined** extension to complete the degree. This request must be recommended by the major professor, the Chair of the Department, the Director of Graduate Studies, and approved by the Dean of the Graduate School.

If the student does not complete the degree requirements in the defined extension period, the Director of the Graduate Program may recommend and the Dean of the Graduate School may take whatever action is necessary up to and including dismissal.

The comprehensive examination must be passed within five years of the beginning of doctoral study, or within four years if the student entered with a master's degree in the same or a closely related field.

Failure to complete the work within the periods specified shall necessitate reevaluation of the student's program and may result in a recommendation for dismissal by the Director of Graduate Studies to the Graduate Dean.

COURSE REQUIREMENTS

Core Courses

A field of specialization is required of all candidates for the Ph.D. degree. All students must have formal course work in all of the core marine science subdisciplines. This requirement is normally met by completion of four (4) core courses (see below) and seminar, representing eighteen (18) credit hours.

The four (4) core courses consist of four (4) semester hours each for a total of 16 semester hours in physical (MAS 601), chemical (MAS 602), geological (MAS 603), and biological oceanography (MAS 604), or equivalent transfer courses.

Other Required Courses

At least 46 semester hours in courses beyond the baccalaureate degree are required in addition to the core courses, at least half of which must be taken in formal courses exclusive of directed studies or directed research. No more than 18 hours of dual-listed courses (400- and 500- level listing for the same course) may be counted toward meeting the minimum hours required for a degree. Graduate students will only receive graduate credit for the 500 level version of dual-listed courses.

At least 12 semester hours of dissertation course credit is required. Not more than 15 hours in this category can be counted toward the minimum requirement of 60 semester hours.

At least two (2) semester hours of seminar (two, one (1) semester hour enrollments) are required.

Schematic of Typical Program

Core Courses

MAS 601	4	MAS 602	4
MAS 603	4	MAS 604	4

Seminar (two enrollments) 2
Total 14 Hours

Marine Science Electives	at least 23
Directed Studies	8 (maximum)
Dissertation (1-5 per semester)	15 (maximum)
	at least 60

COMPREHENSIVE EXAMINATIONS

Written and oral examinations in marine sciences are required of all students seeking the Ph.D. degree in marine sciences. These examinations are given after at least two full years but before five full years of graduate study

are completed. The written comprehensive examination is taken first and normally is more general in scope than the oral comprehensive examination. The examinations may be taken no more than twice.

CANDIDACY

A doctoral student is admitted to candidacy upon passing both the written and oral comprehensive examinations and after completing all formal course work requirements. The doctoral candidate is a student who has fulfilled all preliminary requirements for the Ph.D. and has only completion of the dissertation research as the remaining requirement.

DEFENSE OF DISSERTATION

The final oral defense of the dissertation is scheduled after the dissertation is completed except for such revisions as may be necessary as a result of the defense. The final oral defense will not be given earlier than one semester after admission to candidacy and not before all required course work has been completed or is currently in progress.

*See departmental section of this **Bulletin** for complete course information in subdisciplines of Marine Sciences (Biology, Chemistry, Geology).

DESCRIPTIONS OF ALL MARINE SCIENCES (MAS) COURSES BEGIN ON PAGE 255.

DEPARTMENT OF MATHEMATICS AND STATISTICS

Interim Chair: Madhuri Mulekar
Graduate Coordinator: Silver

Mathematics
Professors: Carter, Pillen, Prokhorov, Silver, Williams, Zhang
Associate Professors: Benko, Brick, Feldvoss
Assistant Professors: Bulka, Byrne, Lopez-Garcia
Professorial Lecturer: Jellett
Senior Instructors: Farmer, Murdick
Instructor: Dasinger
Associate Professor Emeritus: Dodd
Professors Emeriti: Kovacs, Mattics

Statistics
Professors: Mulekar, Rainosek, Wang
Associate Professor: Mishra
Assistant Professor: Bindele, Dey
Senior Instructor: Farmer
Professor Emeritus: Shah

Department of Mathematics and Statistics web site
http://www.southalabama.edu/mathstat

UNDERGRADUATE STUDIES

The purpose of the Department of Mathematics and Statistics is to provide a well-rounded program for students majoring in the mathematical sciences and to fulfill the mathematical science needs of students in other fields of study. To this end, the department emphasizes excellence in teaching, and encourages the professional growth of its faculty through study, research, and consulting.

The Department offers a major leading to the Bachelor of Science Degree in Mathematics and Statistics. We also offer a minor in mathematics and a minor in applied statistics. Students pursuing a degree in Mathematics and Statistics also must have a minor in another discipline.

All first-time freshmen must successfully complete CAS 100: First Year Experience as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students who must enroll in the fall semester following entry. ST 335 will fulfill the technology proficiency requirement.

MATHEMATICS AND STATISTICS MAJOR

The core requirements for this major provide the student with a balanced program of undergraduate mathematics and statistics in areas that have proven applications. The program produces a graduate who is employable based on good inductive and deductive inferential, problem formulating and solving, and communication skills.

REQUIREMENTS FOR THE MAJOR ARE:

- **Introductory courses**: Calculus (MA 125, MA 126), Statistics (ST 210 or ST 315)
- **Intermediate courses**: Multivariable Calculus (MA 227), Linear Algebra (MA 237)
- **Quantitative modeling courses**: Differential Equations (MA 238) and Regression (ST 335)
- **Upper division courses**: 21 additional hours of 300 level or above courses in mathematics or statistics, including at least three courses chosen from MA 334; MA 335, or 400 and 500 level courses. Students who wish to concentrate in a specific area should choose these additional courses accordingly. Recommended concentrations are available at http://www.southalabama.edu/mathstat/css-undergrad.shtml. Students in the major are encouraged to take MA 320 as soon as possible after taking MA 125.
  The program also requires an approved minor.

GENERAL EDUCATION REQUIREMENTS FOR MATHEMATICS AND STATISTICS MAJORS

General Education Requirements for Mathematics and Statistics are specified on the College of Arts and Sciences section. Note that the Mathematics section of Area III is satisfied by the major requirements specified above.

REQUIREMENTS FOR A MINOR IN MATHEMATICS

The requirements for a minor in mathematics are MA 125 and MA 126, plus four additional courses from among:
MA 227, MA 237, MA 238, MA 267, MA 311, MA 316, MA 320, MA 321, MA 332, MA 334, MA 335, MA 354, MA 367, MA 410, MA 413, MA 414, MA 434, MA 436, MA 437, MA 451, MA 458, MA 467, MA 481, MA 490, ST 315.

At least two of the courses chosen for the minor must be 300 level or higher.

REQUIREMENTS FOR A MINOR IN APPLIED STATISTICS

The requirements for a minor in applied statistics consist of a minimum of 18 credit hours chosen as follows:

1. ST 210, or ST 315, but not both, and ST 335 and ST 340.
2. At least three courses selected from: ST 345, ST 350, ST 355, ST 415, ST 425, ST 450, ST 475, ST 460, MA 451 and ST 550. One statistics oriented course from any other discipline may be counted toward this requirement with the approval from the department chair.

Where to Begin in the Mathematics Courses

Students must begin at the proper level and in the proper track in mathematics. Students who lack college level credit in mathematics should take the placement exam at least 48 hours prior to registering for a mathematics course. Students must call 251-460-6264 to register to take the test. Times and days of the test are available at www.southalabama.edu/mathstat/css-placements.html

Note 1: To Avoid Duplication:

1. **Credit for both MA 112 and MA 115 is not allowed.**
2. **Credit for both MA 113 and MA 115 is not allowed.**
3. **Credit for both MA 120 and MA 125 is not allowed.**
4. **Students may receive credit for only one of the following: ST 310, ST 315 or ST 320.**

Note 2: MA 110 is not a prerequisite course for any other course required by mathematics and statistics major.

GRADUATE STUDIES

A Master of Science degree in Mathematics is offered by the Department of Mathematics and Statistics. The program has been designed to meet the varied needs and goals of most students seeking advanced degrees in mathematics. The course of study accommodates students interested in traditional and modern mathematics, applied mathematics, statistics, and computer science.

REQUIREMENTS FOR ADMISSION

Students are admitted each semester. The following criteria supplement the Graduate School criteria (see Categories of Admission).

REGULAR ADMISSION

1. A bachelor's degree in mathematics or in a mathematics-related field from an accredited institution of higher education with a concentration of upper-level mathematics courses including a sequence in advanced calculus or real analysis.
2. Submission of scores on the General Test of the Graduate Record Examination. Normally a minimum combined score of 1000 on the verbal and quantitative sections or a minimum score of 600 on the quantitative section (without regard to the score on the verbal section). An advanced degree or other standardized test score may be considered in lieu of a GRE score.

PROVISIONAL ADMISSION

Applicants who do not meet all requirements for regular admission, but who do meet the Graduate School requirements for provisional admission, will be considered for provisional admission. Applicants must have an undergraduate major in mathematics or a closely related field with a concentration of upper-level mathematics courses. Applicants who are deficient in their undergraduate preparation may be denied admission or may be required

to take undergraduate courses in the areas of deficiency without graduate credit in addition to the normal degree requirements listed below.

NON-DEGREE ADMISSION

Applicants who do not meet all the conditions for provisional admission or who are not interested in earning a graduate degree may apply for non-degree admission. Adequate undergraduate preparation in mathematics which indicates a reasonable chance of success in graduate mathematics courses is required for non-degree admission. After admission, permission of the department graduate coordinator is required for each course taken. In cases where undergraduate preparation is inadequate for a particular graduate course, a plan of study including additional undergraduate courses can be worked out in consultation with the graduate coordinator.

GRADUATE ASSISTANTSHIPS

Graduate students holding assistantships are usually assigned duties such as tutoring or supervising recitation sections in the Department of Mathematics and Statistics. Awards are normally made for the academic year, but positions occasionally become available during the year. An assistantship application can be obtained from the Graduate Coordinator in the department and online. Three letters of recommendation sent directly to the Graduate Coordinator are required. Graduate Assistants are required to enroll in MA 592 (Seminar) each semester.

REQUIREMENTS FOR DEGREE

Several degree options are available. MA 501, MA 502, MA 503, MA 504, MA 505, MA 506 do not satisfy degree requirements except as stated below.

THESIS OPTION

1. A minimum of 32 semester hours of course work including MA 535, MA 536 and MA 599.
2. In addition to MA 535 and MA 536, at least one two-course sequence must be completed.
3. Complete a thesis. A maximum of six semester hours of credit will be granted for the thesis. A student may not enroll in MA 599 (Thesis) until a thesis prospectus has been approved by the Graduate Coordinator and the Director of Graduate Studies in the College of Arts and Sciences.
4. Complete a comprehensive examination covering a collection of course work specified by the Graduate Coordinator.
5. Complete MA 592 (Seminar) during at least two semesters.

NON-THESIS OPTION

1. A minimum of 32 hours of course work including MA 535 and MA 536.
2. In addition to MA 535 and MA 536, at least one two-course sequence must be completed.
3. Completion of a comprehensive examination covering a collection of course work specified by the Graduate Coordinator.
4. Complete MA 592 (Seminar) during at least two semesters.

COMPUTER SCIENCE EMPHASIS (NON-THESIS)

1. A minimum of 23 semester hours of Mathematics courses including MA 535 and MA 536 and a minimum of nine semester hours of Computer Science courses approved by the Mathematics Graduate Committee.
2. MA 521 or MA 525.
3. At least three courses in Computer Science approved by the Mathematics Graduate Committee.
4. Complete a comprehensive examination covering a collection of courses specified by the Graduate Coordinator.
5. Complete MA 592 (Seminar) during at least two semesters.

POLICIES AND PROCEDURES

The document "Department Policies and Procedures for the MS Degree Program in Mathematics" is posted on the departmental web site. It contains details concerning advising, the comprehensive examination, graduate assistant duties, student meetings and colloquia.

DESCRIPTIONS OF ALL MATHEMATICS (MA) COURSES BEGIN ON PAGE 251.

DESCRIPTIONS OF ALL STATISTICS (ST) COURSES BEGIN ON PAGE 309.

DEPARTMENT OF MILITARY SCIENCE

Chair: Lieutenant Colonel Judson Gillett
(251) 460-6341
Professor: Gillett
Assistant Professors: White, Rey
Instructors: Wright, Guintavano, Leazer

Department of Military Science web site
http://www.southalabama.edu/armyrotc

MILITARY SCIENCE

Our Mission: To commission the future officer leadership of the United States Army. The Military Science Department offers a progressive program which will enhance student education regardless of academic endeavor. The program is designed to improve the leadership abilities of students, develop managerial skills, inform students concerning the roles, missions, and capabilities of the Army, and train qualified ROTC students to become commissioned officers in the National Guard, U.S. Army Reserve, or the U.S. Army. Military Science is an accredited field of minor study. Students may take Military Science courses and receive graduation credit in lieu of Physical Education courses. National Guardsmen, reservists, veterans and former JROTC students may received advanced placement by requesting it through the department chair.

REQUIREMENTS FOR ENROLLMENT AND CONTINUANCE

The general requirements for enrollment and continuance in the Army ROTC program are as follows:

1. Basic course students must:
   - Be a citizen of the United States
   - Be physically qualified
   - Have freshman or sophomore standing. Students with higher standing require consent of instructor.
2. Basic course cadets applying for enrollment in the advanced course who seek a commission must:
   - Have successfully completed MS 101, MS 102, MS 201, MS 202 or have accomplished one of the following: prior military service, ROTC basic military studies; practicum (LTC); three-year high school JROTC basic course.
   - Have two years remaining at the university (either undergraduate, graduate or in pursuit of additional course work).
   - Have completed a minimum of 32 hours to contract.
   - Be under 31 years old during year of graduation and commissioning (waiverable to 39).
   - Be enrolled as a full-time student, either at the University of South Alabama, or at a partnership program university.
   - Meet military screening and physical requirements.
   - Maintain a minimum 2.0 G.P.A.
   - Maintain B average in military science and leadership courses.

Regularly enrolled students who meet the academic prerequisites may take individual courses as electives with the permission of the department head and academic advisor.

BASIC COURSE

The purpose of the Army ROTC Basic Course is to introduce students to Army ROTC, to give them general information about the Army and to introduce them to basic skills which have both military and civilian application. Courses and practical exercises in land navigation, orienteering, and leadership round out the student's academic life, provide a challenge, develop confidence, and break the classroom monotony. With this initial exposure, the students will have experience upon which to base their decisions to continue into the Advanced Course and into the Army as commissioned officers. There is no military obligation in connection with the Basic Course. Basic Course scholarship students earn $300-$350 a month upon contracting. Contracted cadets are required to pass an Army Physical Fitness Test at least once a semester.

MS I (MS 101-102). Meets for one hour per week. Students are required to attend a two hour leadership lab every week and are encouraged to attend physical training lab three times per week for 1 hour per session. During leadership laboratory, students will participate in adventure training, and other military activities. Several optional training activities on and off campus are scheduled each semester.

MS II (MS 201-202). Meets for two hours per week. All contracted students are required to attend a two hour leadership lab every week. In addition, contracted students are required to attend physical training lab three times per week for 1 hour per session. During leadership laboratory, students will participate in adventure training, and other military activities. Several optional training activities on and off campus are scheduled during the school year.

LEADERSHIP TRAINING COURSE

Army ROTC Leaders Training Course, conducted during the summer session, is a challenging four-week training course designed

to evaluate students ability to handle themselves and others in new and demanding situations. Throughout the program, the student is provided with the fundamentals of soldiering which include physical training, marksmanship, tactical operations, map reading, and orienteering. Students are provided transportation to and from camp, fees, room and board, as well as approximately $700 in pay and allowances. Attendance at the Leaders Training Course does not necessarily obligate the student to military service; it does, however, qualify the student for the Army ROTC Advanced Course when taken in lieu of the Basic Course requirements.

Provided eligibility criteria are met, a student can compete for a two-year scholarship upon graduation. See the scholarship section that follows for more information.

ADVANCED COURSE

Upon completion of the Basic Course or Leaders Training Course (above), ROTC students entering the Advanced Course continue to develop their ability in evaluating situations, making decisions, and practicing traits considered essential in a leader. The ability to motivate subordinates, to win their confidence, and to supervise them effectively has been attributed by many civilian and military leaders to training received through ROTC in college. The ROTC Program uses and extends the intellect, education, and special abilities of college students. Its primary purpose is to produce Army officers needed for the defense of our nation in time of crisis; but, in the process, it also develops the kind of Leader or Junior Executive or manager needed in every field of civilian endeavor.

All Advanced Course students earn $450-$500 a month (upon contracting) beginning the first month of their junior year and continuing until they complete the Advanced Course. Additional pay and travel allowances for the 33-day Leadership Development Assessment Course training between the junior and senior years, makes the total received approximately $10,000.

MS III (MS 301-302). Meets for three hours per week. All students are required to attend a two hour leadership lab once per week. In addition, students are required to attend physical training lab three times per week for 1 hour per session. Three training activities off campus will be scheduled during the school year.

MS IV (MS 401-402). Meets for three hours per week. All students are required to attend a two-hour leadership lab once per week. In addition, students are required to attend physical training lab three times per week for 1 hour per session. Three training activities off campus will be scheduled during the school year.

SIMULTANEOUS MEMBERSHIP PROGRAM

The simultaneous membership program option combines the Army ROTC living allowance with membership in the Army Reserve or Army National Guard and allows the student to receive pay from both programs. ROTC cadets serve as officer trainees in direct leadership/management positions. Simultaneous membership program participation with National Guard or Reserve forces is one weekend per month and two weeks each year. Cadets participating in the simultaneous membership program are eligible for tuition assistance reimbursement up to $4,500 per year.

BRANCH SELECTION

The curriculum of the Army ROTC program is designed to qualify the cadet for appointment as an officer. Selection for assignment to the various branches of the army is based upon the personal interests of the cadet, the major course of study, academic accomplishments, leadership potential, and the needs of the service. Under this system a cadet may be commissioned in any branch for which he or she is qualified and in which a need for officers exists. After graduation and commissioning, the officer will attend a service school for further specialized military training which will qualify him or her for the branch to which he or she is assigned.

ROTC SCHOLARSHIP PROGRAM

See information provided in the chapter on financial aid.

Army ROTC Scholarships

These competitive scholarships are awarded solely on potential rather than financial need and cover the costs of tuition, fees, and a flat-rate book allowance (of $600 per semester) plus a monthly subsistence allowance of $300 for freshman; $350 sophomores; $450 for juniors; $500 for seniors. This allowance is tax-free. Four-year scholarships are available to designated freshmen, who applied and were selected during their senior year in high school. Three and two-year scholarships are available to eligible students, enrolled in the ROTC program. Two-year undergraduate or graduate school scholarships are available to students who successfully complete the Leaders Training Course.

ACTIVITIES

In an effort to develop maximum leadership qualities among cadets, the following organizations and activities are sponsored by ROTC as an integral part of the Army Cadet Corps:

Color Guard:	The official color guard for the University of South Alabama. Present the colors for USA and civic organizations in Mobile.
Ranger Challenge:	Students are trained in small-unit tactics and participate in ranger-type operations and competitions.
Running Club:	Participation is open to all students. Runs from 3k to 26.2 mile marathons and triathlons.
Scabbard and Blade:	Honor Society for Cadets. Cadets must meet national requirements to be a member.

ACADEMIC CREDIT

Academic credit is granted for the completion of Military Science course requirements as follows:

Basic Course 1st Year (MS 101-102)
1st and 2nd Semester - 1 hour each - Total 2

Basic Course 2nd Year (MS 201-202)
1st and 2nd Semester - 3 hours each - Total 6
(Leadership Training Course in lieu of Basic Course) (6)

Advanced Course 1st Year (MS 301-302)
1st and 2nd Semester - 3 hours each - Total 6

Advanced Course 2nd Years (MS 401-402)
1st and 2nd Semester - 3 hours each - Total 6

AUDITING

Students who do not meet qualifications for Army contracting and commissioning may be allowed to audit a Military Science course. Students desiring to audit must receive the permission of the department chair. Auditing students may not participate in leadership laboratory, field training exercises, or other physical activities. Non-U.S. students must have written permission from their government prior to taking an ROTC course.

REQUIREMENTS FOR A COMMISSION AS A SECOND LIEUTENANT IN THE UNITED STATES ARMY

Students desiring a commission must complete a minimum of 23 hours of course work to include:

1. 20 hours of Military Science, including
   a. MS 101 and 102;
   b. MS 201 and 202;
   c. Students can receive placement credit for the 100- and 200-level courses for prior military service, Junior ROTC, ROTC Leadership Training Course, and equivalent military training with PMS approval;
   d. MS 301 and 302;
   e. MS 401 and 402.
2. A three hour Military History Course.
3. In addition to the required courses, students must contract and attend the ROTC Leadership Development Assessment Course for 33 days of training between the junior and senior year.

REQUIREMENTS FOR A MINOR

Completion of the 20 semester hours of MS course work and one military history elective (3) are required for a minor in Military Science. Placement credit may be awarded for the Basic Course for prior military service, attendance at ROTC Leadership Training Course, or three or four years of JROTC. Students who are already commissioned officers are not eligible to receive a minor in military science. Non-contracted students are not eligible to receive a minor in Military Science.

DESCRIPTIONS OF ALL MILITARY SCIENCE (MS) COURSES BEGIN ON PAGE 269.

MUSEUM STUDIES

Director: Dr. Phillip J. Carr (251) 460-6907
Affiliates: Dr. Kara Burns, Ms. Barbara Filion, Dr. Marsha Hamilton, Dr. Christina Lindeman, Dr. Elizabeth Rivenbark

Museums, institutions dedicated to the acquistion, preservation, study and exhibition of works of artistic, historical, or scientific value, play an integral role in today's societies through the act of discovery and the preservation of knowledge of both the past and present. The Museum Studies Program, using an interdisciplinary approach (e.g immunitatis, social sciences, visual

arts), offers a minor that allows students to gain a firm understanding of the histories, theories and skills involved in museum work The minor in Museum Studies provides basic preparation to enter the museum industry by introducing students to both the variety of roles played my museums in today's societies and the diversity of museum careers.

CORE REQUIREMENTS

1. Twenty-one (21) credit hours in approved courses; nine (9) hours must be taken at the University of South Alabama.
2. At least one (1) course must be taken in each of the three primary disciplines of anthropology, art history and history.
3. MUM 201: Introduction to Museum Studies
4. EH 372: Technical Writing
5. At least three (3) and no more than six (6) credit hours from AN 496: Anthropology Internship. ARH 360: Traineeship in Museum Work, or HY 498: Internship in History.

Two (2) of the following courses: AN 435 Museum Methods in Archaeology, ARH 493: Methodology of Art History, HY 496: Introduction to Public History.

CORE COURSES

Anthropology

AN 220 Archaeology Around the World
AN 313 New World Archaeology
AN 340 native American Cultures
AN 344 SE Asian Cultures and Society
AN 347 Latin American Cultures and Societies
AN 442 Cultural Resources Management

Art History

ARH 304 Ancient Greek Art and Architecture
ARH 306 Roman Art
ARH 332 Baroque Art
ARH 335 Eighteenth-Century Art
ARH 340 Early Modern Art
ARH 344 Contemporary Art
ARH 345 American Art 1600-1940
ARH 423 Italian Renaissance Art
ARH 480 Women in Art

History

HY 228 Latin America
HY 432 Colonial America
HY 433 American Revolution
HY 436 Modern US I, 1877-1845
HY 437 Modern US II, Since 1945
HY 477 Old South
HY 478 New South
HY 479 Modern South

Other periods and topics in all disciplines must be approved by the Museum Studies Committee and Director.

Course description may be found under the appropriate departments.

For additional information about the program, please contact Dr. Philip Carr, Museum Studies Program. Archaeology Museum, ARCM 107, 6052 USA Drive South, University of South Alabama 36688-0002. Phone (251) 460-6907; E-mail address pcarr@southalabama.edu.

DESCRIPTIONS OF MUSEUM STUDIES (MUM) COURSES BEGIN ON PAGE 274.

DEPARTMENT OF MUSIC

Chair: Greg Gruner (251) 460-6136
Professors: A. Bohnet, Gruner, Heavner, Holm
Associate Professors: Durant, Fresne, Rowell, P. Wood
Assistant Professors: Mindock, Moore, Petersen, Zoghby, Rivera
Lecturers: Barker, Bemis, K. Bohnet, Davis, Driskell, Greenwood, Habib, Imsand, King, Leska, Noah, Seebacher, Sunderland, Sylvester, Thwaites, J. Wood

Department of Music web site
http://www.southalabama.edu/music

The Music Department of the University of South Alabama is a fully accredited member of the National Association of Schools of Music. Degree programs are offered for those students pursuing careers in music performance, music education, music business, and those who wish to combine studies in music with other academic disciplines.

All first-time freshmen must successfully complete CAS 100: First Year Experience as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students who must enroll in the fall semester following entry.

REQUIREMENTS FOR A MINOR IN MUSIC

A minimum of 23 semester hours in music, including the following: MUT 112 and MUT 113; MUL 235, MUL 236, Applied Music (six hrs. at 200 level), MUO 111, MUO 117 , MUO 115, MUO 127, and MUO 130 or MUO 133 (four hours), three hours of electives in music at 300 level or above.

REQUIREMENTS FOR A BACHELOR OF MUSIC DEGREE (B.M.)

A total of 120-124 semester hours is required for the B.M. degree. All students are required to complete the Music Core and General Requirements. In addition, they will complete the requirements in their chosen Concentration: Music Education, Elective Studies in Business and/ or Elective Studies in Outside Fields, or Performance. Only those students pursuing a degree in outside fields must have a minor in another discipline. An audition is required for acceptance into a music degree program. Contact the Department (460-6136 or www.southalabama.edu/music) for audition requirements.

University residency requirements stipulate that at least 32 semester hours, including 15 hours in the major, must be completed in residence at the 300 and/or 400 level. An overall GPA of 2.0 is required for graduation as well as a minimum GPA of 2.0 in the major.

MUSIC CORE (54 hours)
Music Theory - 16 hours of MUT as required by advisor.

Conducting - 3 hours
MUT 361

Music Literature - 10 hours of MUL as required by advisor.

Major Ensemble - 7 hours in appropriate instrumental or vocal area.
Concert Choir, Symphony Band, Chorale, Wind Ensemble, Orchestra,
or Marching Band

Applied Music (MUA or MUB) - 14 hours
200 level - 8 hours
300 or 400 level - 6 hours

Piano - 4 hours or equivalent proficiency examination.
MUE 102 or MUE 212
MUE 103 or MUE 213
MUE 202 or MUE 312
MUE 203 or MUE 313

Recital Class
MUA 100 (repeat six times with grade of "S")

Senior Recital
MUA 400

GENERAL EDUCATION REQUIREMENTS (35 hours)

Written and Oral Communication (9 hrs)
EH 101, EH 102, CA 110

Humanities (3 hrs)
One literature course required, select from EH 215, EH 216, EH 225, EH 226, EH 235, EH 236

History, Social & Behavioral Sciences (12 hrs)
Select from at least two disciplines, a minimum of three hours of history required. AN 100, AN 101, GEO 114, GEO 115, HY 101, HY 102, HY 135, HY 136, IS 100, PSC 130, PSY 120, PSY 250, ECO 215, ECO 216, SY 109, SY 112

Sequence Requirement
Select a six-hour sequence in literature or history: EH 215 and EH 216, EH 225 and EH 226, EH 235, and EH 236, HY 101 and HY 102, HY 135 and HY 136

Mathematics (3 hrs)
MA 110 or higher

Natural Sciences (8 hrs)
Select two: BLY 101, BLY 102, CH 101, CH 103, CH 131, CH 132/CH 141, GEO 101, GEO 102, GY 111, GY 112, PH 101, PH 104, PH 114/PH 201, PH 115/PH 202

CONCENTRATION REQUIREMENTS

Music Education - Instrumental (32 hrs.)
MUO 111/411 or MUO 115/415, MUE 240, MUE 241, MUE 242, MUE 243, MUE 346, MUE 444, MUE 455, EDM 310 or MUS 201, MUT 362, EPY 351, EDU 400, SED 470

Music Education - Vocal (32 hrs)
MUA 181 (repeat for two semesters), MUE 444, MUE 448, MUE 455, EDM 310 or MUS 201, MUS 202, MUS 203, MUT 364, EPY 351, EDU 400, SED 470

Completion of a Music Education concentration and teacher certification requires a grade-point average of at least 2.5 on all course work attempted, no grade below a "C" in professional teacher education, and at least a 2.75 grade-point average on all work attempted in the teaching specialization (music).

Performance - Instrumental (23 hrs.)
MUA 300, Applied Music 400 level (6 hours),

MUE 4** Pedagogy, MUL 4** Literature, MUO 411/MUO 417, 4 semesters of small ensemble, 9 hours of electives in music at 300 level or above
Electives (8 hrs.)

Performance - Vocal (25 hrs.)
MUA 300, MUA 423, (6 hours), MUE 448, MUO 411, MUO 416, (4 semesters), MUS 202, MUS 203, LG 111, LG 151, 3 hours of electives in music at 300 level or above
Electives (6 hrs.)

Elective Studies in Business (35 hrs.)
MUS 204, MUS 304, MUS 305, MUS 404, MUS 470, ACC 211, ACC 212, ECO 215, ECO 216, MKT 320

Elective Studies in Outside Fields (24-36 hrs.)
MUA/MUB 300 level (2 hrs.), MUO 411/417, 3 hours of electives in music at 300 level or above. Additional Major or Minor specific requirements determined by academic area (approximately 18-21 hrs.)
Electives - variable to complete 120 hr. degree total.

ADDITIONAL INFORMATION FOR MUSIC MAJORS

TECHNOLOGY PROFICIENCY

Music majors will satisfy the University of South Alabama requirement for Technology Proficiency through the successful completion of MUT 112, 3 cr., Basic Music Theory I. This is a required course for all music majors.

PIANO PROFICIENCY

1. The piano proficiency is attained by successfully completing the class piano sequence (MUE 102, MUE 103, MUE 202, MUE 203) and achieving a passing score on the final exam of MUE 203.
2. Students with piano as their principal instrument, or others who have sufficient piano background may be placed in the Advanced Keyboard Musicianship Sequence (MUE 212, MUE 213, MUE 312, MUE 313) after an audition for the piano faculty.
3. Excess hours in piano required to complete the piano proficiency examination may not be counted toward graduation in music. Additional hours in piano beyond the proficiency may be counted toward graduation.
4. The piano proficiency must be completed before a student may enroll in Senior Recital or Student Teaching.

PLACEMENT IN MUSIC THEORY

Transfer students intending to take music theory must take a Theory Placement Examination. Contact the Music Office for details.

PLACEMENT IN APPLIED MUSIC CLASSES

All students not previously enrolled in private music study at the University of South Alabama must audition prior to enrolling. Contact the Music Office for audition requirements and scheduling.

All students enrolled in private music study must fill out a Teacher Preference form for each Applied Music course in which they are enrolled. These forms must be filed on-line to the Music Office before registration begins. Once a student is registered and knows their schedule, they must submit their schedule information to their Applied teacher.

APPLIED MUSIC

Applied music is an integral and vital part of the total education in the field of music. In addition to performing in recitals, full-time music students are also required to attend concerts and recital class (MUA 100) for six semesters and take part in various programs given during their course of study.

Students choosing a minor in music must include applied music courses at the 200 level.

Credit for applied music is based on the minimum practice time per week, not on the length of the lesson period. Courses that show one hour's credit require one 30-minute lesson per week with a minimum practice period of 30 minutes per day. A two-hour course requires 60 minutes of lesson time a week and at least 60 minutes of practice time per day. Those that show three hours' credit require 60 minutes of lesson time per week with a minimum of two hours per day for practice. Satisfactory achievement and development are best achieved by practicing twice the above minimum requirements.

A student may take no more than two applied music courses in any given semester unless permission is obtained from the student's advisor, major applied teacher, and department chair.

Senior Recital Requirements

A public senior recital (MUA 400) is required for the BM degree. Specific requirements vary according to the chosen concentration. See the Department of Music Student Handbook for details.

APPLIED MUSIC LEVELS

Students must audition in order to enroll in Applied Music courses. Contact the Department of Music for information.

100 Level (Elective) is designated for students majoring in other academic disciplines (when possible) or music majors who wish to study in a secondary applied area.

200 Level (Major/Lower Division) is designated for the first four semesters of study as a music major. A student must pass an examination at the end of the fourth semester in order to enroll at the 300 or 400 level. Music minors will also enroll at the 200 level.

300 Level (Major/Upper Division) is designated for the junior and senior music major in all concentrations except Performance.

400 Level (Major/Performance) is designated for the junior and senior music major with a concentration in Performance.

MINOR

Students pursuing a Bachelor of Music Degree are not required to have an academic minor with the exception of the Bachelor of Music with Elective Studies in Outside Fields.

MUSIC ORGANIZATIONS

The Department of Music sponsors performing organizations open to all students of the University, providing satisfactory audition requirements have been met. Ensemble participation is recognized as an essential literature class in music and music education. The appropriate MAJOR ensemble (Wind Ensemble, Chorale, Orchestra, Marching Band, Symphony Band or Concert Choir) must be elected each semester that a student is enrolled as a full-time student in music. Lower division credit is for 1st and 2nd year students. Upper division credit is for 3rd and 4th year students and reflects increased responsibility and leadership within the section and/or ensemble as assigned by the conductor/director. Graduate credit requires assisting the conductor/director with logistics, rehearsals, and presentation of concerts. Each course number is to be repeated four times for a two-year sequence of the course. All Bachelor of Music Degree majors in guitar and piano must satisfactorily complete a minimum of six semester hours in a major ensemble, to be taken for three consecutive years and one semester hour in another ensemble in which they will play their principal performing instrument. Students are, in addition, encouraged to elect additional hours in both major and small ensembles. Consult the appropriate curriculum in the section entitled Music Organizations for the requirements. The organizations include the Concert Choir; University Chorale; Marching Band; University Symphony Band; Wind Ensemble; Orchestra; Jazz Band; Woodwind, Brass, Guitar, Percussion, and Piano Ensembles; and Opera and Musical Theatre Workshop.

MASTER OF MUSIC GRADUATE STUDIES

The Master of Music degree offers concentrations in Collaborative Keyboards, Music Education and Performance (Piano and Vocal). The program is designed to provide professional advancement for musician living and working along the Gulf Coast, produce research and/or performances, qualify students for admission to doctoral programs, and fulfill the mission of the University by offering high-quality teaching and public service that increases the education level of Alabama citizens, who can better participate in a global community and attain a higher quality of life.

The department's graduate faculty engage students to think critically as they address music practices and issues. Courses examine how music creates, sustains and changes personal lives, organizations, cultural institutions and society.

Each concentration consists of 32 credits hours, which culminate in performances, portfolios, recordings, or projects representing pedagogical work.

REQUIREMENT FOR ADMISSION

All applications must receive approval from the Graduate Coordinator of Music, the Director of Graduate Studies for the College of Arts and Sciences, and the Graduate Dean. The Office of Admissions should receive a resume limited to one page and three letters of recommendation addressing academic or professional abilities. Students are admitted each semester and must meet the following additional requirements:

REGULAR ADMISSION

GRE/GMAT Scores

Students must submit a satisfactory score on the general portion of the Graduate Record Examination or the Graduate Management Admissions Test. The scores required for regular admission are:

- GRE score on file. USA College code of GRE is 1880.
- GMAT - A combined score of 800 or more when calculated as follows:

200 x undergraduate GPA + GMAT score.

Undergraduate Requirements

Students must submit official copies of undergraduate transcripts indicating the following:

- A bachelor's degree in music.
- A minimum grade-point average of 3.0

International Students

- International students must submit documentation of TOEFL test scores of 525 or above (197 on computer based test or 71 on internet based test).
- Students who are required to take the English Language Proficiency Examination and whose scores suggest an English language deficiency must take the appropriate English as a Second Language courses. These courses are not counted as part of the 32-hour degree program.

Departmental Admissions Requirements

- Passing score in Graduate Music Theory and Music History Diagnostic Exam or Bachelor of Music degree from USA.
- Admittance requirements per area of specialization:
  - Collaborative Keyboards
    - Audition - recording or live. Admittance determined by area faculty
    - Contact Piano Area Coordinator for date, time and location
  - Music Education
    - Teaching Certificate
    - Video of teaching: 10 - 25 minutes. Acceptability determined by music education faculty
    - Contact Music Education Area Coordinator for date, time and location
  - Performance Piano
    - Audition - recording or live. Admittance determined by area faculty
    - Contact Piano Area Coordinator for date, time and location
  - Performance: Voice
    - Audition - recording or live. Admittance determined by area faculty
    - Diagnostic exam in vocal diction (Italian, German, and French)
    - Contact Vocal Area Coordinator for date, time and location

Diagnostic Exams

- Students admitted to graduate degree programs in the USA Department of Music must take graduate diagnostic exams in music theory and history. USA graduates are exempt. Diagnostic exams are administered twice a year, in August and January. The results of the exams are advisory only; however, students may not take graduate-level history and theory courses until students have earned a passing score on the exams. Advisors receive the results of the diagnostic exams. Students consult with their advisors to determine appropriate history and theory studies.
  - Remedial Courses
    - Students who do not pass the diagnostic exams will be required to pass remedial courses) before enrolling in the graduate-level core course.

PROVISIONAL ADMISSION

Students who do not meet the requirements for the regular admission may apply for provisional admission if they meet the following standards:

Undergraduate Requirements

Students must submit official copies of undergraduate transcripts indicating the following:

- A minimum grade-point average of 2.5 on all undergraduate work. Students with a GPA below 2.5 may want to consider enrolling in undergraduate classes to increase their GPA average before applying to graduate school. USA course work completed after graduation is automatically averaged into the final GPA. The USA Office of Academic Records computes transfer credit averages and can advise students in determining when the minimum GPA has been met.

Non-Degree Admission

Students may register for and complete up to 12 hours without formal entrance into the program.

Degree Requirements and Courses

Students must complete a minimum of 32 semester hours of credit in approved 500-level courses. A minimum of 20 semester hours must be completed at the University of South Alabama. Up to 12 hours of USA courses taken while in another program (or non-degree status) may be applied. Only courses not applied to another degree may count. Maximum of 12 hours with grades of "A", "B", or "S" of approved transfer credit is allowed. If the university is non-accredited, the individual USA graduate program will determine if the quality and content of the courses meet the standards of the program.

Grade Requirements

- A minimum of a 3.0 GPA on all work attempted is required for graduation.
- Courses in which a student receives a "D" or below will not be counted toward the degree program.
- A maximum of two courses with a grade of "C" will be counted toward the degree program.
- Students receiving four grades of "C" or below, regardless of the overall GPA will be dismissed from the program.
- A student who receives a failing grade in a course for graduate credit may be dismissed from the program.

Time Limitations

- All degree requirements must be completed within seven calendar years.
- Most students who take nine hours per semester complete the degree within a two-year period.
- The time required for degree completion depends on how many courses a student can take each semester and the ability of that student to complete the recital(s) or final project(s).

Course Load

Six to ten credit hours per semester constitute a full-time course load.

Note: No more than twelve credits in this area are applicable toward a degree.

DESCRIPTIONS OF ALL MUSIC, APPLIED (MUA, MUB) BEGIN ON PAGE 270.

DESCRIPTIONS OF ALL MUSICAL ORGANIZATIONS (MUO) BEGIN ON PAGE 274.

DESCRIPTIONS OF ALL MUSIC EDU, METHODS, AND MATERIALS (MUE) COURSES BEGIN ON PAGE 272.

DESCRIPTIONS OF ALL MUSIC HISTORY AND LITERATURE (MUL) COURSES BEGIN ON PAGE 273.

DESCRIPTIONS OF ALL MUSIC STUDIO (MUS) COURSES BEGIN ON PAGE 275.

DESCRIPTIONS OF ALL MUSIC THEORY (MUT) COURSES BEGIN ON PAGE 276.

DESCRIPTIONS OF ALL CONDUCTING (MUT) COURSES BEGIN ON PAGE 276.

DEPARTMENT OF PHILOSOPHY

Chair: John Coker (251) 460-6248
Full Professor: Meeker
Associate Professors: Coker, Loomis, Poston
Assistant Professors: Hillman, Poston, Youngblood

Department of Philosophy web site
http://www.southalabama.edu/philosophy

UNDERGRADUATE STUDIES

Through reasoned reflection, philosophy seeks to understand human experience in all its various aspects. Courses examine the moral, social, political, aesthetic, and religious dimensions of human existence, topics in special fields such as science, and the historical development of philosophy. In these courses students can develop skills in the presentation, interpretation, analysis, and evaluation of differing viewpoints, and refine their own beliefs about deeply important issues.

GENERAL EDUCATION REQUIREMENTS FOR PHILOSOPHY MAJORS

General Education Requirements for Philosophy are specified on the College of Arts and Sciences section.

All first-time freshmen must successfully complete CAS 100: First Year Experience as a degree requirement. Students must enroll during their first term at USA, except for

summer-entry students who must enroll in the fall semester following entry. PHL 461 will fulfill the technology proficiency requirement for Philosophy majors.

REQUIREMENTS FOR A MAJOR IN PHILOSOPHY

All majors in Philosophy, whether concentrating in Philosophy, or in Classics, or in Religion, must complete 36 semester credit hours of course work, of which 18 hours (i.e., 50% of course work in their major) must be in the common core. In addition, all majors in Philosophy, whether concentrating in Philosophy, Religion and Classics, must complete 15 semester hours of course work in the major at the 300 and/or 400 level. All majors in Philosophy, whether concentrating in Classics, Philosophy, or in Religion, must either 1) minor in another discipline, or 2) minor in a different concentration offered by the Department of Philosophy.

The Common Core

- PHL 120 (Critical Thinking)
- PHL 240 (Western Philosophy: Classical and Medieval)
- PHL 245 (Western Philosophy: Renaissance/ Enlightenment)
- PHL 321 (Symbolic Logic)
- PHL/REL/CLA/EH 310: (Classical Mythology)
- PHL/REL/CLA 461: (Metaphysics)

The following further courses are required for the Religion Concentration:

- PHL/REL 352 (World Religions and/or PHL/REL 355 (Chinese Philosophy)
- PHL/REL 351 (Philosophy of Religion) and/ or PHL/REL 354 (Philosophies of India)
- 0, 1, or 2 Additional Religion (REL) courses at the 300 or 400 level (depending on whether all four, three, or only two of the preceding courses are taken)
- 2 REL courses at any level

The following further courses are required for the Philosophy Concentration:

- PHL 431 (Advanced Ethical Theory) and/ or PHL 441 (Epistemology)
- 1 or 2 additional Philosophy (PHL) courses at the 300/400 level (depending on whether both or only one of the preceding courses are taken)
- 1 more (PHL) course at any level
- 2 CLA, PHL, or REL courses at the 300 or 400 level

The following further courses are required for the Classics Concentration:

- CLA 304 (Ancient Greek Art and Architecture) and CL 306 (Roman Art)
- CLA 311 (Political Philosophy I: Classical and Medieval) or CLA 454 (Ancient Greek Culture) or CLA 455 (Ancient Roman Culture)
- 2 Additional Classics (CLA) courses at any level
- 1 CLA, PHL, or REL course at the 300 or 400 level
- Fulfill Foreign Language Requirement by taking 1 year of Latin or 1 year of Ancient Greek

No more than nine hours at the 100-level may be counted toward the hours required for the major; however, additional hours taken at this level can be counted toward the total number of hours required for graduation. Fifteen hours must be taken at the 300/400-level. PHL 240 and 245 do not have to be taken in sequence and should be taken early in the major. Credit for PHL 499, Honors Thesis, is only given as an addition to the hours required for the major. Credit for PHL 499, Honors Thesis, is only given as an addition to the hours required for the major.

REQUIREMENTS FOR A MINOR IN PHILOSOPHY

A minimum of 18 semester hours in Philosophy, to include a logic course (PHL 121 or 321). At least nine hours must be taken in residence. No more than two 100-level courses may be counted toward the minor.

REQUIREMENTS FOR A MINOR IN CLASSICS

A minimum of 18 hours must be taken in Classics (CLA) courses. At least two courses must be taken in residence. No more than two 100-level courses may be counted toward the Classics minor. Students minoring in Classics must fulfill the Foreign Language requirement by taking either 2 semesters of Latin or 2 semester of Ancient Greek.

REQUIREMENTS FOR A MINOR IN RELIGION

A minimum of 18 semester hours in Religion. No more than two 100 level may be counted toward the minor. At least one course must be taken from each of the following Groups: Group A, Humanities, Group B, History, and Group C, Social Science. No more than 9 hours of courses may be counted toward the minor from each of Group A, Group B, and Group C. 9 hours of course work must be taken as REL courses. 9 hours of course work must be taken at the 300 and/or 400 level at the University of South Alabama. (Note: Courses listed below with a slash, /, are cross-listed between two or more different disciplines: you can register and receive credit for one, but only one, discipline (e.g., in the case of REL/ SY 420, you can register and receive credit for either, but not both, REL 429 or SY 420).

Group A, Humanities; REL/PHL/CLA/EH/ LG 310; REL/PHL 351; REL/PHL 354; REL/ PHL 355

Group B, History: HY/REL 331; HY 332; HY/REL 343; HY/REL 347; HY 351; HY 352; HY/REL 353; HY/REL 364; HY/REL 365; HY/REL 373; HY/REL 465

Group C, Social Science: SY/REL/PHL 352; SY/REL 420

Philosophy Majors can now fulfill the Minor requirement by taking one of the other concentrations offered.

- Majors concentrating in Classic can fulfill the Minor requirement by using Philosophy or Religion concentration.
- Majors concentrating in Philosophy can fulfill the Minor requirement by using Religion or Classics concentration.
- Majors concentrating in Religion can fulfill the Minor requirement by using Philosophy or Classics concentration.

GRADUATE STUDIES

Although the Department of Philosophy has no graduate program, graduate-level courses are offered for those students who need such work.

DESCRIPTIONS OF ALL CLASSICS (CLA) COURSES BEGIN ON PAGE 199.

DESCRIPTIONS OF ALL PHILOSOPHY (PHL) COURSES BEGIN ON PAGE 290.

DESCRIPTIONS OF ALL RELIGION (REL) COURSES BEGIN ON PAGE 302.

DEPARTMENT OF PHYSICS

Chair: Sankoorikal L. Varghese (251) 460-6224
Professors: Clark, Jenkins, Varghese
Associate Professors: Sanders, Gapud, Godang
Assistant Professor: Scott, Burress
Senior Instructors: Boleman, Novovic
Professor Emeritus: Helminger

Department of Physics web site
http://www.southalabama.edu/physics/

The curriculum in the Department of Physics serves three groups of students: those preparing for careers in physics, those pursuing professional fields such as medicine and engineering, and those electing physics and astronomy as part of the natural-science requirement for Bachelor of Arts or Bachelor of Science Degrees. The degree program in physics allows for flexibility to the extent that the serious student can select related courses in biology, chemistry, geology, computer science, and engineering to prepare for a career in such interdisciplinary areas as biophysics, geophysics, oceanography, and environmental science. Three options for a Bachelor of Science degree in Physics are offered. One option (the Premedical Option) is for those students pursuing medicine as a career. Sample programs and requirements for each option follow. Students pursuing a degree in Physics also must have a minor in another discipline. In addition, the Department of Physics offers a double major with the Meteorology program within the Department of Earth Sciences.

All first-time freshmen must successfully complete CAS 100: First Year Experience, as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students who must enroll in the fall semester following entry.

All Physics majors must demonstrate technology proficiency by taking the JagSkills training modules for Microsoft Word, Excel and Powerpoint and must present the certification found on the "My Progress" page of JagSkills to pass the PH 303 laboratory.

The Physics Pre-Medical Option requires a minimum of 129 hours, while the other Physics options require a minimum of 120 hours.

Sample Program for BACHELOR OF SCIENCE DEGREE IN PHYSICS (Option A)

First Year

Physics 107	1	Physics 201	4
Chemistry 131	4	Chemistry 132	4
Math 125	4	Math 126	4
Comm: EH 101	3	Comm: EH 102	3
CAS 100	2	**Total**	**15**
Total	**14**		

Second Year

Physics 202	4	Physics 303	4
Math 227	4	Math 238	3
Social Sciences	3	Art/Humanities	3
CIS 210 or 227	3	Social Sciences	3
Total	**14**	Comm: CA 110	3
		Total	**16**

Third Year

Physics 366	3	Physics 367	3
Physics 385 (W)	3	Physics 411	3
Physics elective	3	Art/Humanities	3
Art/Humanities	3	Social Sciences	3
Social Sciences	3	Electives	3
Total	**15**	**Total**	**16**

Fourth Year

Physics 348	3	Physics 349	3
Physics 448	3	Physics 449	3
Physics elective	3	Physics 463	3
Language	3	Language	3
Electives	3	Art/Humanities	3
Total	**15**	**Total**	**15**

Totals:	**Hours**
Physics	46
Mathematics	15
Chemistry	8
CAS	2
Art/Humanities	12
Social Sciences	12
Communication	9
Language	6
CIS	3
Electives	7
Total	**120**

Physics Electives: Option A

PH 301
PH 346
PH 354
PH 390
PH 494
PH 499

REQUIREMENTS FOR A MAJOR IN PHYSICS (Option A)

Option A is designed for a student anticipating graduate study in Physics. This option gives the student a solid foundation in basic Physics. Physics course requirements include: PH 107, PH 201, PH 202, PH 303, PH 348, PH 349, PH 366, PH 367, PH 385(W), PH 411, PH 448, PH 449, and PH 463. 6 hours of Physics electives must be taken from among the following: PH 301, PH 346, PH 354, PH 390, PH 494 or PH 499. The following additional technical courses are required: CH 131 and CH 132 and CIS 210 or 227. In addition, the following math courses are prerequisites for upper division Physics courses: MA 125, MA 126, MA 227, and MA 238. With the exception of PH 303 and PH 448, which are offered every year, all upper division Physics courses are offered every other year.

All Physics majors will be required to take an assessment test, at no cost to the student, and an exit interview before graduation as directed by the department.

Sample Program for BACHELOR OF SCIENCE DEGREE IN PHYSICS (Option B)

First Year

Physics 107	1	Physics 201	4
Chemistry 131	4	Chemistry 132	4
Math 125	4	Math 126	4
Comm: EH 101	3	Comm: EH 102	3
CAS 100	2	**Total**	**15**
Total	**14**		

Second Year

Physics 202	4	Physics 303	4
Math 227	4	Math 238	3
Social Sciences	3	Art/Humanities	3
CIS 210 or 227	3	Social Sciences	3
Total	**14**	Comm: CA 110	3
		Total	**16**

Third Year

Physics 366	3	Physics 411	3
Physics 385 (W)	3	Physics Electives	3
Physics 354	3	Art/Humanities	3
Art/Humanities	3	Social Sciences	3
Social Sciences	3	Physics Electives	3
Total	**15**	**Total**	**15**

Fourth Year

Physics 348	3	Physics 463	3
Physics 448	3	Language	3
Physics Elective	3	Art/Humanities	3
Language	3	Electives	7
Electives	3	**Total**	**16**
Total	**15**		

Totals:	**Hours**
Physics	43
Mathematics	15
Chemistry	8
CAS 100	2
Art/Humanities	12
Social Sciences	12
Communication	9
Language	6
CIS	3
Electives	10
Total	**120**

Physics Electives: Option B

PH 301
PH 346
PH 390
PH 349
PH 367
PH 449
PH 494
PH 499

REQUIREMENTS FOR A MAJOR IN PHYSICS (Option B)

Option B is designed for a student intending no graduate study in Physics. This option emphasizes applied Physics and has a large number of elective hours so that the student may tailor an interdisciplinary degree. Physics course requirements include: PH 107, PH 201, PH 202, PH 303, PH 348, PH 354, PH 366, PH 385(W), PH 411, PH 448, and PH 463. Nine hours of Physics electives must be taken from among the following: PH 301, PH 346, PH 349, PH 367, PH 390, PH 449, PH 494, and PH 499. The following additional technical courses are required: CH 131 and CH 132 and CIS 210 or 227. In addition, the following math courses are prerequisites for upper division Physics courses: MA 125, MA 126, MA 227, and MA 238. With the exception of PH 303 and PH 448, which are offered every year, all upper division Physics courses are offered every other year.

All Physics majors will be required to take an assessment test, at no cost to the student, and an exit interview before graduation as directed by the department.

Sample Program for BACHELOR OF SCIENCE DEGREE IN PHYSICS (Premedical Option)

First Year

Physics 107	1	Physics 201	4
Chemistry 131	4	Chemistry 132	4
Math 125	4	Math 126	4
Biology 121	4	CAS 100	2
Comm EH 101	3	Comm EH 102	3
Total	**16**	**Total**	**17**

Second Year

Physics 202	4	Physics 303	4
Math 227	4	Math 238	3
Biology 122	4	Chemistry 201	4
Art/Humanities	3	Art/Humanities	3
Total	**15**	Elective	3
		Total	**17**

Third Year

Physics 366	3	Physics 463	3
Physics 385 (W)	3	Physics elective	3
Chemistry 202	4	Biology 301 or BMD 350	3
Art/Humanities	3		
Social Sciences	3	Art/Humanities	3
Total	**16**	Social Sciences	3
		Total	**15**

Fourth Year

Physics 348	3	Language	3
Physics 448	3	Social Sciences	3
Physics Elective	3	CA 110	3
Language	3	Electives	8
Social Sciences	3	**Total**	**17**
Total	**15**		

Totals:	**Hours**
Physics	34
Math	15
Chemistry	16
Biology	11
Art/Humanities	12
Social Sciences	12
CAS	2
Communication	9
Language	6
Electives	11
Total	**128**

Physics Electives: Premedical Option

PH 346
PH 349
PH 354
PH 367
PH 390
PH 411
PH 449
PH 494
PH 499

REQUIREMENTS FOR A MAJOR IN PHYSICS (Premedical Option)

The Premedical Option is designed for a student intending a career in a health profession field such as Medicine. Physics course requirements include: PH 107, PH 201, PH 202, PH 303, PH 348, PH 366, PH 385(W), PH 448 and PH 463. Six hours of Physics electives must be taken from among the following: PH 346, PH 349, PH 354, PH 367, PH 390, PH 411, PH 449, PH 494 and PH 499. The following additional technical courses are required: CH 131, CH 132, CH 201, CH 202, BLY 121, BLY 122 and BLY 301 or BMD 350. In addition, the following math courses are prerequisites for upper division Physics courses: MA 125, MA 126, MA 227 and MA 238. With the exception of PH 303 and PH 448, which are offered every year, all upper division Physics courses are offered every other year.

All Physics majors will be required to take an assessment test, at no cost to the student, and an exit interview before graduation as directed by the department.

GENERAL EDUCATION REQUIREMENTS FOR PHYSICS MAJORS (All Options)

Areas I, II, and IV of the General Education Requirements for Physics are specified in the College of Arts and Sciences section. Note that Area III requirements (Mathematics and Natural Sciences) are fulfilled by the major requirements specified above.

REQUIREMENTS FOR A MINOR IN PHYSICS

A minimum of 20 semester hours in Physics, including PH 303, and at least six additional hours at the 300 level or above.

GENERAL COMMENTS

PH 114 and PH 115 with either PH 201 or PH 202 may be substituted for PH 201 and PH 202 with the prior approval of the physics department chair.

The sequences PH 114, PH 115 and PH 201, PH 202 may not both be taken for credit.

DOUBLE MAJOR IN METEOROLOGY AND PHYSICS

The Meteorology program, with the Department of Earth Sciences, and the Department of Physics jointly offer a double major in Meteorology and Physics. This curriculum is intended for students who anticipate graduate study in Atmospheric Science, yet wish a very strong background in Physics. As constructed, this curriculum will require the student to complete an extra seven (7) hours over the maximum 128 hours required for either major alone. The changes from the current Option B Physics curriculum for a student intending to pursue graduate study in Meteorology include: removal of six (6) Physics Elective hours, two courses, and the addition of PH 366. Requirements removed from the regular Meteorology curriculum are the completion of Meteorology electives and the satisfaction of one of the four Meteorology Tracks; the Physics Major will replace the normal requirements for a Meteorology track and the electives. Only Meteorology-Physics double majors may have these track and elective requirements waived. The double major satisfies the minor requirement for the College of Arts and Sciences.

SAMPLE PROGRAM FOR BACHELOR OF SCIENCE DEGREE IN METEOROLOGY (Double Major in Physics)

First Year

Math 125	4	Math 126	4
Comm: EH 101	3	Comm: EH 102	3
Comm: CA 110	3	Physics 201	4
Physics 107	1	Arts/Humanities	3
CAS 100	2	**Total**	**14**
Arts/Humanities	3		
Total	**16**		

Second Year

Math 227	4	MA 238	3
Social Sciences	3	Social Sciences	3
Language	3	Language	3
Physics 202	4	Physics 303	4
MET 353	4	MET 341	3
Total	**18**	**Total**	**16**

Third Year

Statistics 315	3	Art/Humanities	3
CIS 210 or 227	3	Physics 367	3
Art/Humanities	3	Physics 411	3
Physics 366	3	MET 357	2
MET 354	3	MET 355	3
Total	**15**	**Total**	**14**

Fourth Year

Chemistry 131	4	Chemistry 132	4
Social Sciences	3	Social Sciences	3
Physics 348	3	Physics 463	3
MET 454	6	MET 455	6
Total	**16**	**Total**	**16**

Fifth Year

Physics 448	3
Physics 385	3
Total	**6**

Summer before 4th or 5th year

MET 456	3	MET 356	3
Total	**3**	**Total**	**3**

Totals: Hours

Physics	34
Mathematics/Stat	18
Meteorology	33
Chemistry	8
CAS	2
Art/Humanities	12
Social Sciences	12
Communication	9
Language	6
CIS	3
Total	**137**

REQUIREMENTS FOR A MAJOR IN METEOROLOGY (Double Major in Physics)

The Meteorology/Physics Double Major is designed for a student intending graduate study in Atmospheric Science, yet giving him/her a very strong Physics background. For students anticipating studying graduate physics PH 349, and PH 449 and some physics elective courses are strongly recommended. The course requirements for the Meteorology Major are MET 353, MET 341, MET 354, MET 355, MET 356, MET 357, MET 454, and MET 455 with an additional writing course in meteorology (MET 456 (W)). For students ultimately planning to find employment with the National Weather Service, GY 475, MET 492 electives are highly recommended. GY 475, MET 456(W), and MET 356 are only offered in the summer. The course requirements for the Physics Major are: PH 107, PH 201, PH 202, PH 303, PH 348, PH 366, PH 367, PH 385 (W), PH 411, PH 448, and PH 463. The following additional technical courses are required in Mathematics and Statistics: MA 125, MA 126, MA 227, MA 238 and ST 315. Chemistry: CH 131 and CH 132 and Computer and Information Sciences: CIS 210 or 227.

All Physics majors will be required to take an assessment test, at no cost to the student, and an exit interview before graduation as directed by the department.

GENERAL EDUCATION REQUIREMENTS FOR PHYSICS/ METEOROLOGY DOUBLE MAJORS

Areas I, II, and IV of the General Education Requirements for Physics/Meteorology Double Major are specified in the College of Arts and Sciences section. Note that Area III requirements (Mathematics and Natural Sciences) are fulfilled by the major requirements specified above.

DESCRIPTIONS OF ALL PHYSICS (PH) COURSES BEGIN ON PAGE 287.

DEPARTMENT OF POLITICAL SCIENCE AND CRIMINAL JUSTICE

Chair: Nader Entessar (251) 460-7161
Graduate Coordinator: Sam Fisher
Professor: Entessar
Associate Professors: Bowers, Fisher, Husain, Nelson, Nicholls, Shaw
Assistant Professors: Costanza, Koon-Magnin, Schulze
Emeriti: Barrow, Kressley

Department of Political Science and Criminal Justice web site
http://www.southalabama.edu/poliscie/

UNDERGRADUATE STUDIES

The courses offered in the Department of Political Science and Criminal Justice are designed to achieve three important objectives:

1. to help students attain a liberal education;
2. to encourage and prepare students to participate actively in public affairs;
3. to help students advance toward professional careers in such fields as education, law and government.

POLITICAL SCIENCE

Political Science is a broad discipline in both content and methods. Political Science includes philosophical, historical, and analytical studies of governments, politics, and policies. Political scientists may focus on political behavior, decision making, processes, organizations, and public policies. Inquiry in political science addresses the domestic and international policies of the United States and all other countries and regions. Political scientists study the political values, attachments, and activities of people, individually and in groups. Political science examines both what preferences people share and how they differ according to their personal attributes and positions in the economy and society. Political science also studies how people regard and trust each other as well as their leaders and governments. Consequently, political science has many facets and offers opportunities for many different concentrations.

All first-time freshmen must successfully complete CAS 100: First Year Experience as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students who must enroll in the fall semester following entry.

TECHNOLOGICAL COMPETENCY REQUIREMENT

Research Methods (PSC 310/CJ 310) will satisfy the technology competency requirement for both political and criminal justice majors. This is a requirement course for both majors.

DEPARTMENTAL HONORS

The Department of Political Science and Criminal Justice offers an opportunity for students in Political Science or Criminal Justice who are not in the University's Honors Program to graduate with departmental honors. In order to graduate with departmental honors, the student needs to have at least a 3.50 grade-point average (overall and in the major) and maintain that average upon graduation. In addition, the student must take a two-semester departmental honors thesis project (PSC 499 for Political Science majors and CJ 499 for Criminal Justice majors) with a faculty mentor and a committee.

REQUIREMENTS FOR A MAJOR IN POLITICAL SCIENCE

The major in political science requires 36 semester hours, of which 12 hours come from

the core political science courses, 15 hours of PSC electives at the 300/400 level, and 6 hours of PSC electives at the 400 level, and the capstone seminar in political science. A grade of "C" or higher is required for PSC majors in all core classes and the capstone seminar (PSC 130, PSC 250, PSC 270, PSC 310, and PSC 492). Students must complete 15 hrs. of the 36 hrs. at the 300/400 level at the University of South Alabama. Students pursuing a degree in Political Science also must have a minor in another discipline. In addition, all political science majors must take the ETS major field test in political science and receive a satisfactory score (standard for passing is determined by the Department of Political Science and Criminal Justice). The ETS test is a standardized national examination in political science that is administered by the Educational Testing Service in Princeton, New Jersey. Students with unsatisfactory scores on the ETS test can retake the test, or they may be required to repeat foundation classes in political science.

All Political Science majors must take the Capstone Seminar and the ETS test during the Fall Semester of their senior year. Failure to do so may prevent you from graduating.

All political science majors must show competency in oral communication. This requirement can be satisfied through paper presentations in the required capstone seminar in political science.

Political Science Major:

PSC 130	3
PSC 250	3
PSC 270	3
PSC 310	3
PSC 492	3
400 level PSC electives	6
300/400 level PSC elective	15
Total Required Hours	**36**

GENERAL EDUCATION REQUIREMENTS FOR POLITICAL SCIENCE MAJORS

General Education Requirements for Political Science majors are specified in the College of Arts and Sciences section.

REQUIREMENTS FOR A MINOR IN POLITICAL SCIENCE

For a minor in political science a student must take a minimum of 18 semester hours in political science, of which 6 hours are required (PSC 130, PSC 250 or PSC 270), and 9 hours of 300/400 level PSC electives and 3 hours of 400 level PSC electives. Students must complete 9 hrs. of the 18 hrs. at the University of South Alabama.

POLITICAL SCIENCE MINOR:

PSC 130	3
PSC 250 or PSC 270	3
400 level PSC elective	3
300/400 level PSC electives	9
Total Required Hours	**18**

CRIMINAL JUSTICE

The curriculum in Criminal Justice provides students interested in law enforcement, criminal law, corrections, and the criminal court system with a broad educational background emphasizing social science and the University's general education skills of critical thinking, writing and analysis. At the same time, students in the department gain basic knowledge of the criminal justice field to the extent of specialization compatible with University and College requirements. The curriculum leads to the Bachelor of Arts degree. The mission of the program must be conceived as interdisciplinary in nature, since no traditional discipline covers the wide spectrum of expertise required. The undergraduate program addresses issues respecting the entire criminal justice system, from the nature of crime and delinquency to society's varied responses to crime. Such a focus includes the organization and operation of each of the functional components in the field.

All first-time freshmen with less than 15 semester hours are required to successfully complete CAS 100: First Year Experience.

REQUIREMENTS FOR A MAJOR IN CRIMINAL JUSTICE

The major in criminal justice requires 42 semester hours, including PSC 130, CJ 205, CJ 310, CJ 320, CJ 330, CJ 340, and CJ 360, and CJ 492, plus 18 semester hours of criminal justice electives. CJ 205 is a prerequisite to all CJ courses and must be passed with a grade of "C" or higher before enrolling in any other CJ course. CJ majors must earn a grade of "C" or higher in all core courses and the capstone seminar (PSC 130, CJ 205, CJ 310, CJ 320, CJ 330, CJ 340 and CJ 360, and CJ 492). Students must complete 15 hrs. of the 39 hrs. at the 300/400 level at the University of South Alabama. Students pursuing a degree in Criminal Justice also must have a minor in another discipline. In addition, all Criminal Justice majors must take the ETS major field test in criminal justice and receive a satisfactory score (standards for passing is determined by the Department of Political Science and Criminal Justice). The ETS test is a national standardized examination in criminal justice that is administered by the Educational Testing Service in Princeton, New Jersey. Students with unsatisfactory scores on the ETS test can retake the test, or they may be required to repeat foundation classes in criminal justice.

All Criminal Justice majors must take the Capstone Seminar and the ETS test during the Fall Semester of their senior year. Failure to do so may prevent you from graduating. Also all core classes should be successfully completed prior to taking CJ 492 and CJ 492 is offered in the Fall Semester only.

All criminal justice majors must show competency in oral communication. This requirement can be satisfied through paper presentations in the required capstone seminar in criminal justice.

CRIMINAL JUSTICE MAJOR

PSC 130	3
CJ 205	3
CJ 310	3
CJ 320	3
CJ 330	3
CJ 340	3
CJ 360	3
CJ 492	3
CJ Electives	18
Total Required Hours	**42**

GENERAL EDUCATION REQUIREMENTS FOR CRIMINAL JUSTICE MAJORS

General Education Requirements for Criminal Justice majors are specified in the College of Arts and Sciences section.

REQUIREMENTS FOR A MINOR IN CRIMINAL JUSTICE

The minor in Criminal Justice requires 18 semester hours, including PSC 130 and CJ 205, plus 12 semester hours of criminal justice electives. CJ 205 is a prerequisite to all CJ courses and must be passed with a grade of "C" or higher before enrolling in any other CJ course. Students must complete 9 hrs. of the 18 hrs. at the University of South Alabama.

CRIMINAL JUSTICE MINOR

PSC 130	3
CJ 205	3
CJ Electives	12
Total Required Hours	**18**

GRADUATE STUDIES

The Master of Public Administration degree (MPA) curriculum in the Department of Political Science and Criminal Justice is a professional degree program designed principally for present and future administrators and officers in government and other public related organizations. It is open, however, to other qualified students as well.

Students entering the program come from varied academic and vocational backgrounds. Accordingly, no specific undergraduate major is required for admission to the MPA Program. However, certain course prerequisites must be satisfied prior to enrollment in any of the required core courses of the curriculum.

All students in the program have an option of non-thesis (Plan A) or thesis (Plan B).

Students in the program who are not already employed in the public sector should, if possible, serve in government internships, discussed as follows.

HEALTH ADMINISTRATION AND POLICY CONCENTRATION

Students in the MPA program can choose to concentrate on the Health Administration and Policy track. Students who select the Health Administration and Policy concentration will take 12 semester hours of appropriate PSC course work in lieu of the 12 semester hours of electives required of all MPA students.

REQUIREMENTS FOR ADMISSION

Students are admitted each semester. The following criteria supplement the Graduate School criteria (see Categories of Admission).

REGULAR ADMISSION

1. Students must have a minimum undergraduate GPA of 3.0 on all undergraduate work (on a 4-point scale).
2. Satisfactory GRE scores (at least 300 combined score on the Verbal and the Quantitative Sub tests).
3. The GRE requirement may be waived for holders of earned advanced degrees on the recommendation of the program coordinator. GRE scores must be submitted prior to any category of admission- except

for the person with an earned advanced degree from an accredited institution.

PROVISIONAL ADMISSION

In addition to the minimum standards required by the Graduate School, the student must have a minimum undergraduate GPA of 2.7, or 3.0 (on a 4-point scale) for the last 64 hours of undergraduate work and submit GRE general test scores.

REQUIREMENTS FOR DEGREE

To qualify for the degree of Master of Public Administration, all candidates must satisfactorily complete a minimum of thirty-six semester hours, as follows:

1. PSC 130, Introduction to U.S. Government, or its equivalent is a prerequisite for the core curriculum
2. Twenty-four hours in the following eight core courses:

   Note: The Core Curriculum Cycle Should Ideally Commence in the Fall Semester

   PSC 500 PSC 510 PSC 520 PSC 530
   PSC 540 PSC 550 PSC 570 PSC 580
3. Students must select one of the following four concentrations to complete the remaining twelve hours of graduate electives:
   a. **Non-thesis Concentration**: Students must take an additional twelve hours of graduate electives as approved by the MPA coordinator.
   b. **Health Care Concentration**: In addition to the core courses, students must take 12 hours of PSC health care administration and policy graduate courses.
   c. **Geographical Information Technology (GIT) Concentration**: In addition to the courses, students must take 12 hours of GIT graduate courses.
   d. **Thesis Concentration**: In addition to core courses, students must take 6 to 9 hours of graduate elective courses as approved by the MPA coordinator and 3 to 6 hours of PSC 599 (Thesis). Students must have a minimum of 12 hours of graduate elective and thesis credit combined. They must also complete a thesis in compliance with Graduate School requirements.

Any substitutions for the above requirements must be approved in writing by the Coordinator of the MPA Program.

A candidate for the MPA degree must complete successfully a comprehensive written examination covering the eight core courses listed previously. To be eligible to take this examination, a student must have achieved at least a 3.00 (B) grade-point average on the core curriculum course work. Normally, the examination will be administered during the Fall and Spring Semesters. The comprehensive examination may be attempted no more than twice.

INTERNSHIP

Students in the MPA Program who are not suitably employed full-time in public agencies may be allowed to enroll in PSC 596, Graduate Internship in Public Administration, for a maximum of nine semester hours.

Normally, admission to the Internship Program will be dependent upon the following prerequisites:

1. Satisfactory completion of at least six of the required core courses;
2. Approval by the internship professor of the prospective intern's qualifications and proposed project; and
3. Placement of the student in an appropriate agency of the government or other public service institution.

The length of the internship and corresponding credit (at the rate of three to nine hours per semester), not to exceed a total of nine hours, will be determined for each student on the basis of the student's particular needs and opportunities.

Each intern will be required, in consultation with the intern professor, to develop a research design for the project to be undertaken during the internship. Each intern will also be required to write a paper showing how that research design has been carried out. Particular emphasis will be placed in the paper upon the relationship between the internship experience and academic course work. Close and continuing supervision of each intern's progress will be provided by the intern professor.

DESCRIPTIONS OF ALL POLITICAL SCIENCE (PSC) COURSES BEGIN ON PAGE 292.

DESCRIPTIONS OF ALL CRIMINAL JUSTICE (CJ) COURSES BEGIN ON PAGE 198.

DEPARTMENT OF PSYCHOLOGY

Chair: Dr. Larry Christensen (251) 460-6371
Graduate Coordinator: Slattery
Professors: Brown, Christensen, Labbe', Langhinrichsen-Rohling, Rohling, Turner
Associate Professors: Shelley-Tremblay, Yates, Foster
Assistant Professors: Hill, Powell, Zlomke, Slattery, Smith
Director of Clinical Training: Labbe'
Director of Psychology Clinic: Zlomke

Department of Psychology web site
http://www.southalabama.edu/psychology

UNDERGRADUATE STUDIES

The objective of psychology, as a science, is to understand, explain, and predict the behavior of organisms. The Department of Psychology has developed and organized its course offerings to meet three major goals:

1. To provide a strong foundation for those students who plan to enter a graduate school of psychology after completing their undergraduate degree requirements.
2. To assist those students who are planning careers in psychology or in related fields by providing a flexible curriculum that can be designed to meet the career goals of individual students.
3. To meet the needs of those students who are taking psychology courses as part of their liberal arts education.

All first-time freshmen must successfully complete CAS 100: First Year Experience as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students who must enroll in the fall semester following entry.

REQUIREMENTS FOR A MAJOR IN PSYCHOLOGY

A minimum of 38 semester hours in psychology including 32 hours from the undergraduate core and six hours of electives.

UNDERGRADUATE CORE

Topic Area	Course Number	Required
Basic	PSY 120 or PSY 121, PSY 220, PSY 221, PSY 310, PSY 320, PSY 321, PSY 412	All seven
Experimental/ Learning	PSY 416, PSY 420, PSY 428, PSY 475	Any Two
Personality/ Social and Abnormal	PSY 340, PSY 435, PSY 440	Any Two
Developmental	PSY 350, PSY 456	Any One

Twelve courses (32 hours)

The remaining six hours of electives needed for a major may be taken from any courses not taken previously (excluding PSY 250).

Students who are preparing for graduate study are encouraged to take all courses listed in the undergraduate core and any additional courses recommended by their faculty advisor. Student research is encouraged by the faculty and students may obtain course credit for individual student research projects in PSY 494. Students pursuing a degree in Psychology also must have a minor in another discipline.

GENERAL EDUCATION REQUIREMENTS FOR PSYCHOLOGY MAJORS

General Education Requirements for Psychology majors are specified on the College of Arts and Sciences section. Note that Area IV is partially satisfied by the major requirements specified above.

REQUIREMENTS FOR A MINOR IN PSYCHOLOGY

A minimum of 21 semester hours in Psychology, including PSY 120 or PSY 121, PSY 220, PSY 221 and 14 semester hours of electives (twelve of those must be in courses numbered 300 or above).

GRADUATE STUDY IN PSYCHOLOGY

The Department of Psychology accepts applicants to the Master of Science program and to the Doctor of Philosophy program in Clinical/Counseling Psychology. The Master of Science degree program in Psychology is designed to provide individuals with knowledge of current theories, principles, and methods of psychology in preparation for future work toward a doctoral degree, employment in a research setting or employment in a junior college teaching position. The Department of Psychology currently accepts applicants to the Master of Science degree program, with an interest in one or more areas of concentration in the Behavioral and Brain Sciences Psychology Program. The available areas of concentration include: Behavioral Statistics/Computational

Modeling, Cognitive and Perceptual Processing, Psychophysiology, Social/Developmental Psychology, and College Teaching Preparation. Students enrolled in the Doctor of Philosophy in Clinical and Counseling Psychology have the opportunity to earn a Master's of Science in Psychology as they progress towards completion of the doctoral degree. Students interested in a graduate degree in Clinical and Counseling Psychology are encouraged to see the full program description of the doctoral program in Clinical and Counseling Psychology under the heading "The Graduate School" for more information.

REQUIREMENTS FOR ADMISSION

Students are admitted Fall Semester only. Applications to the Doctoral CCP Graduate Program should be completed by **December 15**. Applications to the Masters program in Behavioral and Brain Sciences should be completed by **February 15**. Late applications will be considered only if there are still openings available. Please note that the Psychology Graduate Program is a competitive program with a limited capacity and admits students to begin in the Fall Semester only.

In addition to the Graduate School application form and required supporting documentation, the Department of Psychology requires submission of a Psychology Department application form, statement of purpose, writing sample, and three letters of recommendation.

The following criteria supplement the Graduate School criteria for admission (see Categories of Admission).

REGULAR ADMISSION

In addition to meeting graduate school requirements for regular admission (see Categories of Admission), applicants to the Master of Science program must meet the following criteria:

1. Completion of at least 21 semester hours of psychology courses on the undergraduate level including at least one statistics course and one course in experimental methods/ research design. In addition, the following courses are highly recommended: abnormal psychology, biological psychology, learning, personality, social psychology, developmental psychology, and history/systems of psychology.
2. Summed score of 300 or better (1000 or better based on previous scores) on the verbal and quantitative sub tests of the General Test of the Graduate Record Examination.
3. Submission of an academic writing sample (e.g., a college term paper; preferably a paper that is psychology related) that is entirely the student's work and reflects the student's writing skills.
4. Three letters of recommendation and a statement of purpose.

Please note that these are the minimum requirements for admission. Admission is competitive and students who are admitted to the program may far surpass these minimums.

PROVISIONAL STANDING

Applicants who do not meet all requirements for regular admission but who show evidence of promise as a graduate student may, in exceptional cases, be considered for provisional admission if space is available in the program. The graduate admissions committee will consider provisional admission on an individual basis. Students admitted provisionally may be required to make up deficiencies in their undergraduate course work without graduate credit in addition to completing the normal degree requirements listed below.

Provisional students may apply for regular standing after satisfactory completion of the first nine semester hours of recommended graduate course work in psychology. Students must also remove any undergraduate deficiencies before being approved for change of status. Students in provisional standing who receive a grade lower than "B" in any graduate or undergraduate psychology course will be recommended to the Dean of the Graduate School for academic dismissal.

NON-DEGREE STUDENTS

Applicants for non-degree status in psychology are considered only in exceptional cases and will normally be admitted only if they meet regular admission standards. That is, they must have a 3.0 GPA overall and in psychology, a score of 300 or better on the verbal plus quantitative sub tests of the Graduate Record Examination, and must have completed the required undergraduate course work. Following admission, non-degree students must have permission of the department chair and director of graduate studies of the college for each course they wish to enroll in. Enrollment will be approved on a space-available basis with preference being given to degree students. Non-degree students must satisfy the same prerequisites and corequisites as degree students.

PROGRESS TOWARD DEGREE

All graduate students will be evaluated each semester to determine if they are making satisfactory progress toward completion of degree requirements. Students will be given written reports, including specific deficits, if they are not making satisfactory progress. Such students will have one semester to remedy the specific deficits listed or will be subject to dismissal from the program.

GRADUATE ASSISTANTSHIPS

Each year the Psychology Department recommends qualified applicants to the Dean of Graduate School for graduate assistantships. Applicants must be students in Regular Standing. The graduate admission committee strongly recommends that applicants for assistantships submit scores from the GRE Subject Test in Psychology as part of their application materials.

Application forms for graduate assistantships may be obtained from the Graduate School. The deadline for receipt of completed doctoral assistantship applications is December 15, and for the masters assistantships is February 15.

GRADUATE CURRICULUM

Behavioral and Brain Sciences Concentration

Students admitted to the Behavioral and Brain Sciences concentration must complete the curriculum described below and appropriate electives. A minimum of 36 hours of graduate courses are required.

Curriculum

Research Methodology/ Statistics	PSY 500, 501, 502
Biopsychology	PSY 510 or PSY 528 or PSY 575
Social	PSY 520 or PSY 522
Cognition	PSY 514 or PSY 516
Developmental	PSY 524 or PSY 570
Electives	

Thesis (PSY 599 - 6 to 9 hours) optional

Clinical and Counseling Psychology Concentration

Students in the Clinical and Counseling Ph.D., program will complete the following courses as requirements for a Master of Science degree in Psychology. In addition, students must complete either a major project in psychology (minimum of three hours required) or a thesis (minimum of six hours required). Satisfactory completion of PSY 530 with a minimum grade of "B" is required before a student is allowed to enrolled to enroll in any practicum course.

Curriculum

PSY 500	2 hrs	PSY 501	3 hrs
PSY 502	3 hrs	PSY 510	3 hrs
PSY 516	3 hrs	PSY 522	3 hrs
PSY 524	3 hrs	PSY 532	3 hrs
PSY 530	3 hrs		
PSY 540	3 hrs	PSY 542	3 hrs
PSY 544	3 hrs	PSY 550	3 hrs
PSY 556	6-9 hrs		
PSY 599	6 hrs		

DOCTOR OF PHILOSOPHY IN CLINICAL AND COUNSELING PSYCHOLOGY

The Doctor of Philosophy in Clinical and Counseling Psychology program is a collaborative effort between the Department of Psychology in the College of Arts and Science and the Department of Professional Studies in the College of Education. This program is designed to prepare professionals to provide the most effective types of psychological care for individuals and communities. The graduates of this program will have a set of competencies that will enable them to work successfully with a variety of professionals for the purposes of health promotion and to treat mental disorders. Please see the full program description under the heading "The Graduate School" for more information.

DESCRIPTIONS OF ALL PSYCHOLOGY (PSY) COURSES BEGIN ON PAGE 295.

DESCRIPTIONS OF ALL CLINICAL/ COUNSELING PSYCHOLOGY (CCP) COURSES BEGIN ON PAGE 188.

DEPARTMENT OF SOCIOLOGY, ANTHROPOLOGY AND SOCIAL WORK

Chair: Roma Stovall Hanks (251) 460-6347
Graduate Coordinator: Christopher R. Freed
Professors: P. Carr, Daley, Gartman, Hanks, Johnson, Moberg, Picou, Waselkov
Associate Professors: Bryan, Min, Mundy, N. Carr, Hudson, Marshall
Assistant Professors: Bryan, Freed, Gregoricka
Instructors: Haas, Pettway

Department of Sociology, Anthropology and Social Work web site
http://www.southalabama.edu/syansw

UNDERGRADUATE PROGRAMS

Sociology is the scientific study of human social patterns and processes. Broad questions which are addressed include: how are patterns (institutions, group structures and procedures) derived, maintained and changed; how do patterns interrelate and what are the implications of these patterns for the human condition?

Anthropology is the study of human biological and cultural variation, both past and present. It seeks to establish principles and generalizations about societies and their cultures, and to increase understanding among people.

Social Work is a profession devoted to helping people solve problems and issues in their lives. The social worker is guided by a professional code of ethics in assisting people to achieve an effective level of psychosocial functioning and effecting social change to improve the well being of everyone. Social work is founded on the principles of services; social and economic justice; personal dignity and worth; the importance of human relationships; integrity; and competence.

All first-time freshmen must successfully complete CAS 100: First Year Experience as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students who must enroll in the fall semester following entry.

SY 382 will fulfill the technology proficiency requirement for Sociology and Social Work majors and AN 454 for Anthropology majors.

REQUIREMENTS FOR A MAJOR IN SOCIOLOGY

A minimum of 35 semester hours in Sociology, including SY 109, SY 112, SY 376, SY 381 and SY 382. All sociology majors are also required to take AN 100 or 101. At least 17 of the 35 semester hours required for a major must be taken in upper division courses (300-400 level). SY 475 is recommended for students contemplating graduate work. No more than six semester hours of Directed Studies may be used in meeting the major requirements. Students pursuing a degree in Sociology also must have a minor in another discipline.

GENERAL EDUCATION REQUIREMENTS FOR SOCIOLOGY MAJORS

General Education Requirements for Sociology majors are specified in the College of Arts and Sciences section. Note that Area IV is partially satisfied by the major requirements specified above.

REQUIREMENTS FOR A MINOR IN SOCIOLOGY

A minimum of 18 semester hours in Sociology, including SY 109. No more than six semester hours of Directed Studies may be used in meeting the minor requirements.

REQUIREMENTS FOR A MAJOR IN ANTHROPOLOGY

A minimum of 34 semester hours in Anthropology, including AN 100, AN 101, AN 210, AN 454, a 300 or 400 level Archaeology course, and a 300 or 400 level Cultural Anthropology course. Majors must complete 15 of the 34 semester hours required in Anthropology at the 300 level or above. All Anthropology majors are also required to take SY 109. Students pursuing a degree in Anthropology also must have a minor in another discipline.

REQUIREMENTS FOR THE ANTHROPOLOGY DEPARTMENTAL HONORS PROGRAM

Students will work with a faculty mentor from the Anthropology Program and two other faculty members while pursuing an Honors Senior Thesis. Students must apply for the program, during any year of attendance at the University.

GENERAL EDUCATION REQUIREMENTS FOR ANTHROPOLOGY MAJORS

General Education Requirements for Anthropology majors are specified in the College of Arts and Sciences section. Note that Area IV is partially satisfied by the major requirements specified above, and that Area III is partially satisfied by AN 210.

REQUIREMENTS FOR A MINOR IN ANTHROPOLOGY

A minimum of 18 semester hours in Anthropology, including AN 100 and AN 101.

REQUIREMENTS FOR A MAJOR IN SOCIAL WORK

Social work is a profession devoted to helping people solve problems and issues in their lives. The social worker is guided by a professional code of ethics in assisting people to achieve an effective level of psychosocial functioning and effecting social change to improve the well being of everyone. Social work is founded on the principles of service; social and economic justice; personal dignity and worth; the importance of human relationships; integrity; and competence.

USA offers the Bachelor of Social Work program which prepares students for the entry level practice of social work. The bachelor's degree in social work prepares students for membership in professional organizations such as the National Association of Social Workers, and to sit for state licensing examinations.

The program is accredited by the Council on Social Work Education.

OVERVIEW OF THE PROGRAM

The BSW program at USA utilizes a generalist method of practice.

The program mission for Social Work at the University of South Alabama is to prepare competent, effective entry level social work professionals to address the social welfare needs of the Gulf Coast and Southwest Alabama regions. The program has a strong commitment to provide professional leadership to the region in terms of social work education, service to the community and in scholarly endeavors. In order to be attuned to the community context of exploration of both urban and rural community practice, the curriculum covers the foundations of the social work profession, the person-environment perspective, liberal arts preparation, diversity, poverty, social and economic justice, and a strong value base for practice.

Social work goals based on its mission are:

- Program graduates will be prepared for competent, entry level generalist professional social work with diverse groups and populations-at-risk in both urban and rural communities, and who are effective in enhancing human well-being.
- Program graduates will be able to employ critical thinking skills and research knowledge in order to ethically evaluate policy and practice, and advocate for change in organizations and communities, and add to social work knowledge.
- Program graduates will be capable of integrating social work knowledge, values and skills into entry level ethical social work practice with systems of all sizes with an emphasis on the needs of the Gulf Coast and Southwest Alabama.
- Program graduates will have the demonstrated capacity to identify with the profession and take an active role in professional leadership.
- The program faculty will be active in service to the broader Mobile and Southwest Alabama community and social work profession and contribute to the knowledge base of the profession, particularly in relation to regional issues.

SOCIAL WORK ADMISSION POLICY AND PROCEDURES

The social work program has a policy and procedures for admission to the major that are consistent with the goals of the BSW program. The policies and procedures insure that students have a liberal arts base, demonstrate a beginning knowledge of social work and identification with the profession, have content in diversity, populations-at-risk, and social and economic justice, and can demonstrate effective communication skills prior to entry into the professional foundation.

ADMISSION POLICY

Students who want to major in social work are admitted to the pre-professional social work major and remain in the pre-professional major until they meet requirements to be admitted into the social work major. The policy is applicable to all students: new freshmen, transfer students, and students changing their major. In order to be admitted into the social work major, students must meet the following criteria:

- Have a 2.60 overall GPA in courses taken at USA.
- Have completed SW 200, SW 212, and SW 214 with a grade of "C" or better.
- Have completed the BLY 101/102 or BLY 121/122 sequences or BLY 101 or 121 and a second lab science with a grade of "C" or better in both courses and labs.
- Have completed EH 101 and EH 102 with a grade of "C" or better.
- Have completed the Math requirement.
- Have completed a minimum of 60 credit hours.
- Have completed the Statistics requirement (ST 210).
- Meet all requirements specified by the program for demonstrating behavior consistent with the NASW Code of Ethics.

Students who are considering pursuing a major in social work should consult with a social work advisor at the earliest opportunity. Students entering the pre-professional social work major who have 50 or more credit hours are strongly encouraged to take SW 200, SW 212 and SW 214 in their first semester. Students are also encouraged to consider the Spanish sequence to complete their Foreign language requirement. There may be factors in a student's past that could affect the ability to obtain a professional social work license. Examples of factors that may need to discussed with the advisor might include conviction of a felony or misdemeanor, or the revocation or surrender of another professional license.

ADMISSION PROCEDURES

Once the student has completed the specified requirements, the student must make application for admission to the social work major. Students are encouraged to consult with their social work advisor prior to submitting this application.

The student's application for admission to the major will be reviewed by the BSW program faculty and a determination will be made on whether or not the student will be admitted to the major. Following this determination the student will be notified in writing concerning the faculty decision.

Once the student is admitted to the major, the program will initiate a change of major to the university. The student will then need to meet with his/her advisor to sign off on a form indicating student understanding of the criteria for continuation as a social work major. The criteria for continuation as a major include:

- Maintain a 2.50 grade-point average in social work courses.
- Maintain an overall 2.60 grade-point average at USA.
- Demonstrate acceptable professional conduct, personal integrity and emotional stability requisite for effective social work practice.
- Demonstrate identification with the profession of social work.
- Demonstrate behavior consistent with Code of Ethics for the National Association of Social Workers.

Students who have not been admitted to the major may not enroll for SW 302, SW 310, SW 401, SW 402, SW 412 or SW 414.

FRESHMAN and SOPHOMORE YEARS - Pre-professional Social Work

Written Composition
EH 101 English Composition I (min gr. C)
EH 102 English Composition II (min gr. C)

Natural Sciences and Math
MA 110 or higher
BLY 101 and lab (4 cr. hrs.)
Lab Science (4 cr. hrs.)
ST 210 Stat Reasoning & App

History/Social and Behavioral Sciences (no more than 6 hrs. in one discipline)
History elective* (HY 101, 102, 135, or 136)
SY 109 Intro to Sociology
PSY 120 Intro to Psychology
ECO 216 Macroeconomics OR AN 100 Intro to Cultural AN OR 2nd HY to complete sequence

Humanities and Fine Arts (no more than 6 hrs. in one discipline)
Fine Arts Elective (ARH 100, ARH 103, ARH 123, ARS 101, DRA 110, MUL 101)
Literature elective* (EH 215, 216, 225, 235, or 236)
2nd Lit to complete sequence OR Humanities/FA/Literature elective if HY seq completed
Humanities/FA/Elective

Additional Major, College, and USA requirements
CA 110 Public Speaking
Foreign Language I
Foreign Language II
CIS 150 Intro to Comp Applications or passing score on CPE
CAS 100 New Student Seminar (freshmen only)
SW 200 Intro to Social Work (min gr. C)
SW 212 Intro to Social Welfare (min gr. C)
SW 214 Soc Work Skills and Field Experience (min gr. C)

Total Credits: 67 for freshman, 65 for transfer students

*Must have one history elective and one literature elective. In addition, you must choose a second history or literature to complete a two-part sequence. (Part I & II of same subject.) Only 64 hours can be transferred into USA from a Community or Junior College.

Social Work Major

Junior Year : 1st semester
SW 201 HB & SE I
SY 381 Soc Research Meth I
SE 301 Social Welfare Policy
SW Field of Practice Elective

Junior Year: 2nd semester
SW 302 HB & SE II
SY 382 Soc Res Meth II
SW 401 Generalist Practice I
SW 310 Comm. Context
SY 220 Marriage & Family

Senior Year: 1st semester
SW 402 Generalist Practice II
SY 445 Maj/Min Relations (W)

Senior Year: 2nd semester
SW 412 Field Instr (12 cr)
SW 414 Senior Seminar (W)
Electives (if needed) to reach 128 hours

SOCIAL WORK AS A SECOND BACHELOR'S DEGREE

Students who already have an undergraduate degree and wish to pursue the Bachelor of Social Work as a second degree must meet the following requirements.

- Meet the general education requirements for the College of Arts and Sciences
- Meet the general education requirements specific to Social Work including:
  - Biology
  - Statistics
  - Diversity
- Complete the following courses in the major:
  - SW 200
  - SW 201
  - SW 212
  - SW 214
  - SW 301
  - SW 302
  - SW 401
  - SW 402
  - SW 412
  - SW 414
  - SW Elective
  - SY 220
  - SY 381 & SY 382
  - SY 445

Total: 55 Semester Credit Hours

TRANSFER STUDENTS

In order to receive a degree in social work from the University of South Alabama, the student must complete SW 310, SW 401, SW 402, SW 412, and SW 414 and meet the university residency requirements.

Social work course credit will only be granted for courses transferred from programs accredited by the Council on Social Work Education or in CSWE Candidacy. The program director will evaluate social work transfer credits to determine equivalency. No credit will be given for life or prior work experience.

MASTER OF ARTS PROGRAM IN SOCIOLOGY

The Master of Arts Program in Sociology provides the student with training in advanced methods of sociological analysis and increased knowledge of specialized areas in sociology. The student may choose either the basic research track or the applied research track. The basic research track is designed to prepare students for admission to doctoral programs in sociology. The applied research track is designed for students whose current situations or immediate goals involve careers in teaching, government, industry, or social services. Each program offers specialized training in a number of areas, including crime and deviance, environmental sociology, family, gender, gerontology, medical sociology, and the sociology of religion. Students may be enrolled in the University's Gerontology Certification program while pursuing the master's degree in sociology.

REQUIREMENTS FOR ADMISSION

Students are admitted each semester. The following criteria supplement the Graduate School criteria (see Categories of Admission).

REGULAR ADMISSION

1. Undergraduate major in a social science from an accredited institution of higher education.
2. "B" average in undergraduate courses in social science theory, research methods, and statistics.
3. Combined score of 300 or better on the verbal and quantitative sub tests of the General Test of the Graduate Record Examination.
4. Submission of a statement of purpose, written by the applicant, which provides a brief intellectual autobiography of the student, an indication of special areas of interest within sociology, and a description of career goals. Statement should be typed, single spaced, and 1 to 1.5 pages in length.
5. Submission of recommendation that documents the student's ability and willingness to work cooperatively and productively with faculty, students and staff.

PROVISIONAL ADMISSION

Applicants who do not meet all the requirements for full standing may be admitted provisionally. A minimum undergraduate GPA of 2.5 and submission of GRE scores are required

for provisional admission to the Master of Arts Program in Sociology. Admission decisions are based on the applicant's entire application package. Applicants with lower GPA's or GRE scores below 300 may be admitted only when other outstanding credentials warrant exception.

Students meeting requirements for provisional admission must meet two requirements before being considered for regular admission: first, satisfy all conditions of admission stated in the admission letter including any deficiencies in undergraduate theory, methods or statistics; second, in order to be eligible for regular status, the provisionally admitted student must have accrued a minimum of nine (9) semester hours of course work taken at the University of South Alabama for graduate credit with at least a "B" average in all such work attempted. Per Graduate School and Departmental requirements, no more than 15 semester hours of graduate credit earned as a Provisional Admission student may be approved for change of status to Regular Admission. The Provisional student who does not have the required "B" average upon completing 15 semester hours of graduate credit will be subject to dismissal from the graduate program and the Graduate School. Undergraduate courses in sociological theory and/or methods may be required upon Provisional Admission to the Master of Arts Program in Sociology. These courses are considered by the Department to be remedial and will not satisfy requirements for the master's degree. In order to change from Provisional to Regular status, a student must have satisfied all provisions stated in the admission letter.

NON-DEGREE ADMISSION

Students holding baccalaureate degrees from accredited institutions of higher education who are not interested in earning graduate degrees in Sociology or who need to complete prerequisites for particular graduate degree programs may enroll as Non-Degree graduate students. A suitable background for the courses to be taken is expected, i.e., at least one undergraduate course (or equivalent) in sociological theory and at least one undergraduate course (or equivalent) in sociological research methods. Because of limited class size and resources, the Department may limit the enrollment of Non-Degree students. After admission, permission to enter each course is obtained from the Graduate Director/Coordinator in the Department. Unless a non-degree applicant's academic record demonstrates prior mastery of sociological theory and methods, a minimum of one graduate-level sociological theory course and one graduate-level sociological methods course must be taken while pursuing non-degree studies at USA.

Non-Degree students subsequently seeking admission into the Master of Arts Program in Sociology must submit a formal application through the Office of Admissions to the Graduate Director/Coordinator of the Department. Students must meet departmental admissions criteria described under regular or provisional admissions. Students may be subject to further conditions, such as the completion of necessary undergraduate background courses and/or specific graduate-level courses. The student's record in graduate courses taken while in the Non-Degree status may be applied toward a graduate degree if the student is later admitted to a graduate program of study. Please refer to the Graduate School Requirements for non-degree admission.

ACADEMIC STANDARDS

Any student who receives two grades lower than "B" in graduate courses will be recommended to the Dean of the Graduate School for academic dismissal. Provisionally admitted or non-degree students must meet the conditions stated in their admission letter.

DEGREE REQUIREMENTS, BASIC RESEARCH TRACK

1. A minimum of thirty-seven semester hours beyond the bachelor's degree with a grade of "A" or "B". At least twenty-five of these hours must be in sociology.
2. Completion of core requirements: SY 506, SY 508, and SY 509.
3. Completion and Review of Graduate Portfolio. This includes a self-assessment written by the student that describes their strengths and weaknesses as they perceive them. The Graduate Portfolio should address the student's progress through the program and readiness for the thesis or research project. The Graduate Portfolio must also include three written papers that illustrate what the student considers to be their best work completed in the Master of Arts Program in Sociology at USA. These submissions must include at least one paper from a methodology course and one paper from a theory course. Submissions must be "clean copies", with no marking from either the student or other faculty. Included with the submission should be a short description of the assignment it fulfilled. The graduate faculty will collectively review the portfolio and respond to the submission with a letter describing their assessment of the student's materials and recommendations for future work. The Graduate Portfolio will be submitted after the student completes at least 15 hours of coursework, and no more than 21 hours of coursework, including required courses. The faculty review will be provided in writing three weeks after the submission of materials. Portfolios will only be reviewed during the fall or spring academic terms and will be evaluated as Pass or Fail with one opportunity for revision. Two consecutive portfolios evaluated as Fail will result in dismissal from the Master of Arts Program in Sociology.
4. Completion of SY 594, a directed studies course focused on the area of research interest and resulting in a thesis prospectus. This course must be taken after the portfolio review.
5. Completion of a thesis representing original research. Six semester hours will be granted for the thesis. The thesis proposal and the final thesis must be approved by a committee that includes at least three members of the Graduate Faculty. The Chair of the Committee must be a member of the Sociology Graduate Faculty. Committee membership must minimally meet the following two criteria: 1) one theorist and one methodologist either from the Sociology faculty or other Graduate Faculty as appropriate and 2) one additional member of the Graduate Faculty from outside the Department of Sociology, Anthropology and Social Work. After the final product is approved by the Committee and Committee Chair, a PDF of the thesis must be supplied to the Department Chair and the departmental secretary. The Department Chair will approve the thesis after the PDF is submitted. It is the responsibility of the student to make the PDF and to send it to the Department Chair and to the departmental secretary. The Thesis preparation and approval process must follow graduate school policies.
6. There will be an oral defense of both the proposal and the final thesis. The proposal and thesis defense will include a formal presentation of the research. The proposal defense will generate recommendations from the Committee and these recommendations may be required for the final thesis. The thesis defense will involve the final product, including any changes discussed at the proposal defense. It may also include questions related to graduate coursework more generally. These meetings will be scored Pass or Fail. Students have two opportunities to pass their thesis defense.

BASIC RESEARCH TRACK SUMMARY

Students must participate in an orientation event (non-credit) during their first semester in the program.

Core Courses (SY 506, SY 508, and SY 509)	10
Directed Study (SY 594)	3
Thesis (SY 599)	6
Elective Courses	18
Total Credit Hours	**37**

DEGREE REQUIREMENTS, APPLIED RESEARCH TRACK

1. A minimum of thirty-seven semester hours beyond the bachelor's degree with a grade of "A" or "B". At least twenty-five of these hours must be in sociology.
2. Completion of core requirements: SY 506, SY 508, and SY 509.
3. Completion of SY 512 (Applied Sociology) and SY 596 (Internship: Sociology).
4. Completion and Review of Graduate Portfolio. This includes a self-assessment written by the student that describes their strengths and weaknesses as they perceive them. The Graduate Portfolio should address the student's progress through the program and readiness for the thesis or research project. The Graduate Portfolio must also include three written papers that illustrate what the student considers to be their best work completed in the Master of Arts Program in Sociology at USA. These submissions must include at least one paper from a methodology course and one paper from a theory course. Submissions must be "clean copies", with no marking from either the student or other faculty. Included with the submission should be a short description of the assignment it fulfilled. The graduate faculty will collectively

review the portfolio and respond to the submission with a letter describing their assessment of the student's materials and recommendations for future work. The Graduate Portfolio will be submitted after the student completes at least 15 hours of course work and no more than 21 hours of course work, including required courses. The faculty review will be provided in writing three weeks after the submission of materials. Portfolios will only be reviewed during the fall or spring academic terms and will be evaluated as Pass or Fail with one opportunity for revision. Two consecutive portfolios evaluated as Fail will result in dismissal from the Master of Arts Program in Sociology.

5. Completion of Internship: Sociology (SY 596) in which a student spends no less than 100 and a maximum of 200 hours working in a local agency under an on-site supervisor and with a USA faculty member as academic supervisor.
6. Completion of Applied Research project: The applied project includes a proposal of the research and final document that must be approved by a committee that includes at least three members of the Graduate Faculty. The Chair of the Committee must be a member of the Sociology Graduate Faculty. Committee membership must minimally meet the following two criteria: 1) one theorist and one methodologist either from the Sociology faculty or other Graduate Faculty as appropriate and 2) one additional member of the Graduate Faculty from outside the Department of Sociology, Anthropology and Social Work. After the final product is approved by the Committee and Committee Chair, a PDF of the project must be supplied to the Department Chair and the departmental secretary. The Department Chair will approve the research project after the PDF is submitted. It is the responsibility of the student to make the PDF and to send it to the Department Chair and to the department secretary.
7. There will be an oral presentation of the Applied Research project in a professional forum that may include, but is not limited to a professional meeting, a university lecture, or a community or agency presentation. If these opportunities are not available, the student will schedule a presentation in the Department of Sociology, Anthropology, and Social Work. Faculty must be notified in advance of this presentation and invited to attend.

APPLIED RESEARCH TRACK SUMMARY

Students must participate in an orientation event (non-credit) during their first semester in the program.

Core Courses (SY 506, SY 508, and SY 509)	10
Applied Sociology (SY 512)	3
Internship: Sociology (SY 596)	3
Research Project in Sociology (SY 595)	3
Elective Courses	18
Total Credit Hours	**37**

DESCRIPTIONS OF ALL SOCIOLOGY (SY) COURSES BEGIN ON PAGE 310.

DESCRIPTIONS OF ALL ANTHROPOLOGY(AN) COURSES BEGIN ON PAGE 171.

DESCRIPTIONS OF ALL SOCIAL WORK (SW) COURSES BEGIN ON PAGE 310.

DEPARTMENT OF VISUAL ARTS

Chair: Jason Guynes (251) 461-1438
Professors: Guynes, Shamback
Associate Professor: Gibbs, Johnson, Wright
Assistant Professors: Culler, Lindeman, Patterson, Richards, Skiadas
Instructors: Burns, Moore

Department of Visual Arts website
http://www.southalabama.edu/art

The goals of the Department of Visual Arts include preparing students for graduate work or careers in the visual arts; providing suitable programs and courses for persons who want to study or practice the arts for their own personal development and cultural enrichment; and introducing students to their cultural tradition.

The Department of Visual Arts offers Bachelor of Arts and the Bachelor of Fine Arts degree with concentrations in Art History, Ceramics, Graphic Design, Painting, Photography, Sculpture, Glass, and Printmaking.

These degree programs are intended for students who plan to pursue careers in Art or Art History, which will typically require their having continued their studies at the graduate level.

The Department offers minors in Art and in Art History.

All first-time freshmen must successfully complete CAS 100: First Year Experience as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students who must enroll in the fall semester following entry. Students receiving a B.A. in Visual Arts must take ARS 396 (Studio Art students) or ARH 493 (Art History students) to fulfill the technology requirement. Students receiving a B.F.A. in Studio Art must take ARS 396 (Studio students), or ARS 479 (Graphic Design students), or ARH 493 (Art History students) to fulfill the technology requirement.

GRAPHIC DESIGN LAPTOP POLICY AND COMPUTER REQUIREMENTS

All students enrolling in ARS 271, Introduction to Graphic Design, and all subsequent graphic design courses are required to own a personal laptop computer that conforms to the graphic design computer requirements. Students are expected to have a computer on the first day of classes. This is a one-student, one-machine requirement. Any student who does not have a laptop by the end of the first week of the semester will be administratively withdrawn from any course requiring the laptop. There are no exceptions to the policy.

This purpose of this policy is to ensure that students have adequate access to computing resources and obtain an extensive working knowledge of the Macintosh system. Possession of a laptop allows students access to printers and other available resources on campus and elsewhere. In addition, owning a laptop aids students with job searches and job preparation as well as provides necessary resources for freelance opportunities that otherwise would not be available. Computer requirements are available in the Department of Visual Arts office and in the graphic design program.

REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE IN VISUAL ART

The B.A. program requires completion of the general education requirements in the College of Arts and Sciences, requirements for a minor, and enough elective courses for credit hours to total 128. At least 32 hours of courses numbered 300 or higher must be taken at this University, including a minimum of 15 hours of upper-division art courses. Two courses must be designated writing credit (W) courses, at least one of which is in the art program. A minimum of 39 hours in art history and studio courses is required. All students must complete the core requirements and those listed under one of two concentrations, art history or art studio, as follows:

A. Core courses for all BA concentrations in art: 15 credit hours as follows:
ARH 103, 123, 344 ..... 9 hrs
ARS 123, 124 ..... 6 hrs

B. Choose from one of the following concentrations:
Studio Art: 24 hours

In addition to the core requirements, 24 hours in studio art courses of which at least 12 hours are at the 300 or 400 levels. Studio students must take ARS 396 Professional Practices.

Art History: 24 hours

In addition to the core requirements, 24 hours in art history courses including ARH 492 Seminar, ARH 493 Art History Methodologies, and at least one 300 or 400 level course in each of the following areas:

1. Ancient Art - ARH 304, ARH 306, ARH 406
2. Medieval Art - ARH 415
3. Renaissance Art and Baroque Art - ARH 322, ARH 324, ARH 326, ARH 330, ARH 434
4. Modern Art - ARH 340, ARH 345, ARH 346

Seminar and Special Topics courses may be used to satisfy area requirements.

Language Requirements in Art History:

The art history concentration requires two years (12 hours) of university level study or equivalent proficiency in French or German. French and German are the preferred languages because they are required by most M.A. and Ph.D. programs in art history.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF FINE ARTS IN STUDIO ART

A minimum of 128 hours of required and elective courses. At least 32 hours in courses numbered 300 or higher must be taken at this University, including a minimum of 12 hours in the primary concentration, and 6 hours in a secondary concentration. Two courses, including one in Studio Art, must be designated "Writing Across the Curriculum" (W) courses.

General Education Requirements

Written composition: EH 101, EH 102 .... 6 hrs
Oral communication: CA 110..... 3 hrs

Fine Arts - Art History:

ARH 103, ARH 123, ARH 344, 15 hrs
6 hours in elective Art History courses

Humanities:
One approved course in literature..... 3 hrs
(EH 215, EH 216, EH 225, EH 226,
EH 235, EH 236)

History, Social and Behavioral Sciences:
HY 101-102 or HY 135-136..... 6 hrs
Two approved 100/200 level courses in... 6 hrs
Anthropology, Economics, Geography,
International Studies, Political Science,
Psychology or Sociology (AN 100, AN 101,
ECO 215, ECO 216, GEO 114, GEO 115,
IS 100, PSC 130, PSY 120, PSY 250,
SY 109, SY 112)

Natural Sciences and Mathematics:
MA 110, 112, or higher level course..... 3 hrs
Two courses in laboratory sciences..... 8 hrs
(AN 210, BLY 101, BLY 102, CH 101,
CH 103, CH 131 or CH 141, CH 132
or CH 141, GEO 101, GEO 102, GY 111,
GY 112, PH 101, PH 104,
PH 114 or PH 201, PH 115 or PH 202)

Art Core Requirement

a. Drawing: five course including..... 15 hrs
ARS 121, ARS 122, one or two 200 level courses, and at least one 300 or higher level drawing course, or ARS 326
b. Design: ARS 123, ARS 124 ..... 6 hrs
c. One of the following:
Professional Practices
(studio students): ARS 396..... 15 hrs
Business Practices for Graphic Design
(graphic design students): ARS 479.... 3 hrs
Art History Methodologies
(art history students): ARH 493..... 3 hrs.

Courses in section "c" satisfy technology requirements.

Studio Concentration Requirements

Two options are available. See below for specific requirements for each Studio Concentration.

Option One:

A Primary Studio Concentration in Ceramics, Glass, Graphic Design, Painting, Photography, Printmaking, or Sculpture; and a Secondary Studio Concentration in another studio area.

Senior Thesis or Senior Portfolio Requirements

Students with the primary concentration in Graphic Design take ARS 488 (three hours). All other option one students take ARS 498 (six hours).

Primary Studio Concentrations

Primary Studio Concentrations are offered in the areas of Ceramics, Glass, Graphic Design, Painting, Photography, Printmaking, and Sculpture.

a. Ceramics: 24 hours in Ceramics courses.
b. Graphic Design: 30 hours in ARS 271, ARS 272, ARS 273, ARS 372, ARS 373, ARS 374, ARS 375 or ARS 376, ARS 472, ARS 473, and either ARS 479 or ARS 496. (see admissions process below).
c. Painting: 24 hours in Painting courses, including ARS 231 and ARS 232.
d. Photography: 24 hours in Photography courses, including ARS 281.
e. Sculpture: 24 hours in Sculpture courses.
f. Printmaking: 24 hours in Printmaking courses.
g. Glass: 24 hours in Glass courses.

Secondary Studio Concentrations

Fifteen hours in studio areas. Secondary concentrations are available in Ceramics, Glass, Painting, Photography, Printmaking, Sculpture and Interdisciplinary. Interdisciplinary Secondary consists of 9 credits in one area and 6 credits in any combination of the other areas.

Option Two:

A primary concentration in Art History, including ARH 492, ARH 493, and 24 hours in Art History, beyond the General Education Requirements, with at least one course in each of the following areas:

1. Ancient Art - ARH 304, ARH 306, ARH 406.
2. Medieval Art - ARH 415
3. Renaissance Art and Baroque Art - ARH 322, ARH 324, ARH 326, ARH 330, ARH 434.
4. Modern Art - ARH 340, ARH 345, ARH 346.

ARH 290 and ARH 390, Special Topics, may be used to satisfy area requirements.
A Secondary Concentration in one of the Studio Art areas is also required for option two.

BFA PROGRAM IN GRAPHIC DESIGN ADMISSIONS PROCESS

Students who wish to pursue a degree in graphic design at the University of South Alabama may apply for admission to the BFA program in graphic design after completing ARS 271 Introduction to Graphic Design, ARS 272 Typography, and ARS 273 Graphic Design Applications. Acceptance into the program is determined by a review process which is coordinated each spring semester. Only those admitted to the program are allowed to enroll in upper-level graphic design courses.

Review Process

Upon completion of the aforementioned courses, each student who wishes to be considered for admission to the BFA program in graphic design will assemble a portfolio of his/her work to be presented for evaluation by the Graphic Design Review Board. The portfolio should consist of ten to fifteen pieces that best display the student's abilities in the area of graphic design. A limited number of these portfolio pieces may come from other studio art areas but the emphasis should be on works that are relevant to graphic design. Portfolio pieces should reflect the student's creative and conceptual abilities, demonstrate an ability to successfully work with typography, show a strong working knowledge of graphic design software, and display the student's understanding of the basic principles of design and how best to incorporate these principles compositionally. The student's portfolio will also be evaluated in terms of presentation and craftsmanship. Students accepted into the program will be those who exhibit strong design sensibilities and have potential to excel in the upper level courses.

Written Statement of Intent

In conjunction with the portfolio of work, each student must submit a minimum 500 word essay outlining why they feel they should be accepted into the program and what they intend to accomplish with a graphic design degree. This essay will be submitted along with the portfolio. Attention should be given to presentation and writing quality.

Acceptance into the Graphic Design Program

Students are permitted to apply for the graphic design program only twice. Upon acceptance, the chosen students will be allowed to register for upper level graphic design classes and continue their studies toward the BFA in graphic design as outlined by the University of South Alabama Bulletin. Students must register for designated graphic design classes for the fall semester following acceptance to the program. Failure to register for classes or failure to progress through the graphic design curriculum in a timely manner will result in revocation of admission status.

REQUIREMENTS FOR A DOUBLE PRIMARY CONCENTRATION

In lieu of a secondary concentration, students may complete a second primary concentration. This will require course work in excess of the 128 hours minimum required for the B.F.A. and may delay time to graduation. To complete a Double Primary Concentration, students must complete Primary Concentration requirements in two separate areas including Senior Thesis or Senior Portfolio where applicable.

REQUIREMENTS FOR A MINOR IN STUDIO ART

A minimum of 21 hours in Studio Art of which nine hours must be taken at this university. At least three hours must be in courses numbered 300 or higher taken at this university.

REQUIREMENTS FOR A MINOR IN ART HISTORY

A minimum of 21 hours in Art History of which nine hours must be taken at this university. At least six hours must be in courses numbered 300 or higher taken at this university. ARH 100 will not count toward the minor in Art History.

GRADUATE STUDIES

The University of South Alabama offers a Masters in Art Education and an Alternative Masters in Art Education which are housed in the College of Education. Course work in the visual arts is within the Department of Visual Arts. Further information regarding these degree programs is listed in the Bulletin under graduate programs in the College of Education.

DESCRIPTIONS OF ALL ART HISTORY (ARH) COURSES BEGIN ON PAGE 172.

DESCRIPTIONS OF ALL STUDIO ART (ARS) COURSES BEGIN ON PAGE 173.

MITCHELL COLLEGE OF BUSINESS

Dean: Bob G. Wood (251) 460-6419
Associate Dean: James R. Hardin
Director of Graduate Studies: Mohan Menon (251) 460-6418
Mitchell College of Business Student Services (251) 460-7167

Mitchell College of Business web site
http://www.southalabama.edu/mcob

DEPARTMENTS OF INSTRUCTION
Department of Accounting
Department of Economics and Finance
Department of Management
Department of Marketing

The Mitchell College of Business offers the degrees of Bachelor of Science, Master of Accounting, Master of Business Administration, and Doctor of Business Administration.

The foundation of the College is quality instruction in all undergraduate and graduate programs. Our instructional mission is to prepare our graduate and undergraduate students for professional careers in the fields of accounting, economics, finance, management, and marketing through a curriculum designed for both broad exposure to each field and in-depth coverage within a specific field of choice.

MISSION, GOALS AND OBJECTIVES

To provide an internationally accredited business education program to qualified undergraduate and graduate students, to support the economic development of the region and contribute to the continuing success of the University. We accomplish this mission through quality instruction, faculty scholarship, and external services.

PRIORITIES

I. Instruction

The highest responsibility of the College is the instruction of its students and primary emphasis is placed on excellent teaching. In so doing, the College affirms its commitment to the University focus on excellence, lifelong learning and the education of the whole person. The College fulfills its instructional mission through the B.S. degree program for undergraduates and the M.B.A. and Master of Accounting programs at the graduate level.

II. Intellectual Contributions

The College encourages and supports faculty basic and applied scholarship as well as instructional development for the purposes of expanding knowledge, enhancing classroom instruction, and contributing to regional economic development. Scholarship is broadly defined to include investigative efforts that lead to the origination, the integration, or the application of knowledge pertinent to the various fields of business. A program of continuing scholarship is the responsibility of each faculty member. The College is responsible for using its resources, including faculty recruiting, to encourage, support, and reward faculty scholarship.

III. Service

The College's service mission is to engage in activities which support and contribute to the development of the University, community and region, and to provide a vehicle for the continuing development of faculty and staff through interaction with the College's numerous constituents. This mission is accomplished through participation in the College's external programs, and through the efforts of individual faculty and staff.

THE CENTER FOR REAL ESTATE AND ECONOMIC DEVELOPMENT

The Center for Real Estate and Economic Development provides students with educational opportunities to increase their knowledge of real estate markets and the impact of economic development on the community.

THE MELTON CENTER FOR ENTREPRENEURSHIP AND INNOVATION

The Melton Center for Entrepreneurship and Innovation engages in education, research, and outreach that is focused on the areas of family business issues, social entrepreneurship, technology transfer to successful business operations, and small business sustainability. The activities of the Center directly support the service mission of the Mitchell College of Business to contribute to the economic development of the region.

SMALL BUSINESS DEVELOPMENT CENTER

The University of South Alabama Small Business Development Center is one of eleven Small Business Development Centers located in universities around the State. Funded jointly by the Small Business Administration and the University, the Center offers business services to business people in a six-county area of southwest Alabama. The SBDC provides free one-on-one counseling, and conducts workshops that address the problems of the business community.

CAREER SERVICES CENTER

The University Career Services Center acts as a liaison between employers and students. Business and professional firms of national significance visit the campus regularly to interview prospective graduates.

SCHOLARSHIPS

The Mitchell College of Business offers prestigious scholarships to entering freshmen students from Alabama who are majoring in the Mitchell College of Business. Contact the Office of Enrollment Services, (251) 460-6494, for application procedures, deadline dates and more information about the Abraham Mitchell Business Scholarships. In addition, scholarships for eligible students in the Mitchell College of Business are made available by local and regional firms in Accounting, Management, Marketing, Real Estate, and Finance. (Refer to the Financial Aid section of this **Bulletin** for details.)

COOPERATIVE EDUCATION PROGRAM

The Cooperative Education Program is available to students in the Mitchell College of Business. This program offers qualifying students opportunities to work part-time while attending school as a full-time student or alternate full-time employment with course work on a rotating semester basis. For details contact the Director, Career Services Center, 2100 Meisler Hall, University of South Alabama, Mobile, Alabama 36688-0002, (251) 460-6188.

ADMISSION TO THE MITCHELL COLLEGE OF BUSINESS

Students may transfer from other colleges in the University to the Mitchell College of Business. Degree requirements are defined by the University Bulletin in effect for the semester of entry into the College.

A student's counseling file must be available for evaluation of courses required for a degree in Business.

TRANSFER STUDENTS

The Office of Student Services of the Mitchell College of Business evaluates for credit all courses transferred from other colleges and universities. Degree credit will be given only for those courses which meet the requirements for the degree program of the College.

Students transferring from a junior college may have a maximum of 61 semester hours accepted toward the degree program. No junior- or senior-level courses listed in the curriculum of the Mitchell College of Business will be accepted from a junior college for degree credit.

TRANSIENT COURSE CREDIT

Students enrolled in the Mitchell College of Business must receive prior approval from the MCOB Dean's Office before enrolling in any courses at another institution. Approval will not be granted for dual enrollment for any semester in which the requested course is taught at USA.

If the course is a major requirement, prior approval of the Department Chair is also required.

Transient course approval may be granted on one of the following conditions:

1. Students who are not residents of the area and who leave USA to return home for one or more semesters.
2. Students who move to another area prior to completing all degree requirements but who have met the residency requirements for the Mitchell College of Business.
3. Students who are scheduled to graduate and the course will not be offered at USA during the final term.

FAILURE TO OBTAIN PRIOR APPROVAL MAY RESULT IN LOSS OF TRANSFER CREDIT FOR THE COURSE WORK. The **Transient Approval** form may be downloaded from the MCOB web site and forwarded to the Office of Student Services for consideration.

STUDENT CLASSIFICATIONS, RESPONSIBILITY AND ADVISING

Student classifications in MCOB are Pre-Business, Business Administration, and Declaration of a Major. Freshmen admitted as exceptions to the University of South Alabama admissions

criteria and freshmen that are required to complete one or more developmental studies courses will be admitted in the Pre-Business Classification. Students in the Pre-Business Classification will be restricted to enrollment in General Education classes, which can include CIS 150 and BUS 150.

In order to advance to the Business Administration classification, students admitted in the Pre-Business classification must successfully complete any developmental studies requirements and 24 or more of the approved General Education courses with a GPA of 2.0 or higher.

All students, other than those in the Pre-Business classification, enrolling in the College will list Business Administration as their major area until they have completed the 200-level Business Techniques Core listed below with a minimum 2.0 in the area and a 2.0 USA GPA.

Each student enrolled in the Mitchell College of Business must complete the following Basic Business Techniques Core before enrolling in any course of the MCOB 300 or 400 series:

ACC 211, ACC 212	BUS 245, BUS 255
BUS 265	CIS 250
ECO 215, ECO 216	EH 101, EH 102
MA 120	

After completion of the above 200-level Business Core, each student must declare a major selected from the fields of Accounting, Economics and Finance, Management, Marketing, or General Business. In Economics and Finance, Management, and Marketing, a concentration must also be declared. Those planning to declare Accounting as a major must also complete ACC 371 and ACC 331 with a C or better before declaring Accounting. After declaring a major, students will be advised by a faculty advisor from that area.

Students attending other colleges, including junior colleges, who are planning to enter the Mitchell College of Business must take at least fifty percent of the required business credit hours and at least six (6) out of nine (9) major courses at the University of South Alabama.

Each student is responsible for meeting all requirements of the degree program. Before registering for any course, students must complete any prerequisites listed in course descriptions in this **Bulletin**. The Office of Student Services is available to all students for the evaluation of their degree-program record. When an exception is made in a student's program, written approval of the exception by the Associate Dean must be placed in the student's file. Failure to properly document exceptions may delay graduation.

REQUIREMENTS FOR SECOND MAJOR IN BUSINESS

Undergraduate students enrolled in the Mitchell College of Business who plan to add a second major to their curriculum must meet all requirements for the second major. Courses included in the first major cannot be counted toward the second major requirements.

DUAL MAJOR ACROSS COLLEGES

Students not enrolled in the Mitchell College of Business and interested in a dual major in business must meet with an adviser in the Office of Student Services for information.

MINORS IN THE MITCHELL COLLEGE OF BUSINESS

Students in other colleges may elect, with the approval of their department chair, a minor in the Mitchell College of Business. A 2.0 GPA is required for the courses applied toward the minor. Students must complete at least 50% of the courses counted towards the minor at the University of South Alabama. Courses used for a first business minor may not be used for a second business minor.

ECONOMICS MINOR

A minimum of 18 semester hours in Economics including:

ECO 215	ECO 216
ECO 315 or	ECO 316

Plus nine semester hours of other upper-level Economic Electives numbered 301 or above.

GENERAL BUSINESS MINOR

ACC 211	ECO 215
MGT 300	MKT 320

Plus three semester hours of Management Electives and three semester hours of Business Elective, numbered 300 or above for which the student meets the prerequisites.

GENERAL MANAGEMENT MINOR

MGT 300	MGT 340
MGT 305	MGT 351

Plus six semester hours of Management Electives, numbered 300 or above for which the student meets the prerequisites.

MARKETING MINOR

MKT 320	MKT 374
MKT 380	

Plus nine semester hours of other upper-level Marketing Electives numbered 300 or above.

REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE

All students enrolled in the Mitchell College of Business are required to take specified Business courses and courses in other Colleges of the University. Additionally, a major field of study must be selected in either Accounting, Economics and Finance, Management, Marketing, or General Business. The General Business major is delivered online.

To graduate, you must have a minimum of 122 semester hours with an overall institution grade-point average of 2.0. In addition, a 2.0 is required in each of the Basic Business Techniques courses and a 2.0 grade-point average is required for all courses counted in the Major.

All students enrolling in the Mitchell College of Business must complete at least fifty percent of all business credit hours and at least six of the nine courses counted toward the major at the University of South Alabama.

All students must petition for graduation according to University requirements explained elsewhere in this **Bulletin**.

Requirements for a degree in the Mitchell College of Business are detailed below. The sequence, as outlined, is intended as an example schedule only. Freshman and sophomore students may take lower division courses in any combination which meets prerequisite requirements. Each student must comply with Course Prerequisite Requirements as listed in the course description sections of the current University **Bulletin**.

BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION CURRICULUM

English Composition Requirements

Semester Hours	
EH 101 - English Composition I *	3
EH 102 - English Composition II *	3

General Education Requirements

MA 120 - Calculus and Its Applications *	3
Literature (EH 215-216, 225-226, or 235-236)	3
2nd Literature course of sequence	3
Fine and performing Arts (ARS 101, DRA 110, MUL 101, ARH 100, or ARH 103)	3
Humanities and Fine Arts (Select 1 from: CA 110, ARS 101, DRA, 110, LG 111, 112, 131, 132, 151, 152, 171, 172, MUL 101, PHL 110, 131, ARH 100,103, or 123)	3
History (HY 101, 102, 135, or 136)	3
Behavioral Sciences (CA 211, PSY 120, SY 109, or AN 100)	3

Science Requirements

Natural Science **with lab**	4
(Select 2 from BLY 101 or 121, BLY 102 or 122, CH 101, 103, 131, 132 GEO 101, GEO 102, GY 111, 112, PH 101, 104, PH 114 or 201, PH 115 or 202)	4

Freshman Core/Non-Business Electives (3 Hours Required) 3

BUS 150 - Introduction to Business and Management **

**BUS 150 is required of all incoming freshman. Transfer students without BUS 150 should select one non-business elective.

200-Level Business Core (2.0 Average is required in this area)

ACC 211 - Accounting Principles I*	3
ACC 212 - Accounting Principles II*	3
BUS 245 - Applied Business Statistics I*	3
BUS 255 - Applied Business Statistics II*	3
BUS 265 - Legal Environment of Business I*	3
CIS 250 - Advanced Computer Applications*	3
ECO 215 - Principles of Microeconomics*	3
ECO 216 - Principles of Macroeconomics*	3

***Courses which must be completed before student can declare a major**.

300-Level Business Core (2.0 Average is required in this area)

BUS 305 - Information Systems & Technology	3
FIN 315 - Business Finance	3
MGT 300 - Management Theory & Practice	3
MGT 305 - Organizational Communication (W)	3
MGT 325 - Operations Management	3
MKT 320 - Principles of Marketing	3

Major Courses (27 hours - 6 of the 9 must be taken at USA)

(2.0 GPA is required in this area) 27

Business Electives (300 - 400 level) 12

Business Policy Requirement

MGT 485 - Business Policy in a Global Economy (W)	3
MGT 486 - Undergraduate Comp Exam **(MGT 485 Co-Req.)**	0

TOTAL BUSINESS CURRICULUM 122 Semester Hours

ONLINE GENERAL BUSINESS MAJOR

The online general business major is designed for students that have completed, or are in the process of completing, the freshman and sophomore level degree requirements and who desire to complete a business degree through the online delivery of the junior and senior level requirements.

The program assumes the student has completed 62 credit hours of general education and sophomore level business requirements. Students enrolled in the general business online degree program must complete 60 credit hours of junior and senior requirements and all of these courses are available online each year. The online courses curriculum allows the student to complete the program in two years or five semesters. Although the curriculum is set up for a five semester sequence, students are not required to complete the courses in the listed sequence. Additionally, students are not required to enroll in a certain number of courses each semester to participate in the online degree program.

For additional information about the online program or for academic advising, please contact the:

Office of Student Services
Mitchell College of Business
MCOB 110
Phone: 251-460-7167
E-mail: mcobadviser@southalabama.edu

Required General Business Major Courses

MGT 340 - Organizational Behavior (W)
MGT 351 - Human Resource Management
MGT 334 - International Management
MKT 374 - Consumer Behavior
MKT 379 - Retailing
MKT 336 - International Marketing
MKT 345 - Real Estate
MKT 375 - Supply Chain Management
MKT 385 - Services Marketing

THE MASTER OF BUSINESS ADMINISTRATION DEGREE PROGRAM (MBA)

The Master of Business Administration degree program is designed to enable individuals to study advanced concepts of business, industry, and government operations. This program is intended for both the active manager or technical supervisor as well as the recent graduate who is interested in advanced study in the field of business. The program includes accounting, finance, quantitative methods, marketing, economics, human behavior, and labor-management relations.

The program requires fourteen (14) courses, each carrying three (3) semester hours credit. The normal load is two courses per semester. Students are expected to make appropriate arrangements with their employers to meet classes on time, avoid absences due to out-of-town travel, and provide sufficient time to complete library and other assignments as required.

The graduate program offered in Business Administration is fully accredited by the Association to Advance Collegiate Schools of Business.

THE MASTER OF ACCOUNTING DEGREE PROGRAM (MAcc)

Students may earn a Master of Accounting degree in the Mitchell College of Business. The admissions requirements, academic regulations, and general degree requirements are the same as those required for the MBA Degree. The Master of Accounting program seeks to provide advanced knowledge in accounting, enhance selected skills, and instill professional attributes. Graduates of the program are prepared for a career in the field of accounting or the pursuit of additional graduate studies.

ADMISSION REQUIREMENTS FOR MBA AND MAcc

The Mitchell MBA and the MAcc program have a fall only admission policy.

1. a bachelor's degree from an institution accredited by the appropriate United States regional accreditation agency or equivalent for international institutions.
2. a minimal grade-point average of 3.0 on all undergraduate work (A=4.0), and
3. a minimum GMAT (Graduate Management Admissions Test) of 450 and
4. a combination of GPA and GMAT score that meets the requirements of the following formula:

A student who has a bachelor's degree with less than 3.0 but greater than a 2.5 (A=4.0) or a minimum grade-point average of 2.75 on the last 64 semester hours of college work may attain Provisional Admission provided the student meets the minimum GMAT score requirement and meets the requirements of one of the two following formula:

200 x GPA + GMAT = 1050 or
200 x UDGPA (last 64 hours) + GMAT = 1100

In addition all applicants must achieve a GMAT Analytical Writing score of 3.0 or higher.

The GMAT must have been taken in the last five years.

International students must submit documentary evidence showing TOEFL test scores of 525 or above or its equivalent.

The non-degree category is reserved exclusively for students with an MBA Degree. Students in this category must obtain permission of the Director of Graduate Studies before registering for any graduate courses in the Mitchell College of Business.

A student must reapply if no course work has been completed within one year after admission into the Master of Accounting or the Master of Business Administration programs.

REQUIREMENTS FOR REGULAR STANDING

A Provisional Admission student will qualify for Regular Standing upon completion of a minimum of nine semester hours taken for graduate credit (500 level) toward degree requirements provided at least a "B" average is maintained in all such work attempted.

ACADEMIC REGULATIONS

The following regulations apply to all graduate students and encompass all work taken as a graduate student including all graduate degree courses (core, elective, concentration, business and accounting).

1. All students must earn an overall GPA of 3.0 or better
2. Students receiving a third grade of C will be dismissed
3. No D Grades will be awarded
4. Students receiving a grade of F will be dismissed
5. Student may not drop (WD) from any course more than one time.
6. Students may not repeat a course more than one time.

GRADING SCALE

Final Average Course Grade	Letter Grade
90-100	A
80-89	B
70-79	C
69 & below	F

Courses taken outside the Mitchell College of Business which are not an approved part of the degree program will not be included in the computation of the grade-point average.

TRANSFER CREDIT

A maximum of twelve (12) semester hours of graduate credit earned at another institution may be considered for credit toward degree requirements in the graduate program. Transfer credit is approved only after completion of a minimum of nine (9) semester hours of graduate credit (500 level) toward degree requirements at the University of South Alabama and the student has qualified for Regular Standing. Only grades of "A" or "B" may be accepted as transfer credit. Transfer credits are not used in the calculation for the grade-point average. Students transferring from other University of South Alabama graduate programs must complete a minimum of thirteen courses (39 semester hours) after formal admission into the Mitchell College of Business graduate programs.

TRANSIENT APPROVAL

Students enrolled in the Master of Business Administration Program and the Master of Accounting program are expected to complete all requirements at the University of South Alabama. Students transferring from other accredited graduate programs may transfer a maximum of nine credit hours (three courses) to be counted toward USA graduate requirements. Once enrolled at USA, students are expected to complete the degree requirements at USA.

Transient student requests will be approved only under the following conditions:

1. The student is graduating and the specific course requirement is not offered at USA during that term.
2. The student is moving from the Mobile area and can complete the degree requirements at another accredited institution (a maximum of nine hours if the student has not transferred other graduate credit to USA).

Transient approval will not be granted for students to enroll in graduate classes at other local (non-AACSB accredited) institutions.

FAILURE OF A COURSE

Should a student fail a course, he or she will be dismissed.

TIME LIMITATION

All requirements for a master's degree must be completed within seven calendar years from admission as a graduate student at the University of South Alabama.

GRADUATE ASSISTANTSHIPS

Graduate Assistantships are awarded on an

annual basis and are granted for the academic year. The stipend for the two semesters is $8,000 and waiver of up to nine hours of tuition. Out-of-state fees, if applicable, are also waived. Fees are paid by the student.

Application forms can be obtained from the Director of Graduate Studies, Mitchell College of Business.

REQUIREMENT FOR DEGREES

MBA students must satisfactorily complete fourteen (14) three semester-hour graduate courses. Students seeking the Master of Accounting degree must complete ten (10)-three semester-hour graduate accounting courses.

MASTER OF BUSINESS ADMINISTRATION CURRICULUM

To earn a Master of Business Administration degree from this University, a student must satisfactorily complete the following fourteen (14) graduate courses.

ACC 501- Survey of Financial Accounting
ACC 502 - Managerial Accounting
ECO 506 - Economic Theory
ECO 507 - Topics in Managerial Economics
FIN 508 - Introduction to Corporate Finance
FIN 509 - Intermediate Corporate Finance
MGT 503- Management Information Systems
MGT 521 - Data Analysis for Business Decisions
MGT 522 - Operations Management and Analytical Decision-Making
MGT 530 - Managing People and Organizations
MGT 532 - Legal and Ethical Environment of Business
MGT 580 - Strategic Management
MKT 541 - Strategic Marketing
MKT 544 - Global Environment of Business
MGT 599* - MBA Comprehensive Exam (corequisite with MGT 580. No credit hrs.)

THE MASTER OF ACCOUNTING DEGREE PROGRAM

Students may earn a Master of Accounting degree in the Mitchell College of Business. The admissions requirements, academic regulations, and general degree requirements are the same as those required for the MBA Degree.

Students seeking the Master of Accounting degree are required to complete any of the following foundation courses as designated by the Director of Graduate Studies. In addition, students must complete six (6) graduate accounting courses and four (4) elective courses.

Undergraduate Foundation Courses

All courses must be taken as an undergraduate student or transferred into the university before admission will be granted to the MAcc program. Courses must have been passed with a minimum grade of "C" to complete a prerequisite requirement.

	Prerequisites
ACC 211	
ACC 212	
CIS 250	
ACC 331	ACC 212
ACC 341	ACC 212, CIS 250
ACC 371	ACC 212
ACC 372	ACC 371
ACC 381	ACC 212
ACC 451	ACC 372

MAcc CORE (18 Hours Required)

	Prerequisites
ACC 511	
ACC 521	
ACC 531	
ACC 534	
ACC 541	
ACC 571	ACC 511, ACC 531, ACC 541

Elective Courses (12 Hours)

ACC 416/516*
ACC 432/532*
ACC 452/552*
ACC 461/561*
ECO 507
FIN 509
MGT 530
MGT 532

*This course is dual-listed with a 400-level course. Students may not repeat dual-listed courses completed at the 400-level.

CPA Eligibility

Persons seeking qualification to sit for the uniform CPA examination in the state of Alabama must have completed a minimum of 150 semester hours or 225 quarter hours of postsecondary education, including (1) a baccalaureate degree from an accredited university, and (2) evidence that he or she has satisfied either one of the following:

a. At least 33 semester hours or equivalent quarter hours (excluding principles of accounting courses) at the upper division undergraduate and/or graduate level, including minimum requirements in each of the following areas: financial accounting - 9 hours; auditing - 6 hours; taxation - 6 hours; management accounting - 3 hours; governmental and not-for-profit accounting - 3 hours; additional accounting - 6 hours and at least 30 semester hours or equivalent quarter hours in business courses (other than accounting courses) at the undergraduate and/or graduate level, including at least 3 semester hours in business law, concentrating primarily on the Uniform Commercial Code.
b. Awarded a graduate degree in accounting or business and completed a course of instruction that includes all of the requirements specified in (a) above.

If you need any further information, see the Chair of the Department of Accounting.

DOCTOR OF BUSINESS ADMINISTRATION (DBA)

The Doctor of Business Administration (DBA) program is designed for individuals in business desiring to transition to an academic career. The program weekend format is designed to allow students to complete classes in an intensive series of Friday through Sunday classes. Students may select a concentration in either Management or Marketing.

Minimum requirements for Admission

Applicants must have earned a MBA degree or a Masters degree in a specialized business discipline and have a minimum of five years of senior management experience. A class is admitted once per year, starting in May.

International students must submit an official score of at least 100 on the computer administered Test of English as a Foreign Language (TOETL).

Students may apply online at www.southalabama.edu/dba.

Degree requirements

The doctor of business administration (DBA) degree is awarded in recognition of the student's demonstrated ability to conduct original, scholarly research at the highest levels without extensive supervision. The degree is not granted upon completion of a stated amount of course work, but rather after demonstration by the student of a comprehensive knowledge and research capability in a specialized field of study. The student must demonstrate this ability in writing and by defending the research component based upon the result of an original investigation.

GRADE REQUIREMENTS

1. All students must earn an overall GPA of 3.0 or better in the program in order to graduate.
2. All students receiving a second grade of C will be dismissed.
3. No D grades will be awarded.
4. Students receiving a grade of F will be dismissed.
5. Students may not drop (WD) from any course more than one time.
6. Students may not repeat a course more than one time.

GENERAL

Required Credits

A minimum of 60 semester hours of approved graduate credit is required. Details about the curriculum are given below.

Transfer Credit

Graduate courses taken at another accredited university in the same (or closely related) subject as that of the DBA program, may be considered in the DBA plan of study up to a maximum of 12 semester hours. Only grades of "A" or "B" may be accepted as transfer credit. The transfer credit is approved by the Dean of the Graduate School only after completion of a minimum of 9 semester hours of graduate work in the doctoral program at USA.

Residence, full-time study, and Continuation Registration

A minimum of eight consecutive terms of full-time study in residence is required.

Time Limit

All requirements for the DBA degree must be completed within 36 months from the date of matriculation. A student who has not satisfactorily completed the research component in a three year period must apply for a defined extension to complete the degree. This request must be recommended by the major professor, the Director of Graduate Studies, and approved by the Dean of the Graduate School.

A comprehensive examination is scheduled for the fall of the third year of the doctoral program.

Failure to complete the work within the periods specified shall necessitate reevaluation of the student's program and may result in a recommendation for dismissal by the Director of Graduate Studies to the Graduate Dean.

Course Requirements
Research and Quantitative Methods
Applied Statistical Analysis
Research Methodology
Multivariate Analysis
Regression Analysis
Structural Equation Modeling

Discipline Concentration
Management
Seminar in Organizational Behavior
Seminar in Organization Theory, Development and Change
Seminar in Leadership
Seminar in Strategic Management
Entrepreneurship: Theory and Practice

Marketing
Development of Marketing Theory
Consumer Behavior: Theory and Practice
Integrated Marketing Communication: Theory and Practice
Global Logistics and Supply Chain Management
Strategic Marketing: Analysis Planning and Execution

Other Requirements
Industrial Organizational Economics
Seminar in International Business
Dissertation Research I
Dissertation Research II

DESCRIPTIONS OF ALL BUSINESS (BUS) COURSES BEGIN ON PAGE 182.

DOCTOR OF BUSINESS ADMINISTRATION PROGRAM (DBA) COURSE DESCRIPTIONS AT THE END OF EACH AREA.

DEPARTMENT OF ACCOUNTING

Chair: Thomas Noland (251) 460-6144
Professor Emeritus: A. Jeannette Sylvestre
Professors: Grant, Hardin, Noland, Segal
Associate Professor: Hsu
Assistant Professor: Vann
Instructors: Foster, Madden, Prescott

Department of Accounting Mission: Our primary purpose is to provide for general professional accounting education leading to careers in both private and public sectors. The baccalaureate concentration in accounting provides a foundation for a career in accounting or a basis to pursue graduate study. The Master of Accountancy degree focuses on educational preparation for a career as a certified public accountant or for advanced placement in industry, government, or not-for-profit organizations. The Department also provides courses in accounting as a service for both undergraduate and graduate non-accounting majors.

The Department encourages faculty research contributions in a broad range of areas with an emphasis on applied scholarship and instructional development. As members of the accounting profession, the Department supports faculty and student participation in professional organizations.

Department of Accounting web site
http://www.southalabama.edu/mcob/accounting.shtml

Reporting on the financial affairs of private and public institutions, preparing regulatory reports, and tax return preparation require sound accounting procedures. Since management decisions are made from accounting information, qualified accountants must be available, not only as executive accountants for industrial firms but also as public accountants for auditing and for general services to business firms and governmental agencies. The major in accounting is designed to prepare students for positions in these areas.

A student is not permitted to repeat any accounting course for which they have previously earned a grade of "C" or better.

The following courses are required:
ACC 331 ACC 341 ACC 371 ACC 372
ACC 381 ACC 416 ACC 451

Choose two electives from the following:
ACC 432 ACC 452 ACC 461

TRANSIENT COURSE CREDIT

All students majoring in Accounting must receive prior approval from the Chair of the Department before taking courses in the major field at another institution. Failure to obtain prior approval may result in loss of transfer credit for the course work.

Only equivalent courses with grades of "C" or above from a college of business that is accredited by AACSB International will be accepted.

DESCRIPTIONS OF ALL ACCOUNTING (ACC) COURSES BEGIN ON PAGE 165.

DEPARTMENT OF ECONOMICS AND FINANCE

Chair: Kenneth J. Hunsader (251) 414-8259
Professor Emeritus: A. Douglas Stutsman
Professors: Swofford
Associate Professor: Hunsader
Assistant Professors: Affuso, Cummings, Herrington, Javine, Lahtinen, Pennywell

Department of Economics and Finance web site
http://www.southalabama.edu/mcob/econfin.shtml

THE ECONOMICS AND FINANCE MAJOR

The Economics and Finance major is designed to prepare students for managerial positions in business and government. Two concentrations are available within the Economics/Finance major: Economics and Finance.

All Economics/Finance majors are required to take the following three courses and choose one concentration area:
ECO 315 FIN 343

THE ECONOMICS CONCENTRATION

The Economics concentration is designed to prepare students for professional careers in managerial positions, government, administration, education, and others. Positions in business economics and graduate study require knowledge of economics and the application of economic tools to analyze problems for decision-making.

The following courses are required:
ECO 316 ECO 330 ECO 491

Choose four electives from the following:
ECO 318 ECO 322 ECO 323 ECO 343
ECO 363 ECO 372 ECO 383 ECO 453
FIN 420 FIN 430

DESCRIPTIONS OF ALL ECONOMICS (ECO) COURSES BEGIN ON PAGE 208.

THE FINANCE CONCENTRATION

The Finance concentration is designed to provide an understanding of the various areas and principles of finance. Students will develop a body of specialized knowledge and analytical techniques that are used in the acquisition, allocation and management of financial resources. Finance careers are typically in industry and commercial businesses, public utilities and government agencies, banks, insurance companies, brokerage houses, investment companies and other financial institutions.

The finance concentration is appropriate for students who plan a career in corporate finance, financial planning, investment planning and research, or insurance.

The following courses are required:
FIN 332 FIN 350 FIN 410 FIN 411
FIN 420

Choose two electives from the following:
FIN 345 FIN 421 FIN 430 FIN 445
FIN 470 FIN 471 MKT 345 MKT 445

DESCRIPTIONS OF ALL FINANCE (FIN) COURSES BEGIN ON PAGE 228.

DEPARTMENT OF MANAGEMENT

Chair: Donald Mosley (251) 460-6411
Professor Emeritus: Edward Harrison, Paul Pietri
Ben May Chair of Entrepreneurship and Director of the Melton Center for Entrepreneurship: Weaver
Professors: Icenogle, Maes, Retzlaff-Roberts, Shearer, Turnipseed, Woodford
Associate Professor: Finney, Gillis, Mosley
Assistant Professors: Chow, Eastburn, Weldy
Instructors: King, Lambe

Department of Management web site
http://www.southalabama.edu/mcob/management.shtml

Four concentrations are available within the Management major: General Management, Human Resource Management, Entrepreneurship and Service Management.

All Management Majors are required to take the following **three courses** and choose **one concentration area**.
MGT 334 MGT 340 MGT 351

General Management Concentration

The General Management concentration offers courses designed to give students a solid foundation in the field of Management and will enable them to become effective managers, problem-solvers, and decision-makers in the world of business, industry, and government. Emphasis is placed upon problem recognition and anticipation, problem solving, and managerial decision-making. The thrust of the curriculum is to give students insight into the means for improving the productivity and efficiency of modern organizations.

The following course is required: MGT 492

Choose five electives from the following:
MGT 311 MGT 345 MGT 356 MGT 357
MGT 390 MGT 430 MGT 441 MGT 450
MGT 451 MGT 452 MGT 454 MGT 455
MGT 460 MGT 462 MGT 465 MGT 470

Human Resource Management Concentration

Managers have become aware of the significant impact on the bottom line of effective utilization of the human resources in an organization. As a result, the Human Resource Manager has become a key person on the top management team. The Human Resource Management concentration provides the student with the skills and knowledge to become a proficient practitioner in this leading organizational field.

The following courses are required.
MGT 452 MGT 450 MGT 475

Choose three electives from the following:
MGT 357 MGT 451 MGT 454
MGT 455 MGT 460 MGT 470

Entrepreneurship Concentration

Entrepreneurship is the key to economic growth for the United States and the Mobile region. The Entrepreneurship concentration is designed to create an "innovation" focused mindset that produces entrepreneurs and entrepreneurial leaders in ALL sectors of the society including: starting businesses, working in financing careers, innovative educators, franchise owners, economic development officials and social entrepreneurs. The concentration allows student to choose a combination of courses that best match their interests and entrepreneurial opportunities.

The following courses are required:
MGT 345 MGT 355 MGT 365 MGT 483

Choose two electives from the following:
ACC 321 MGT 347 MKT 384
MGT 492 MGT 356

DESCRIPTIONS OF ALL MANAGEMENT (MGT) COURSES BEGIN ON PAGE 265.

DEPARTMENT OF MARKETING

Chair: Mohan Menon (251) 460-6412
Professor Emeritus: Lynn Robinson
Distinguished Professor of Marketing: Williams
Distinguished Professor of Real Estate: Epley
Professors: Finney, Menon, Sneath
Associate Professor: Sharland

Department of Marketing web site
http://www.southalabama.edu/mcob/marketing.shtml

Three concentrations are available within the Marketing major: Marketing Management, International Business and Real Estate.

All Marketing Majors are required to take the following **four courses** and choose **one concentration area**.
MKT 336 MKT 374 MKT 384 MKT 479

Marketing Management Concentration

The Marketing Management Concentration prepares students for entry-level positions in sales and sales management, supply chain management, retailing, advertising, and market research.

The following courses are required:
MKT 375 MKT 380 MKT 382 MKT 385

Choose one course from the following:
MKT 350 MKT 376 MKT 379 MKT 381

Marketing-International Business Concentration

The Marketing-International Business Concentration prepares students for entry level positions with import-export firms, international departments of domestic firms, and firms based throughout the world.

The following courses are required:
ECO 330 MGT 334 MKT 477 MKT 310

Choose one course from the following:
ECO 363 MKT 350 MKT 375 MKT 376

It is recommended that International Business students take two of the following courses as their non-business electives:
IS 100 GEO 114 GEO 312

Proficiency in a Second Language

International Business students are required to demonstrate introductory-level proficiency in a second language by passing a foreign language proficiency examination as administered by the University of South Alabama Department of Foreign Languages and Literature or by successfully completing the second semester of any approved elementary sequence in a foreign language.

Real Estate Concentration

Real Estate students and career professionals are involved with specialties such as property management, valuation, financing, and underwriting, development and construction, law, and residential and commercial sales. The body-of-knowledge is excellent preparation to enter the profession directly or to enter graduate school. The material taught provides a valuable program for students who desire knowledge on parts of the typical market transaction as supplemental information to their major.

The following courses are required:
MKT 345 MKT 348 MKT 445 MKT 448

Choose one course from the following:
FIN 343 FIN 345 FIN 420 MGT 345

Real Estate students are advised to enroll in the MKT 494 Directed study course as their business elective.

DESCRIPTIONS OF ALL MARKETING (MKT) COURSES BEGIN ON PAGE 268.

COLLEGE OF EDUCATION

Dean: Richard L. Hayes (251) 380-2738
Associate Dean for Student Affairs
Andrea Moore Kent
Associate Dean for Academic Affairs:
Wanda Maulding
Director of Graduate Studies: Wanda Maulding
Director of Assessment and Evaluation:
James P. Van Haneghan
Director of Field Services: Jennifer Simpson
Director of Student Advising: Josh Wooden

College of Education web site
http://www.southalabama.edu/coe

DEPARTMENTS OF INSTRUCTION
Health, Physical Education and Leisure Studies
Leadership and Teacher Education
Professional Studies

MISSION, VISION, AND GOALS

The mission of the College of Education is to provide the highest level of leadership in furthering education, life-long learning, and well-being for all citizens of Alabama as members of a global community. In fulfilling this mission, we envision becoming an exemplar for preparing high quality professionals who are committed to maximizing the potential of every citizen to participate fully in a global society. To realize this vision, we have set the following goals:

- To raise academic quality and enhance the learning environment
- To maximize the quality of student life
- To embrace diversity
- To enhance visibility, collaboration, and civic engagement
- To strengthen financial resources
- To ensure appropriate planning and assessment
- To promote research and scholarship

INTERNATIONAL EDUCATION

As part of its mission, the College of Education is committed to broadening students' understanding of different cultures and preparing them for the global community in which we live. We believe that an international academic experience, in which students immerse themselves in a different culture and apply what they have learned in their USA classes, can enhance their cross-cultural competence and improve their interpersonal skills. While abroad, students develop a greater understanding and a deeper appreciation of the complexity of educational, cultural, political, environmental, economic, and social issues worldwide that promote the knowledge and skills needed to interact effectively in today's global society. Students are encouraged to explore the full range of international opportunities for directed study, teaching internships, collaborative research, and service learning projects available in the College and in other programs across campus.

Interested students should contact the College's Office of Student Advising (http://www.southalabama.edu/coe/advising.shtml) or the USA Office of International Education (http://www.southalabama.edu/international) to explore options available to students majoring in programs in the College.

ACCREDITATION AND APPROVALS

The College of Education at the University of South Alabama is accredited by the National Council for Accreditation of Teacher Education (NCATE), 2010 Massachusetts Ave., NW, Suite

500, Washington, DC 20036; phone (202) 466-7496. This accreditation covers initial teacher preparation programs and advanced educator preparation programs.

Additionally, teacher and support personnel certification programs are approved by the Alabama State Board of Education.

CHOICE OF BULLETIN

If a student does not attend the College for a period of one (1) calendar year or longer, he/she will be required to fulfill the requirements of the program as specified by the Bulletin in effect during the year of his/her return as a student.

Students requesting to change their program, major, or concentration must meet the requirements as specified by the Bulletin in effect at the time of the change.

COMPUTER ACCESS REQUIREMENT

College of Education Computing Policy

In addition to the University Access Requirement the College of Education requires all students who are pursuing a degree in designated programs to own or have access to a personal portable laptop computer or equivalent device and accessories that conform to the College's current minimum standards. See http://www.southalabama.edu/coe/forms/computerpolicy.pdf for details.

FINGERPRINT/BACKGROUND CHECK REQUIREMENT

Beginning fall term 2011 proof of a clear ALSDE background check (Suitability Letter) will be required prior to enrollment in any course in a teacher education program which contains a field experience/placement in a K-12 school.

In addition, proof of clear background check may also be required prior to enrollment in any course which contains a field experience in a Non Teacher Cert program.

UNDERGRADUATE

The College of Education, working in cooperation with the Administrative staff and with other colleges of the University, recognizes and accepts the responsibility for identifying, recruiting, and preparing students who will be capable of providing education in a dynamic society. It accepts the further responsibility of insuring that every student preparing to teach will have the advantage of continuous counseling. Planned observation and participation are regular parts of the student's program throughout the preparation period.

The College of Education has five major objectives: to prepare professional educators for meeting the educational needs of children, youth, and adults; to prepare support personnel for meeting the educational needs of the schools; to assist schools with the improvement of instructional programs; to prepare students in professional areas other than teaching; and to conduct research to expand, enhance, and evaluate instructional programs and personnel.

Undergraduate preparation is offered in elementary education, middle and high-school education, and special education programs. Offerings in educational psychology, foundations of education, health, physical education and leisure studies, safety education, and other areas of general appeal are available to students in the University on the basis of need and interest.

The College of Education, as an integral part of the total University, strives to give all possible services to the people of Alabama through assistance to their educational programs and related activities.

STUDENT PORTFOLIO ASSESSMENT

The College of Education uses student portfolio assessment as a part of program requirements and assessment of student learning outcomes.

Students majoring in the College of Education are required to purchase the License to use the portfolio beginning with the first College of Education course containing teacher education standards taken and will continue to use the software throughout their program of study.

UNDERGRADUATE RESIDENCY REQUIREMENT

In addition to the University Residency Requirements, a student seeking a degree in the College of Education must complete 25 percent of the credit hours required for the degree from the last 45 semester hours and a minimum of 32 hours of upper level course work in the major discipline as a student at the University of South Alabama.

THE TEACHER EDUCATION PROGRAM

The Teacher Education Program begins with selective recruitment, gives careful attention to each phase of the preparation program, and assists in the proper placement and adjustment of teachers and other educational personnel. Follow-up studies of graduates are made in an effort to assist them, to gain knowledge of their effectiveness on the job, and to secure data vital to future planning and development. Programs for the preparation of teachers are built on a liberal arts foundation. Those preparing for teaching positions in the secondary schools pursue a composite teaching specialization in the College of Education, and a content area in the College of Arts and Sciences. Those preparing to teach in elementary school concentrate on subject matter relevant to the elementary school curriculum while completing general requirements in the liberal arts. Those preparing for a teaching specialization which extends from nursery through twelfth grade pursue a broad program appropriate to elementary and secondary schools. All groups complete their undergraduate programs with suitable professional preparation.

UNDERGRADUATE PROGRAM OPTIONS WITHIN THE COLLEGE

The College of Education offers teaching and non-teaching programs. Teaching programs are presented first and predominate among all programs offered.

Various teaching program options are available at the Class B (Bachelor of Science degree) level in the College.

MINIMUM GENERAL STUDIES REQUIREMENTS (64 Hours)

See individual department for additional or specific general studies requirements.

Area I - Written Composition

2 courses EH 101, EH 102	6 hrs

Area II - Humanities and Fine Arts

1 course CA 110	3 hrs
1 course from ARS 101; MUL 101; DRA 110; ARH 100, ARH 103, ARH 123,	3 hrs
1 course from *EH 215, EH 216, EH 225, EH 226, EH 235, EH 236	3 hrs
1 course from EH 215, EH 216, EH 225, EH 226, EH 235, EH 236; AFR 101; AIS 105; PHL 110, PHL 121, PHL 131, PHL 231, PHL 240; LG 111-272; ARS 101; MUL 101; DRA 110; ARH 100, ARH 103, ARH 123	3 hrs

Area III - Natural Sciences and Math

1 course from MA 110, MA 112, MA 113, MA 115	3 hrs
2 courses from BLY 101, BLY 102; GY 111, GY 112; CH 101, CH 103, CH 131, CH 132, CH 141; GEO 101, GEO 102; PH 101, PH 104, PH 114, PH 115, PH 201, PH 202	8 hrs

Area IV - History, Social and Behavioral Sciences

1 course from *HY 101, HY 102, HY 135, HY 136	3 hrs
3 courses from **HY 101, HY 102, HY 135, HY 136; AN 100, AN 101; GEO 114, GEO 115; SY 109, 112; PSC 130; PSY 120, PSY 250; ECO 215, ECO 216	9 hrs

** Only one additional History course may be selected from this area.

Area V - Preprofessional, Major and Electives

1 course PE 100 and 1 course from PE 101-PE 157	4 hrs
1 course EPY 251 (teacher education majors take EPY 351)	3 hrs

Required electives in the Major to total 60 hrs.

*As a part of the General Studies Curriculum, students must complete a 6 semester hour sequence in Literature or History.

K-6 Teacher Education (Elementary Education, Early Childhood Education, and Special Education) majors must complete 12 semester hours (as specified on the advising sheets or in PAWS) in each of the following four disciplines: English Language Arts, mathematics, social sciences and natural sciences (with a grade of C or higher in each course). In addition, K-6 Teacher Education majors must include BLY 101 + lab and two laboratory science courses from BLY, CH, GY, or PH representing two areas.

See Departmental Advising Sheets for Specific Course Requirements.

COURSE FEES

All undergraduate three semester hour courses in the COE, except the PE activity courses, internships and practicum, have a special computer fee. Internships have an internship fee, and some PE activity courses have special fees as noted in other sections of this **Bulletin**.

MINIMUM PROFESSIONAL STUDIES REQUIREMENTS

Because professional studies requirements vary from program to program, the student is referred to the appropriate departmental section in this **Bulletin**. However, a candidate may not

enroll in more than five professional studies courses before the candidate has met all criteria for unconditional admission to a teacher education program. The candidate may repeat any of the five courses in which he or she received a grade of "C" or below. A student who changes from non-teacher certification to a teacher certification program must comply with this standard. A student who violates this standard is in jeopardy of losing academic credit.

REQUIREMENTS FOR ADMISSION TO CANDIDACY IN A TEACHER EDUCATION PROGRAM

Student should make a written application for admission to a teacher education program during the semester immediately following the completion of 60 semester hours of credit. Courses in progress during the semester the student makes the application for candidacy may be used as a part of meeting the regulations. Admission to a program in teacher education requires that:

1. The student
   (a) declare teaching specializations,
   (b) take any necessary tests (including those in the communicative skills),
   (c) submit to any needed evaluations, and
   (d) be available for necessary interviews.
2. The student's application must be submitted to the College of Education Advising Center by the second week of the semester in which the student is eligible to be admitted.
3. Transfer students must complete twelve semester hours of work at the University of South Alabama to be eligible for candidacy consideration.
4. The student's application receives approval from the Undergraduate Candidacy Committee.

CRITERIA FOR ADMISSION TO TEACHER EDUCATION CANDIDACY

1. Completion of 60 semester hours of course work, 48 of which must be in general studies.
2. A minimum overall grade-point average of 2.5 on all work attempted at the University of South Alabama and a minimum program grade-point average of 2.75 (including transfer work).
3. A minimum grade-point average of 2.75 in professional studies (including transfer work) , no grade below "C" is acceptable.
4. A minimum grade-point average of 2.75 in area(s) of teaching specialization(s) (including transfer work).
5. Completion of EH 101, 102, CA 110, EDM 310, EPY 351 including successful completion of the e-portfolio assessment of standards in completed courses. Secondary Education, Health Education, and Physical Education and SPE Collabortive 6-12 must complete EDU 400.
6. Satisfactory performance on the College of Education Reading Test (IDE 010). Students who are seeking a second Bachelor of Science degree or students with official E-ACT scores of 20 (or higher) on the Reading Component (RD are exempt from IDE 010. Students are limited to two attempts for IDE 010. After two unsuccessful attempts individuals are required to seek remediation and register for RGD 152 or 153 until they meet the requirement.
7. Satisfactory performance on the basic skills assessment of the Alabama Educator Certification Testing Program (AECTP).
8. K-6 Teacher Education majors must successfully complete the Elementary Ed: Multiple Subjects Praxis II.
9. Completion of The Dispositions Survey and satisfactory completion of a departmental interview designed to provide information on the applicant's personality, dispositions, interests, and aptitudes consistent with the requirements for the successful teaching.
10. Proof of: Clear (ALSDE) background check, and professional liability insurance.
11. Sufficient physical ability and emotional stability to perform successfully as a teacher. (NOTE: These factors might be covered in the departmental interview.)
12. Recommendation of advisor and department chair.
13. Department/program may have additional candidacy requirements.
    See departmental section of the bulletin.

REQUIREMENTS FOR ADMISSION TO STUDENT TEACHING

Admission to student teaching requires that the applicant:

1. Submit an application for student teaching to the Office of Field Services through the advisor February 15 for fall placements and September 15 for spring placements.
2. Receive approval of the application from the Director, Office of Field Services.
3. All students must comply with the College of Education Policies and Procedures, which are on file in the Office of Field Services and in the Office of the Dean.
4. A student may not enroll in any other course during the hours assigned for student teaching. With approval a student may be allowed to enroll in one course outside the hours assigned for student teaching.
5. **Student Teaching Assignments**: All student teaching placements and nontraditional fifth-year teaching field internships will be coordinated by the Office of Field Services. All student teaching placements will be made in Mobile and Baldwin counties to facilitate the supervision of students by University of South Alabama faculty or other personnel so designated by the chair of the department in which that student is enrolled.

CRITERIA FOR ADMISSION TO STUDENT TEACHING

1. Be admitted to Teacher Candidacy and senior standing.
2. A minimum overall grade-point average of 2.5 at the University of South Alabama.
3. A minimum program grade-point average of 2.75 (including transfer work).
4. A minimum grade-point average of 2.75 in professional studies (including transfer work). No grade below a "C" is acceptable.
5. Completion of a minimum of three-fourths of teaching specialization(s) with a minimum grade-point average of 2.75 (including transfer work).
6. Completion of the required methods courses, sequence courses, or block courses.
7. Continued satisfactory progress in meeting requirements for admission to the program of teacher education.
8. Recommended for Student Teaching by assigned faculty advisor.
9. Satisfactory completion of Alabama Educator Certification Testing Program (AECTP) including the basic skills assessment.
10. Satisfactory score on the Praxis II test(s) for the teaching field or content area.
11. Completion of any departmental prerequisites.
12. Proof of: clear (SDE suitability letter) background check and professional liability insurance.
13. Completion of field experience requirement, hours vary with program (at a minimum 150 hours, 90 hours in 3 hour block, at least half in the teaching field and span grades for which certification is sought).
14. Department/program may have additional admission requirements.
    See departmental section of the bulletin.

RETENTION

To remain in the teacher education program, each student shall make satisfactory progress as determined by continuous evaluation. A student shall be removed from candidacy when any of the minimum required program GPA's drop below 2.75, or, the USA transcript GPA drops below 2.50 or if a D or F grade is received in a candidacy course. Violations of the Alabama Educators Code of Ethics is grounds for dismissal from the program or delay in advancing through the program. Failure to receive or maintain a clear background check is grounds for dismissal from the program.

MINIMUM COMPLETION REQUIREMENTS FOR CERTIFICATION PROGRAMS

Successful completion of the following minimum requirements may qualify the student for Class B Certification. Currently in Alabama this certificate is **valid for five years**.

1. Satisfactory completion of a program approved by the State Board of Education with a minimum overall grade-point average of 2.5 on all work attempted at the University of South Alabama and a minimum program grade-point average of 2.75 (including transfer work), a minimum grade-point average of 2.75 in professional teacher education with no grade below "C" (including transfer work), and a minimum grade-point average of 2.75 in area(s) of teaching specialization(s) (including transfer work).
2. Demonstrated readiness to teach through on-the-job performance as a student teacher as determined by an evaluation plan approved by the State Board of Education.
3. Satisfactory completion of the student teaching experience.
4. A minimum of 25 percent of the credit hours required for the degree from last 45 semester hours and a minimum of 32 semester hours of upper level course work in the major discipline must be earned in residence at The University of South Alabama.
5. A community college graduate can transfer no more than 60 semester hours toward the Bachelor of Science degree requirements.

6. A satisfactory performance on the Alabama Quality Teaching and Teaching Field Standards as determined by the e-portfolio assessment.
7. A passing score on all areas of the Alabama Educator Certification Testing Program (AECTP).
8. Satisfactory performance on the appropriate PRAXIS II tests. Including content and Principles of Learning and Teaching.
9. Bachelor's degree from a regionally accredited institution.
10. Course work used to meet certification requirements (B, A, AA) may not be used to meet a different level requirement.
11.. Secondary Education programs require an academic major in Arts & Sciences.
12. Remedial or developmental studies courses may not be used to meet program requirements.

RECOMMENDATION FOR CERTIFICATION

The Associate Dean for Student Affairs of the College of Education is responsible for recommending qualified University of South Alabama students seeking teacher certification. Only those students who have completed requirements of the University and of the Alabama State Department of Education will be recommended for Class B Professional Teaching Certificate. The State Department of Education and Teacher Certification do not recognize minors in teacher education programs.

WARRANTY STATEMENT

Consistent with the policies of the Alabama State Department of Education, the College of Education at the University of South Alabama warranties its graduates (State Approved Program Competencies) under the following conditions:

Warranties will be provided USA graduates who receive their initial professional certification through the college and are employed by a public school district in Alabama in their area of specialization. The College of Education shall provide assistance at no cost to such individuals who were recommended for certification by the College of Education and are deemed to be unsatisfactory based on performance evaluations established/approved by the Alabama State Board of Education and recommended by the Local Education Agency within two years after program completion.

TRANSFER CREDIT FROM NON-ACCREDITED INSTITUTIONS

No degree credit will be accepted by the College of Education from any collegiate institution unless that institution has regional accreditation and prepares teachers on the same degree level of certification. Course work from institutions in foreign countries require an official (WES or IEE) evaluation to determine if course may be used for programs leading to Teacher Certification.

PERSONS WITH DEGREES OTHER THAN IN EDUCATION

Persons holding degrees other than in Education may apply for study in an "approved program" leading to professional certification; they will be required to complete their approved programs outlined in this **Bulletin** to qualify for Alabama certification.

WORKSHEETS AVAILABLE FOR ALL PROGRAMS

Course of Study sheets are available online at (www.southalabama.edu/coe/coursesofstudy.shtml). Each student will have access to his/her degree audit via PAWS.

APPROVALS AND SERVICES

Upon satisfactory completion of an approved program of study and upon recommendation of the Associate Dean and Certification Officer of the College of Education, a professional certificate will be issued by the appropriate State Department of Education only if the student is eligible and applies. Presently, many State Departments of Education have reciprocal agreements for issuing certificates to graduates of NCATE-accredited institutions.

CERTIFICATION IN MORE THAN ONE TEACHING FIELD

Students enrolled in the College of Education desiring to complete certification requirements in more than one teaching field will complete the curriculum in each field including general studies, professional studies in teacher education (including the internship), and teaching specialization. Courses used for one level of certification may not be used again for a higher level certificate.

THE TEACHER EDUCATION EXIT EXAMINATION, THE ELECTRONIC PORTFOLIO ASSESSMENT, AND THE ALABAMA EDUCATOR CERTIFICATION TESTING PROGRAM (AECTP) , INCLUDING PRAXIS II

Students under the current Alabama state standards must pass satisfactorily the assessments mentioned above if they are to be recommended to be certified by the Alabama State Department of Education. Test dates are announced in advance. Application information for the Alabama Educator Certification Testing Program (AECTP) and Praxis II Test(s) including Principles of Learning and Teaching test may be obtained from the Student Services Office, UCOM 3020 or Advising Center, UCOM 3360. Information pertaining to the exit examination may be obtained in the student's major department.

GRADUATION AVERAGE

A minimum grade-point average of 2.2 in the major/specialization (including transfer work) and a grade-point average of 2.2 on all work undertaken in residence at the University of South Alabama are required for the Bachelor of Science degree. In addition, students seeking teacher certification must have a minimum overall grade-point average of 2.5 on all work attempted at the University of South Alabama and a minimum program grade-point average of 2.75 (including transfer work), a minimum grade-point average of 2.75 in professional teacher education with no grade below "C" (including transfer work), and a minimum grade-point average of 2.75 in area(s) of teaching specialization(s) (including transfer work).

GRADE-POINT AVERAGE (GPA) DEFICIENCY (OVER ALL)

If additional course work is required to fulfill the GPA requirement, only course work in the humanities, social sciences, science, mathematics, or the teaching field(s)/ specialization(s) may be used. Physical Education activity courses may not be used to improve a deficient GPA. Previous course work with a grade of C or below may be repeated.

DIRECTED/INDEPENDENT STUDIES

No more than two (2) Directed/ Independent Study courses may be used for degree and/ or certification requirements, including use in improving the grade-point average.

GRADUATE

The College of Education offers the Master of Education degree leading to Alabama Class A Certification in Early Childhood Education, Elementary Education, English for Speakers of Other Languages, Health Education, Instructional Leadership, Library Media, Physical Education, Reading Specialist, School Counseling, Secondary Education, Special Education, and Visual Arts, and the Master of Science degree in Community Counseling, Instructional Design and Development, and Exercise Science.

The College of Education offers the following Alternative Master of Education degree programs leading to the Alabama Class A Certificate, or equivalent, to persons who have earned a non-education baccalaureate degree from an accredited institution of higher education: Early Childhood Education, Elementary Education, English for Speakers of Other Languages, Foreign Languages, Secondary Education, Special Education and Visual Arts.

The College of Education offers an Educational Specialist degree leading to AA Certification, in Alabama, in the following areas: Early Childhood Education, Elementary Education, Instructional Leadership, Reading Specialist, Secondary Education, Special Education and Teacher Leader.

The College of Education offers a Doctor of Philosophy degree program in Instructional Design and Development and a Doctor of Education degree program in Educational Leadership.

COURSE FEES

All graduate three semester hour courses in the COE, except internships, practicum and pre-practicum experiences have a special computer fee.

GENERAL INFORMATION

Requirements for Admission/Readmission

Each applicant to a graduate program must meet the general Graduate School Standards stated in the "Graduate School Admission Requirements and Procedures" section of this **Bulletin**. Individual programs may have additional requirements for admission and may be restricted because of capacity limitations. Consult departmental or program descriptions for additional information. **Readmission** to some programs in Education (e.g., Educational Administration, Doctoral Program, and some AA/Ed.S. and M.Ed. Programs) require review by program faculty.

Academic Regulations

1. All degree programs require a minimum of 30 semester hours of approved course work at the 500-level or above.
2. A minimum overall 3.0 GPA on all work attempted in the specific Master's Degree

programs as well as an overall 3.0 GPA on all work attempted. (Educational Administration M.Ed. and certification option - 3.25) and a 3.25 GPA for Educational Specialist Degree programs is required for graduation.
3. All requirements for a Master's Degree or Educational Specialist Degree must be completed within seven calendar years from the date of matriculation.

Student Responsibilities
1. Students admitted on a provisional basis will be eligible for regular admission when they complete nine hours of approved graduate course work with a minimum grade-point average of 3.0. If this requirement is not met in the first nine hours, provisional status may be continued for a maximum of 15 semester hours. Students who do not meet the required minimum GPA of 3.0 after 15 hours are completed are subject to academic dismissal. Some programs do not admit students in provisional status.
2. Apply for Graduation. See University Calendar for deadline dates. Apply two semesters in advance in the Registrar's Office, Meisler Hall, Suite 1100.
3. Apply for Written Comprehensive Examination. This should be done by the end of the first week of class in the semester student wishes to sit for the examination.

TEACHER CERTIFICATION

Master of Education degree programs require that students have the appropriate valid State of Alabama Class B Professional Certificate. Sixth-year programs require that students have the appropriate State of Alabama Class A Professional Certificate. Coursework used to meet Class B certification requirements may not be used to meet Class A certification requirements. Course work used to meet Class A certification requirements my not be used to meet Class AA certification requirements.

RENEW/REINSTATE STATE CERTIFICATION

Students in need of course work to renew or reinstate certificates can be admitted as non-degree graduate students for no more than two semesters. Courses taken as a non-degree graduate student cannot be counted toward subsequent degrees. The student is responsible for checking with the State Department of Education to ensure that the course(s) will meet renewal or reinstatement requirements.

FOREIGN LANGUAGES

A foreign language is not required for graduate programs in the College of Education.

GRADUATE ASSISTANTSHIPS

Masters level assistantships are awarded on an annual basis and are granted for the fall and spring semesters. The stipend for the two semesters is $6,000 and waiver of up to 10 hours of tuition. Fees are paid by the student. In return, twenty clock hours of work during business hours are required per week. The awards are made generally in the summer for the next academic year..

Ph.D. level assistantships are awarded on an annual basis and are granted for the fall, spring, and summer semesters. The stipend for the three semesters is $11,000 and waiver of up to 10 hours of tuition. Fees are paid by the student. In return, twenty clock hours of work during business hours are required per week. The awards are made generally during the summer for the next academic year.

Application forms can be secured by a request addressed to Director, Graduate Studies, College of Education.

TRANSFERRED WORK - DEGREE (After completion of nine semester hours on USA campus)

For a master's program a maximum of nine semester hours of graduate credit from a regionally accredited institution having a master's program may be transferred to the University of South Alabama. The appropriateness of courses for transfer will be determined by the candidate's department. A minimum grade of "B" is required for each course. Courses completed more than seven years prior to graduation may not be used to meet degree requirements. Graduate Transfer Credit Recommendation forms are available in UCOM 3020 or on the web. The institution must have been accredited at the time of students' study for a student to transfer credit.

CERTIFICATION TRANSFER COURSES (Prior to completion of the first semester at USA)

Students with a previous master's degree, seeking Class A level certification without obtaining a second master's degree and wish to count course work from a previous master's degree must seek approval during the first semester of enrollment in the new certification program. The form for this process is Transfer Credit Evaluation - Certification Courses and is located on the web. (www.southalabama/coe/forms.tceval.pdf). No previously taken course will count in the new certification program without this approval. Courses approved in this manner may count for the certification, but not a second master's degree.

MASTER OF EDUCATION DEGREE PROGRAM

The programs for the Master of Education degree in the College of Education provide for a major in each area. Both thesis and non-thesis degree options are available to the graduate student. Each degree area specifies courses that support the major area. Supporting courses are developed for the particular demands of the individual degree areas. The programs may lead to the Alabama Class A Certificate, or equivalent.

REQUIREMENTS FOR ADMISSION

Students are admitted each semester. The following criteria supplement the Graduate School criteria (see Categories of Admission in the general section of this **Bulletin**).

REGULAR ADMISSION

1. Sufficient courses in the major area to qualify for graduate study in the involved discipline.
2. An appropriate advanced degree may be used in lieu of other requirements for Regular Standing.
3. A completed application for admission to the Graduate School.
4. Official test scores must be sent by the agency to Office of the Registrar. All Master's of Education programs require the GRE including the Analytical writing section except Health, Physical Education, Non Certification Educational Leadership and Counseling. Health, Physical Education, Non Certification Educational Leadership and Counseling will accept the GRE or MAT. Some Alternative Masters programs and the traditional masters programs for Early Childhood Education and Elementary Education may accept a passing score on the appropriate Praxis II exam. Some fully online programs may accept the National Higher Education Entrance Exam for China (GAOKAO) for international students (Chinese) completing the fully online program.
5. Official transcripts from all institutions attended.
6. A copy of a valid Alabama Teaching Certificate in the appropriate teaching field or instructional support area if entering a certification program.
7. Submission of resume with chronology of professional employment.
8. Two letters of recommendation, preferably from outside the academic department, attesting to the prospective student's scholarship and/or professional abilities.
9. Two page narrative on the prospective student's career goals and purpose for graduate study.
10. For programs requiring proof of teaching experience (e.g., Instructional Leadership, Reading Specialist) a Supplemental Experience Form is required as proof of the teaching experience.
11. See departments for any other or more specific requirements.
12. Certification programs require completion of the College of Education Applicant Self Assessment. (http://www/southalabama.edu/coe/forms/dispassess.pdf)

PROVISIONAL ADMISSION

See Categories of Admission in the general section of this **Bulletin** for criteria for Provisional Admission and requirements for a provisional student to be changed to Regular Standing. Some programs including certification programs do not admit students to Regular Standing without meeting all admission requirements. Students missing one or more of the regular standing admissions requirements may be admitted provisionally. Please contact the Office of Graduate Studies (251.380.2630) in the College of Education for more information.

MASTER OF SCIENCE DEGREE PROGRAMS

The programs for the Master of Science degree program in the College of Education provide for a major in each area. Both thesis and non-thesis degree options are available to the graduate student. Each degree area provides for areas of study that support the major area. These are developed for the particular demands of the individual degree areas. Supporting areas of study draw upon other divisions of the

University, as well as the College of Education, to give greater depth and breadth to the major. Courses in the supporting area are elected by the student after consultation with the advisor.

REQUIREMENTS FOR ADMISSION

Students are admitted each semester. The following criteria supplement the Graduate School criteria (see Categories of Admission in the general section of this **Bulletin**).

REGULAR ADMISSION

1. Sufficient courses in the major area to qualify for graduate study in the involved discipline.
2. An appropriate advanced degree may be used in lieu of other requirements for Regular Standing.
3. A completed application for admission to the Graduate School.
4. Official test scores must be sent from the testing agency to the Office of the Registrar. All Master of Science programs require the GRE or MAT for admission.
5. Official transcripts from all institutions attended.
6. Submission of resume with chronology of professional employment.
7. Two letters of recommendation, preferably from outside the academic department, attesting to the prospective student's scholarship and/or professional abilities.
8. See departments for any other or more specific requirements.

PROVISIONAL ADMISSION

See Categories of Admission in the general section of the **Bulletin** for criteria for Provisional Admission and requirements for a provisional student to be changed to Regular Standing. Some programs do not admit students in provisional status.

ALTERNATIVE MASTER OF EDUCATION DEGREE PROGRAMS

Alternative Master of Education degree programs are available in selected areas to persons who have earned a non-education baccalaureate degree from an accredited institution of higher education. The program provides for a major concentration in an area of teacher certification. Each certification area specifies courses that support the particular demands of the individual certification areas. The programs lead to the Alabama Class A Certificate.

The following Alternative Master of Education degree programs are offered: Art Education, Early Childhood Education, English for Speakers of Other Languages, Elementary Education, Secondary Education, and Special Education.

REQUIREMENTS FOR ADMISSION

Students are admitted each semester. Students must meet the criteria for Provisional or Regular Standing in the Graduate School described in Categories of Admission in the general section of this **Bulletin** and the Master of Education Requirements for Admissions section listed above, as well as the following program criteria:

1. A grade-point average of at least 2.50 (A=4.0) documented on the official transcript from the degree-granting regionally accredited institution.
2. Evidence of having earned as many hours of credit in the subject to be taught as are required in an undergraduate teacher education program. (Minimum 32 semester hours/19 semester hours upper level.) Social science, general science and English language arts composite programs require at least one course in each area of the composite program. For example general science composite program requires course work in biology, chemistry, earth and space science, and physics.
3. Elementary and Early Childhood Education and Special Education require completion of 12 hours of course work in each of the following areas prior to admission to the program: mathematics, social sciences, general sciences, and English language arts (with a grade of "C" or higher in each course). Passing score on the appropriate Praxis II test may meet this requirement.
4. Official test scores must be sent by the testing agency to the Registrar. In addition to the admission requirements listed above for all Master of Education programs, some Alternative Master's programs may accept a passing score on the appropriate Praxis II test in lieu of the GRE or MAT.
5. Successful completion of the basic skills assessment of the AECTP (test scores are sent directly to the Office of Student Services in the College of Education). Passing score on the appropriate Praxis II exam required for all programs except ESOL. Candidates could be admitted Conditionally for one semester only pending receipt of passing test scores if they meet university requirements for admission. Candidates admitted Conditionally may not continue beyond one semester unless they meet full admission requirements for the College of Education.
6. All Alternative Master's programs, require SPE 500.
7. Proof of: Clear ALSDE background check.
8. See department for additional prerequisites or admission requirements.

COMPLETION OF A TEACHER EDUCATION PROGRAM

Master of Education Programs

Satisfactory performance on the following minimum requirements and completion of the required master's degree curriculum qualifies the student for Class A Certification.

A. Program for Teachers:

1. A minimum grade-point average of 3.0 on all work attempted in the graduate program.
2. Successful completion of a written comprehensive examination including the teaching field, humanistic and behavioral studies, curriculum and teaching, and evaluation of teaching and learning.
3. Successful completion of an internship required for: Alternative Master's programs, Reading Specialist, and other initial teacher certification programs.
4. Satisfactory performance on the appropriate Praxis II test and the electronic portfolio are required for a recommendation for certification.

B. Programs for Instructional Support Personnel:

1. A minimum grade-point average of 3.0 on all work attempted in the graduate program. (3.25 in Educational Administration)
2. A satisfactory score on a comprehensive written examination covering content of the program.
3. Satisfactory performance of the responsibilities of the specialist in a full-time internship.
4. The curriculum in each area of specialization must be taken in work approved for graduate students.
5. Satisfactory performance on the appropriate Praxis II test and the electronic portfolio are required for a recommendation for certification.

EXAMINATIONS

Two types of examinations are available. See departmental sections for departmental option(s).

Type I Comprehensive Examination Written or Oral

This examination is written or oral, or both, at the option of the faculty of the student's major department, and is in the candidate's field(s) of concentration. The examination is conducted by a committee of at least three members appointed by the chair of the department in which the student has majored. This examination shall not exceed three hours. Comprehensive examinations are scheduled once each semester. The student is responsible for ascertaining the date and time of the examination. Student must be in good standing, i.e. not on academic probation in order to take the exam.

The comprehensive examination is taken during the semester in which students complete their degree requirements or a subsequent semester. The examination is given at least two weeks before the end of the semester, and the result is reported to the Director of Graduate Studies, College of Education. Application for the comprehensive examination can be obtained from http://www.southalabama.edu/coe/forms/compsapp.pdf, submission deadlines for the application are available at http://www.southalabama.edu/coe/forms/deadlinetestdates.pdf. The result of this examination is reported to the Director of Graduate Studies College of Education by the Chairperson of the department. Comprehensive examinations may be repeated at the discretion of the graduate student's department. In no case may the comprehensive examination be repeated more than twice. A student will be dismissed from the program after three unsuccessful attempts to pass the examination. Specific recommendations for additional work, following failure of the comprehensive examination, will be at the discretion of the department involved.

Type II Comprehensive Examination Performance

This examination requires a performance either as part of a culminating seminar, internship, field study, or practicum review. Successful completion of this examination is determined by the faculty of the department of the student's major.

The result of this examination is reported to the Director of Graduate Studies, College of Education, by the chair of the department.

The student should consult with an advisor for entering this phase of graduate work.

If a thesis is submitted, an oral examination on the thesis, not to exceed one hour, is required. The examination is conducted by the candidate's Thesis Committee. Approval by a majority of the examination committee is required.

EDUCATIONAL SPECIALIST DEGREE PROGRAM FOR THE INSTRUCTIONAL SPECIALIST

The Educational Specialist degree program for the Instructional Specialist leading to AA Certification, in Alabama, is available in the following areas: Early Childhood Education, Elementary Education, Instructional Leadership, Secondary Education, and Special Education.

ADMISSION TO THE PROGRAM

The requirements for admission to the program are as follows:

1. The applicant shall have valid Class A certificate in the same teaching field or instructional support area in which the sixth-year program is sought;
2. The applicant shall have a Master's degree from a regionally accredited institution; and
3. The applicant shall have at least two years' successful experience as a teacher in the area of specialization in which the sixth-year program is sought, except for Instructional Leadership, which requires three years of acceptable experience. A Supplemental Experience Form is required as proof of teaching experience.
4. A two to three page narrative, typed and double spaced, stating the applicant's reasons for pursuing an Educational Specialist Degree.
5. Three letters of recommendation. Letters may not be written by someone currently teaching in the College of Education.
6. Official Graduate Record Exam (GRE) scores including the Analytical writing section.
7. Submission of resume with chronology of professional employment.
8. Certification programs require completion of the College of Education Applicant Self Assessment. (http://www/southalabama.edu/coe/forms/dispoassess.pdf)
9. The Instructional Leadership program requires an admission portfolio with specific content and format. Please refer to the department section for additional information.

Application forms can be requested from the Director of Admissions, University of South Alabama, Mobile, Alabama 36688-0002. If a student already holds a Master's degree from the University of South Alabama, a new application must be submitted, as this is considered a different program.

Transferred Work (After completion of nine semester hours on USA campus)

A maximum of nine semester hours of graduate credit from a regionally accredited institution having a sixth-year program may be transferred to the University of South Alabama for the program. Only graduate credit earned following the completion of a Master's degree may be transferred. The appropriateness of courses for transfer will be determined by the candidate's department. Courses more than seven years old may not be used to meet degree requirements. Graduate Transfer Credit Recommendation forms are available in UCOM 3020 or on the web.

DESCRIPTION OF THE PROGRAM

The Program for the Instructional Specialist is organized around the following program components.

A. Core Courses

Core courses are designed to insure that each candidate possess required basic knowledge and competencies. The Core Courses are IDE 615 or IDE 620, IDE 640, IDE 650, and IDE 692, and Departmental 699.

B. Area of Certification

In addition to the core courses, each candidate will complete an area of specialization from among the following available in the program: Early Childhood Education, Elementary Education; Instructional Leadership, Reading Specialist, Secondary Education; Special Education or Teacher Leader. The specializations are designed to provide candidates with an in-depth study of instructional concerns and skills appropriate to specific student groups and areas of study in the school curriculum.

C. Research Project Seminar (IDE 692)

The Research Project Seminar is designed for the purposes of selecting and developing a field project proposal. The proposal, in turn, provides the basis for the Field Project. Successful completion of the core courses is prerequisite to the enrollment in the research project seminar.

D. Research Project (Departmental 699)

The field project, as the culminating experience in the Instructional Specialist Program, provides an opportunity for the candidate to synthesize and apply the various program components in a selected instructional setting. The research project may carry three semester hours of credit. The candidate must reach suitable agreements with the appropriate public school system. A project report in standard form is required. Students must enroll in the Department 699 course each semester until the project is completed. A grade of "B" or higher in IDE 692 is a prerequisite.

Educational Specialist Degree Programs

Successful completion of the required curriculum and the following minimum requirements qualifies the student for Class AA Certification recommendation.

A. Programs for Teachers:

1. A minimum grade-point average of 3.25 on all work attempted.
2. Successful completion of a written comprehensive examination covering the content of the program.
3. Satisfactory performance as a teacher.

B. Programs for Instructional Support Personnel:

1. A minimum grade-point average of 3.25 on all work attempted.
2. Successful completion of a written comprehensive examination covering the content of the program.
3. Two years satisfactory performance in the area of specialization three years for Educational Administration

DOCTOR OF PHILOSOPHY PROGRAM IN INSTRUCTIONAL DESIGN AND DEVELOPMENT

The College of Education offers a Doctor of Philosophy degree in Instructional Design and Development. The purpose of the program is to produce graduates who will discover, advance, and disseminate knowledge in the field of instructional design and development. See Department of Professional Studies for details.

DOCTOR OF EDUCATION PROGRAM IN EDUCATIONAL LEADERSHIP

The College of Education offers a Doctor of Education degree with two concentrations. One area of focus is for K-12 practitioners, the other for aspiring Higher Education administrators. The purpose of the program is to provide educational leaders with the knowledge and skills to connect research, theory, and practice in leading high performing organizations. For information contact Dr. Peggy Delmas, Department of Leadership and Teacher Education. The program accepts applications through December 15, for yearly cohorts starting the following May.

DEPARTMENT OF HEALTH, PHYSICAL EDUCATION AND LEISURE STUDIES

Chair: Kovaleski (251) 460-7131
Professors: Gurchiek, Kovaleski, Pugh
Associate Professors: Broach, Keshock, Norrell
Assistant Professors: Dong, Forester, Holden, Mitchell
Senior Instructors: Barter, Palombo
Instructor: Anastasio

Department of Health, Physical Education and Leisure Studies web site
http://www.southalabama.edu/coe/hpels

The Department of Health, Physical Education and Leisure Studies offers state and nationally accredited undergraduate and graduate teacher certification programs in Physical Education (P-12) and Health Education (6-12). Undergraduate and graduate non-teacher certification programs are available in Physical Education (Exercise Science) and Health Education. An undergraduate major is offered in Leisure Studies with a concentrations in Sport and Recreation Management and Therapeutic Recreation. The department also provides a basic physical activity instructional program for all university students through courses in physical fitness, lifetime sports, dance, and martial arts. An undergraduate Sport Coaching Certificate program is provided by the department.

UNDERGRADUATE PROGRAMS

MINIMUM GENERAL STUDIES REQUIREMENTS FOR HPELS MAJORS (60 hours)

See College of Education section or departmental advising sheets at http://www.southalabama.edu/coe/coursesofstudy.shtml for General Studies requirements.

PHYSICAL EDUCATION

I. General Studies Component

See Departmental advising sheet for specific requirements and suggestions.

II. Requirements for Physical Education (P-12) Class B Teacher Certification
HS 170, HS 262, HS 263, HS 361, HS 429, HS 460; PE 100, PE 106, PE 130, PE 166, PE 201, PE 282, PE 351, PE 370, PE 380, PE 381, PE 429, PE 452, PE 461, PE 474, PE 475, PE 476, PE 478, PE 470, BMD 114, EPY 351, EDM 310; EDU 400; successful completion of appropriate tests: IDE 010, AECTP, background check and professional liability insurance, PRAXIS II in teaching field; Praxis PLT K-6 or Praxis PLT 7-12.

III. Requirements for Non-Certification Physical Education (Exercise Science).
HS 170, HS 262, HS 263, HS 362, LS 472, PE 100, PE 201, PE 278, PE 282, PE 370, PE 380, PE 381, PE 474, PE 475, PE 476, PE 479, PE 480, PE 482, PE 484, PE 495; BMD 114, BMD 115; PE 102 and two (2) different one-hour PE activities, IDE 010 and the USA computer proficiency requirement.

The Exercise Science program is an approved educational program by the National Strength and Conditioning Association. American College of Sports Medicine (ACSM) guidelines are emphasized in the curriculum. Upon degree completion, students are eligible to pursue nationally recognized certifications such as *Personal Trainer, Health Fitness Specialist, Exercise Specialist*, and Strength and Conditioning Specialist.

Additional departmental requirements are listed on HPELS advising sheets.

HEALTH EDUCATION

I. General Studies Component
See Department advising sheets for specific requirements and suggestions.

II. Requirements for Health Education (6-12) Class B Teacher Certification
HS 170, HS 262, HS 263, HS 351, HS 361, HS 429, HS 460, HS 463; PE 100 and one (1) hour activity course; PE 201, PE 460, PE 475; PE 381; PE 380 or PE 474 or PE 476; BMD 114, BMD 115; EDU 340, EDU 341, EDU 342, EDU 363, EPY 351; EDM 310; EDU 400; BLY 205, SY 220; successful completion of appropriate tests: IDE 010, AECTP, background check and professional liability insurance, Exit Exam, PRAXIS II in teaching field, additional field experiences (see advisor).

III. Requirements for Non-Certification Health Education
HS 170, HS 262, HS 263, HS 351, HS 361, HS 362, HS 463; PE 100, PE 201, PE 278, PE 381, PE 475, PE 380 or PE 474 or PE 476, PE 495, and one (1) hour activity course; LS 391 or LS 471 or LS 472, BLY 205; BMD 114, BMD 115; SY 220, IDE 010, and the USA computer proficiency requirement.

Additional departmental requirements are listed on HPELS advising sheets (see advisor).

LEISURE STUDIES

I. General Studies Component
See departmental advising sheet for specific requirements.

II. Leisure Studies Program Requirements
Professional Core (34 hours): LS 191, LS 292, LS 391, LS 471, LS 483, LS 498; HS 170, HS 262, HS 263, IDE 010, and the USA computer proficiency requirement.

III. Concentration Areas
Therapeutic Recreation. (31 hours): BMD 114, or BMD 115, HS 362, LS 295, LS 375, LS 395, LS 465, LS 466, LS 468, PE 370 or PE 380 or PE 461 or PE 476 and PSY 340.
Sports and Recreation Management (31 hours): LS 276, LS 297, LS 384, LS 394, LS 472, LS 486, LS 496, PE 278, and PE 478. Advisor approved electives (4 hours) from the following: ACC, BLY, BMD, BUS, CA, CH, CLS, ECO, EMT, FIN, HS, LS, MGT, MKT, PE 201-499, PH, PSY, ST, or SY.

INTERNSHIPS IN NON-TEACHING (NTC) PROGRAMS (HS, LS, PE)

Students enrolled in one of the following NTC Programs: Health Education, Leisure Studies, or Physical Education/Exercise Science, must be admitted to candidacy in their program and attain senior status prior to enrollment in an internship. All internships must be completed at departmentally approved sites, and must be planned and approved at least one full semester in advance of the experience. No other academic courses may be taken during the internship without permission of the Department Chair and HPELS advisor. Health and Physical Education/Exercise Science students enroll in PE 495 and Leisure Studies students enroll in LS 498. See advisor for details and internship planning.

SPORT COACHING CERTIFICATE

The University of South Alabama Sport Coaching Certificate is a 21 hour academic program that can be completed in two years. The program is intended to give students with coaching aspirations significant course work in coaching theory, sport behavior, basic athletic injury care, sport specific coaching strategies, and team management. Program Requirements: Satisfactory completion of 21 hours (12 required, PE 100, 278, 282, 478; 9 hours of electives from PE 373, 374, 375, 376, 377, 378) with a minimum GPA of 2.0 required for certificate.

THERAPEUTIC RECREATION CERTIFICATION

Additional requirements may be needed for National Council for Therapeutic Recreation Certification (NCTRC). See departmental advisors for specific NCTRC requirements.

MINOR IN LEISURE STUDIES (21 Hours)

LS 191, LS 391 and the remaining hours from the following: LS 276, LS 292, LS 295, LS 297, LS 300, LS 375, LS 384, LS 394, LS 395, LS 397, LS 468, LS 479, LS 486, LS 490 PE 278, PE 478. See Leisure Studies academic advisor for help with course selection.

REQUIREMENTS FOR ADMISSION TO CANDIDACY IN TEACHER-CERTIFICATION PROGRAMS (HS and PE)

All students must apply in the Advising Center (UCOM 3360), College of Education, for admission to teacher candidacy. This is normally done during the final semester of the sophomore year or first semester of the junior year. All previously listed requirements of the University and College must be met prior to application. See specifics in College of Education section.

In addition to meeting the College of Education criteria for admission to teacher candidacy, Health and Physical Education teacher certification students must complete the following as partial fulfillment of the requirements for teacher education candidacy: BMD 114; PE 100, PE 201.

All (P-12) Physical Education majors must also complete PE 166.

All (6-12) Health Education majors must also complete HS 170, HS 262, HS 263.

Candidacy requirements are summarized on departmental advising sheets.

REQUIREMENTS FOR ADMISSION TO CANDIDACY IN NON-TEACHER-CERTIFICATION PROGRAMS (HS, LS, PE)

All students must apply for admission to a program during the semester immediately following the completion of 60 semester hours of credit provided they meet the requirements listed below. Courses in progress during the semester the student makes application for candidacy may be used in the candidacy application process.

Admission to a non-teacher certification program requires that

1. the student:
   a. declare a specialization,
   b. take any necessary tests,
   c. submit to any needed evaluations, and
   d. be available for necessary interviews.
2. the student's application receives approval from the advisor and departmental chair. The application must be submitted to the College of Education Advising Center by the second week of the semester in which the student is eligible to be admitted.
3. the student's application receives approval from the Undergraduate Candidacy Committee.
4. the student's application receives the approval of the Dean or Associate Dean, College of Education.

Candidacy requirements are summarized on Departmental Advising Sheets

The following are the criteria to be considered by the Undergraduate Candidacy Committee:

1. Completion of 60 semester hours of course work, 48 of which must be in General Studies.
2. A minimum overall grade-point average of 2.2 in the major/specialization (including transfer work) and a grade-point average of 2.2 on all work attempted at the University of South Alabama.
3. Satisfactory performance on the College of Education Reading Examination (IDE 010). Students who are seeking a second Bachelor of Science degree or students with official E-ACT scores of 19 (or higher) on the Reading Component (RD) or 480 or better on SAT Critical Reading component are exempt from IDE 010. Students are limited to two attempts for IDE 010. After two unsuccessful attempts individuals are required to seek remediation and register for RGD 151 until they meet the requirement.
4. Sufficient physical ability and emotional stability to perform successfully as a professional. These and other factors could be determined in a departmental interview.

5. Recommendation of the advisor and department chair.
6. Completion of any departmental prerequisite courses.
7. HS majors must complete EH 101, EH 102; PE 100, PE 201; HS 170, HS 262, HS 263; BMD 114, BMD 115; CA 110, and any departmental prerequisite courses, in addition to the above.
8. LS majors must complete EH 101, EH 102; LS 191, LS 292, LS 391, CA 110 and any departmental prerequisite courses, in addition to the above.
9. PE (Exercise Science) majors must complete EH 101, EH 102; PE 100, PE 201, PE 282; HS 170, HS 262, HS 263; BMD 114, CA 110, and any departmental prerequisite courses, in addition to the above.

The Undergraduate Candidacy Committee may recommend the admission of the student to the program, defer admission, or reject the student's application.

GRADE-POINT AVERAGE (GPA) DEFICIENCIES

If additional course work is necessary to fulfill a GPA requirement in any HPELS program, only course work in the humanities, social sciences, science, mathematics, or the teaching field/specialization may be used. Physical Education activity courses may **not** be used to enhance any program grade-point average. Please see advisor for deficiency recommendations.

GRADUATE PROGRAMS

The Department of Health, Physical Education and Leisure Studies offers:

I. The Master of Education degree with specializations in:
1. Health Education, and
2. Physical Education

These programs are planned to lead to Alabama Class A Teacher Certification. An Alabama Class B certificate or the equivalent is required for students seeking the Master's level (Class A) certification.

II. The Master of Science degree in Exercise Science; and Non-Certification Health Education.

This is a non-teacher certification specialization.

REQUIREMENTS FOR MASTER OF EDUCATION DEGREE (M.Ed. 30 hours)

The requirements for the Master of Education Degree include Educational Research and Evaluation (IDE 510), and 27 semester hours in the area of specialization. Eighteen hours of graduate course work must be in HPELS. No courses below the 500 level can apply to any graduate program.

Option 1: Physical Education (P-12)
Course of Study

A. Curriculum and Teaching (6 hours)
HPE 506 and HPE 521.

B. Professional Studies (3 hours)
Special Education 500 or Advisor Approved Elective
All certification programs require SPE 500 or an introductory Special Education course if not taken at the undergraduate level.

C. Research and Evaluation (3 hours)
IDE 510.

D. Technology Requirement (3 hours)
EDM 510.

E. Teaching Field (15 hours)
HPE 500, HPE 505, HPE 516, HS 562, HS 563.

F. Additional Requirements
Students must successfully complete a comprehensive examination. See Graduate Student Checklist on Departmental Advising Sheets.

Option 2: Health Education (6-12)
Course of Study

A. Curriculum and Teaching (3 hours)
HPE 506 or HPE 530

B. Professional Studies (6 hours)
Special Education and/or Advisor Approved Electives
All certification programs require SPE 500 or an introductory Special Education course if not taken at the undergraduate level.

C. Research and Evaluation (3 hours)
IDE 510.

D. Technology (3 hours)
EDM 510.

E. Teaching Field (15 hours)
HPE 505, HS 562, HS 563, and Advisor Approved Electives (6 hours)

F. Additional Requirements
Students must successfully complete a comprehensive examination. See Graduate Student Checklist on Departmental Advising Sheets.

REQUIREMENTS FOR MASTER OF SCIENCE DEGREE PROGRAM (30 hours)

In addition to satisfying the general requirements of the Graduate School, the candidate for the Master of Science degree in HPELS must complete a minimum of 30 semester hours.

Exercise Science
Course of Study

A. Research and Evaluation (3 hours)
IDE 510

B. Area of Specialization (18 hours)
HPE 505, HPE 516, HPE 570, HPE 571, HPE 572, HS 563.

C. Thesis Option (9 hours)
IDE 620, HPE 599.

D. Non-Thesis Option (9 hours)
HPE 595; HPE 540 and Advisor Approved Elective (3 hours)

E. Additional Requirements
Students must successfully complete a comprehensive examination. See Graduate Student Checklist on Departmental Advising Sheets.

Health Education (Non-Certification)
Course of Study

A. Research and Evaluation (3 hours)
IDE 510.

B. Area of Specialization (12 hours)
HS 562, HS 563, HPE 505, HPE 595

C. Advisor Approved Electives (15 hours)

D. Additional Requirements
Students must successfully complete a comprehensive examination. See Graduate Student Checklist on Department Advising Sheets.

DESCRIPTIONS OF ALL HEALTH AND SAFETY (HS) COURSES BEGIN ON PAGE 233.

DESCRIPTIONS OF ALL HEALTH, PHYSICAL EDUCATION (HPE) COURSES BEGIN ON PAGE 233.

DESCRIPTIONS OF ALL LEISURE SERVICES (LS) COURSES BEGIN ON PAGE 250.

DESCRIPTIONS OF ALL INTER-DEPARTMENTAL EDUCATION (IDE) COURSES BEGIN ON PAGE 238.

DESCRIPTION OF ALL PHYSICAL EDUCATION ACTIVITY COURSES AND PROFESSIONAL PHYSICAL EDUCATION (PE) COURSES BEGIN ON PAGE 284.

DEPARTMENT OF LEADERSHIP AND TEACHER EDUCATION

Chair: Dr. Harold Dodge (251) 380-2894
Professors: Baxter, Cwikla, Ellis, Giles, Kent, Shaw
Associate Professors: Bailey, Campbell, Dodge, Gray, Green, Kinniburgh, Santoli, Tunks, Vitulli
Assistant Professors: Delmas, Martin,
Emeritus Professors: Terry Cronis, Mary Beth Culp
Senior Instructor: Byrd, Kennedy, Simpson
Instructor: Gaillard

Department of Leadership and Teacher Education web site
http://www.southalabama.edu/coe/lted/

UNDERGRADUATE

The Department offers the Bachelor of Science degree in Education leading to Alabama Class B certification in the following areas: Elementary and Early Childhood Education, Secondary Education, and Special Education. The department offers the Bachelor of Science degree in Education with a major in Early Childhood Studies.

GRADUATE

The department offers the M.Ed. degree leading to Alabama Class A Certification in the following areas: Art Education, Instructional Leadership, Elementary and Early Childhood Education, English for Speakers of Other Languages, Reading Education, Secondary Education, and Special Education. The department also offers the Instructional Specialist degree (Ed.S.) leading to Alabama Class AA Certification in the following areas: Early Childhood Education, Elementary Education, Instructional Leadership, Reading Specialist, Secondary Education, Special Education and Teacher Leader. The department offers the Doctor of Education degree in Educational Leadership.

UNDERGRADUATE PROGRAM REQUIREMENTS

Minimum General Studies (60 semester hours) For K-6 Teacher Education

See College of Education General Studies Requirement.

K-6 Teacher Education majors must take 12 semester hours in each of the following four disciplines: English language arts, mathematics (MA 110 or higher and MA 201), social science, and lab science (BLY 101 + lab and two lab science courses representing two areas from BLY, CH, GY, PH, or GEO 101, GEO 102) with a grade of "C" or higher in each course.

K-6 TEACHER EDUCATION

The program for K-6 Teacher Education is designed to prepare teachers for kindergarten through grade six. Satisfactory completion of the program requirements and accompanying tests lead to a recommendation for a Class B Certificate in Elementary Education and Special Education Collaborative K-6. Students may also qualify for a Class B Certificate in Early Childhood Education (P-3) through an additional field placement and a Class B Certificate in Early Childhood Special Education through an additional internship and two courses.

PROGRAM REQUIREMENTS
(no grade below "C" in professional studies or teaching field)

In addition to General Studies, the requirements for a B.S. degree in Elementary Education with a K-6 Teacher Education major are:

Professional Studies (27 semester hours

Curriculum, Teaching, and Media 9 hrs
EDU 302, EDU 345*, EDU 346, EDM 310

Educational Foundations 6 hrs
EPY 351 and EDU 330

Internship 12 hrs
EDU 430* (6 hrs) and EDU 495* (6 hrs)

Teaching Field/Curriculum Area
(33 semester hours)

EDU 300*, EDU 301, EDU 303*, EDU 311, EDU 312, EDU 313*, , EDU 331*, EDU 335*, EDU 336*, EDU 337*,, EDU 362*, HS 365

OPTIONAL CERTIFICATIONS

Candidates completing the K-6 Teacher Education program may take courses listed below to obtain additional class B certificates.
Early Childhood Class B certificate;
EDU 498 (3 credit hours) field experience
Early Childhood Special Education Class B certificate;
EDU 497 (3-6 credit hours) internship, EDU 432, EDU 433
*Only for students admitted to teacher candidacy

STATE BOARD OF EDUCATION PRAXIS II TEST INFORMATION

Praxis II test requirements are subject to change as dictated by the ALSDE. Prior to registering for any Praxis II exam, please verify current requirements by going directly to the ALABAMA portion of the Praxis II website at http://www.ets.org/praxis/al.

Applicants completing a K-6 Teacher Education program and applying for initial certification after the summer term 2012 will be required to pass the following Praxis II tests for each of the four areas in which certification is sought in addition to Basic Skills test required for candidacy.

For Elementary Education the appropriate Alabama prescribed subject assessment and the appropriate Principles of Learning and Teaching assessment,

For Early Childhood Education the appropriate Alabama prescribed subject assessment and the appropriate Principles of Learning and Teaching assessment,

For Collaborative K-6 SPE, ,the appropriate Alabama prescribed subject assessment and the appropriate Principles of Learning and Teaching assessment,

For Early Childhood Special Education the appropriate Alabama prescribed subject assessment and the appropriate Principles of Learning and Teaching assessment.

EARLY CHILDHOOD STUDIES

The Department offers the Bachelor of Science degree in Education, Early Childhood Studies to prepare individuals to work with young children (birth through age 8) as teachers, directors and other professionals in child care, Head Start, Early Head Start, other infant and toddler programs, private preschools, Early Intervention programs or other programs where teacher certification is not required.

PROGRAM REQUIREMENTS

General Education (60 hours)
Professional Studies (30 hours)
EDM 310 or CIS 150, EPY 251 or PSY 250, PSY 350, EDU 400, EEC 300, 346, RED 334 and EEC 496
Early Childhood Core (30 hours minimum)
AED 301, MUE 301, PE 166, RED 348, HS 262 or 351, DRA 261 or MUE 336 approved electives/tracts.

CRITERIA FOR ADMISSION TO TEACHER CANDIDACY

In addition to meeting the College of Education criteria for admission to teacher candidacy, K-6 Teacher Education majors must have satisfactorily completed: 12 hours (as specified on the advising sheets or in PAWS) in each of the following four disciplines: English language arts, mathematics, social sciences, and sciences with a grade of "C" or higher in each course. K-6 Teacher Education majors must have a passing score on the Elementary Education Content Knowledge Praxis II exam and complete EDU 330.

SECONDARY EDUCATION

The Department offers degree programs to prepare middle/high school teachers for grades 6-12. Candidates are required to complete a content field major in the College of Arts and Sciences as well as the Secondary Education major.

Applicants applying for initial certification will be required to pass the appropriate Praxis II test. **Praxis II test requirements are subject to change as dictated by the ALSDE. Prior to registering for any Praxis II exam, please verify current requirements by going directly to the ALABAMA portion of the Praxis II website at http://www.ets.org/praxis/al**.

PROGRAM REQUIREMENTS
Minimum General Studies
(64 semester hours)
For Secondary Education (Grades 6-12)

I. Secondary Education (Grades 6-12) Option
This option is designed to prepare students to teach in secondary level grades 6-12.

A. Professional Studies (36 semester hours minimum)
EPY 351; EDU 363, EDU 400; EDM 310; EDU 340, EDU 341; EDU 451; EDU 342 and one of the following appropriate methods courses: EDU 453, EDU 454, EDU 456, EDU 457 and one of the following student teacher internships: EDU 466, EDU 467, EDU 468, EDU 469.

B. Teaching Fields
Students must select one Comprehensive Teaching Field. One third of the course work in each teaching field must be in the upper-division. All programs require a double major in secondary education and in an Arts & Sciences content field.

(1) English Language Arts
(Arts and Sciences - English Double Major with Education, 51 semester hours)
DRA 110; CA 100; CA 220; EH elective (200 level or above, EH 370 recommended); CA or DRA or EH elective; EH 371, EH 401. Nine hours in EH 215, EH 216 or EH 225, EH 226 or EH 235, EH 236; and one additional survey elective course: EH 215 or EH 216 or EH 225 or EH 226 or EH 235 or EH 236. The remaining course work must come from the following areas (18 hours):

1. At least one course in literature prior to 1660 (EH 314, EH 315, EH 321, EH 322, EH 323, EH 324, EH 461, EH 465, EH 467, EH 470, EH 471, or EH 472).
2. At least one course in British or American literature from 1660-1900 (EH 331, EH 332, EH 334, EH 340, EH 342, EH 343, EH 351, EH 352, EH 353, EH 354, EH 462, EH 474, EH 475).
3. At least one course in twentieth-century literature (EH 360, EH 361, EH 367, EH 463, EH 468, EH 476, EH 478, or EH 479)
4. One of the following courses: EH 402, EH 421, or EH 422.
5. At least two additional courses at the 400-level (exclusive of requirement #4, above) EH 400-499.

Must include at least 36 semester hours of English courses (excluding EH 101 and EH 102), with a minimum of 19 semester hours of English course work at the 300-400 level to include a minimum of three (3) courses at the 400-level -- at least 15 of these upper division hours **MUST** be taken at USA. English Language Arts majors submit a writing portfolio in the student's senior year. See English Department for details and deadlines.

(2) Mathematics
(Arts and Sciences - Mathematics Double Major with Education, 45 semester hours)
ST 210 or ST 315, and ST 335; MA 311 (Fall), MA 320 (Fall), MA 321 (Spring), MA 410 (Fall), and MA 413 (Fall); one 3-hour elective from MA 300-499 level; and one 3-hour elective from MA 400-499 level; MA 125, MA 126, MA 227, MA 237, and MA 238. Must have a minimum of 19 semester hours

of MA 300-400 level courses. At least 15 of these upper division hours must be taken at USA.

(3) General Science Composite
(Arts and Sciences - Biology Double Major with Education, 75 semester hours)
GEO 101 and GEO 101L, PH 101 and PH 101L, MA 125, 238, ST 210, BLY 121 and 121L and BLY 122 and 122L, CH 131 and 131L and CH 132 and 132L, CH 201 and CH 201L, PH 114 and PH 114L or PH 201 and PH 201L, PH 115 and PH 115L or PH 202 and PH 202L, BLY 301, BLY 302, BLY 303, and twenty (20) hours from specified BLY 300-499 courses. At least 15 of these upper division hours (6 hours at 400 levels and 9 hours at 300 or 400 level) **MUST** be taken at USA.

(4) Social Science Composite
(Arts and Sciences - Social Science Double Major with Education, 54 semester hours)
PSC 130, PSC 250 or PSC 270; ECO 300 or ECO 215 and ECO 216; GEO 114 or GEO 115; PSY 120; SY 109, or AN 100; HY 101, HY 102, HY 135 and HY 136; HY 103 or HY 104 or HY 228 or HY 321 or HY 323 or HY 325 or HY 326 or HY 362 or HY 364 or HY 365 or HY 366 or HY 367 or HY 368 or HY 429 or HY 461 or HY 465; HY 432 or HY 433 or HY 434 or HY 435 or HY 436 or HY 437, HY 441 or HY 442 or HY 443, and fifteen (15) hours of approved upper-division History electives. (Check with Department.) At least 15 of these upper division hours (6 hours at 400 levels and 9 hours at 300 or 400 level) **MUST** be taken at USA.

Certification options are also available for Secondary Biology, Chemistry, and Physics.

Please visit http://www.southalabama.edu/coe/coursesofstudy.shtml for specific program requirements.

SPECIAL EDUCATION

The Department has three undergraduate Special Education Certification Options, each leading toward a Bachelor of Science Degree: **Collaborative Teaching K-6, and Early Childhood Special Education, as certification options in K-6 Teacher Education and Collaborative Teaching 6-12**.

The programs in Special Education are designed to prepare teachers to function in a variety of settings with birth-through-high-school-level students.

Students must obtain a minimum grade of "C" in each professional studies and teaching field course in the area of Special Education.

Non-majors seeking enrollment in courses should obtain permission from the department chair. Successful completion of the program and eligibility for the Bachelor of Science degree and/or teaching certificate necessitates that requirements of the Department, the College of Education, the University of South Alabama, the Alabama State Department of Education, and National Council for Accreditation of Teacher Education be met.

THE BACHELOR'S DEGREE PROGRAM

Special Education undergraduate Collaborative Teacher 6-12 program include a minimum of 120 semester hours. Advisors provide the specific course information for each student. Professional courses are organized into blocks which must be taken in a specified sequence.

ADMISSION TO CANDIDACY

Students must apply in the College of Education Advising Center, for admission to teacher candidacy. Students must have satisfactorily completed 12 semester hours (as specified on the advising sheets or in PAWS) in each of the following disciplines: English language arts, mathematics, social sciences, and sciences with a grade of "C" or higher in each course, and professional studies courses. All previously listed requirements of the University and College must have been met also. Students must apply as early as possible preferably by the end of the sophomore year.

Minimum General Studies (60 semester hours) See College of Education section or departmental advising sheets for general studies requirements.

Professional Studies
(33 semester hours minimum)
Visit the web for specific information at: http://www.southalabama.edu/coe/forms/spe612b.pdf.

Areas of Specialization (32 semester hours)
Collaborative Teaching
Visit the web for specific information at: http://www.southalabama.edu/coe/forms/spe612b.pdf.

PRAXIS II REQUIREMENT FOR SPECIAL EDUCATION

Praxis II test requirements are subject to change as dictated by the ALSDE. Prior to registering for any Praxis II exam, please verify current requirements by going directly to the ALABAMA portion of the Praxis II website at http://www.ets.org/praxis/al.

Applicants completing a special education program and applying for initial special education certification are required to pass the Special Education Praxis II test and the appropriate Principles of Learning and Teaching (PLT) Praxis.

GRADUATE

The department offers the M.Ed. degree leading to Alabama Class A Certification; Instructional Specialist Ed.S. degree leading to Class AA Certification, and Doctor of Education degree in Educational Leadership. Deadlines for applications are July 15 for fall, December 1 for spring and May 1 for summer admissions for all programs (except Instructional Leadership- October 1 for spring and March 1 for summer and July 1 for fall and the Doctorate of Education in Educational Leadership- December 15, for yearly cohorts starting the following May).

EDUCATIONAL ADMINISTRATION

The department offers the M.Ed in Educational Administration (see http://www.southalabama.edu/coe/coeonline/coeonline_EdLeadership_Rv1.html for details) and the M.Ed in Educational Administration leading to Alabama Class "A" certification in Instructional Leadership. The department also offers the Instructional Specialist Degree (Ed.S.). leading to Alabama Class "AA" certification in Instructional Leadership. Instructional Leadership courses empower students for advancement in educational service. Leadership programs emphasize growth from the knowledge base through simulations to practical application and career mobility.

Special Admission Requirements for Instructional Leadership Certification

Applications for graduate programs in Instructional Leadership are reviewed for admission to the fall, spring and summer semesters. **Readmission** to some programs in Education (i.e. Educational Administration, Doctoral Program, and some AA/Ed.S. Programs) require review by program faculty. Deadline for receipt of all application materials is October 1, March 1 and July 1.

In addition to the requirements listed in the College section of the bulletin, program specific requirements for admission to Instructional Leadership include:

1. An admission portfolio is required. Applicants should follow a specific format for organizing their admissions portfolio. A copy of this format may be obtained by accessing "Admissions Requirements" at http://www.southalabama.edu/coe/forms/edadmapgm.pdf.
2. Successful completion of a structured interview with Educational Leadership faculty members.

Admission decisions involve evaluation of the applicant's grade-point average, scores on the GRE, all materials in the admission portfolio, and structured interview. Program enrollment and availability will also be considered. The application, transcripts, test scores, and complete admissions portfolio must be received by the Office of Admissions, 2500 Meisler Hall, University of South Alabama, Mobile, AL, 36688-0002 by October 1, March 1 and July 1.

Class A Certificate in Instructional Leadership and Master of Education Degree

Students entering this program must have a bachelor's degree and Alabama Class B Certification in a teaching field. Program requirements include:

1. completing a minimum of 30 semester hours as outlined below with at least a 3.25 grade-point average, including a grade of "B" or above in all courses with EDL prefix,
2. passing the electronic portfolio assessment (Foliotek), and completing a School-based Residency focused on authentic assessments of performance on state standards.
3. passing a written comprehensive examination.

The Class A Certificate is valid for 5 years and is renewable.

I. Instructional Leadership Core
(18 semester hours minimum)
EDL 501, EDL 502, EDL 503, EDL 504, EDL 505, EDL 506

II. Residency
(six semester hours minimum)
EDL 598 Residency
Students must have a passing score on the appropriate Praxis II exam prior to a recommendation for certification.

III. Foundations/Special Education Elective (three semester hours minimum)
SPE 500 required if not previously taken, EPY 502, EPY 521 or EDF 515

IV. Research (three semester hours minimum)
IDE 510
Students who have not completed a survey course of exceptionalities must take SPE 500 in Number III above.

Class AA Certificate in Instructional Leadership and Educational Specialist Degree for the Instructional Specialist

Students entering this program must have a Master's Degree, Alabama Class A Certification in Educational Administration, and three years of successful teaching experience. Program requirements include completing a minimum of 30 semester hours as outlined below with at least 3.25 grade-point average and a grade of "B" or above in all courses with EDL prefix and passing a written comprehensive examination.

The Class AA Certificate is valid for five (5) years and is renewable.

I. Core Courses (15 semester hours minimum)
IDE 620, IDE 640, IDE 650, IDE 692, EDL 699

II. Area of Certification (15 semester hours minimum)
EDL 603, EDL 611, EDL 621, EDL 631, EDL 695 (req)

Refer to the College of Education general section of this **Bulletin** for other program requirements.

MASTER OF EDUCATION IN EARLY CHILDHOOD

The Master of Education (M.Ed.) program in Early Childhood Education provides advanced study for teachers working with children three through eight years of age. Upon completion of the program, students are eligible for the Class A Professional Early Childhood Education Certificate provided they already hold the Class B Professional Early Childhood Certificate.

Note: The appropriate course of study sheets and the assigned departmental advisor should be consulted in all program matters.

Thesis

A student may elect to write a thesis as part of the program. If the student decides to write a thesis, a thesis committee will be appointed to work with the student and to evaluate the thesis. (IDE 510 and IDE 620 are required.)

Program

The program for the M.Ed. in Early Childhood Education is as follows: 30 minimum hours required (500 level)

A. Curriculum and Teaching (15 semester hours)
EEC 553, EEC 522, EEC 523, RED 531 and EEC 532 or EEC 535 or EEC 537

B. Foundations/Special Education Elective (3 semester hours)
SPE 500 required if not previously taken, or EDF 515 or EPY 502 or EPY 521

C. Research and Evaluation (3 semester hours)**
IDE 510
IDE 620 (Thesis Option Only with IDE 510)

D. Technology (3 semester hours)
EDM 510

E. Teaching Field (6 semester hours)
Advisor approved 500 level AED, EEC, RED courses
All certification programs require an introductory special education course SPE 500 required under B above, if not completed at the undergraduate level.
**Students who have previously not completed an evaluation course will be required to complete an approved evaluation course in addition to IDE 510.

MASTER OF EDUCATION IN ELEMENTARY EDUCATION

The Master of Education (M.Ed.) program in Elementary Education provides advanced study for teachers working with children six through eleven years of age. Upon completion of the program, students are eligible for the Class A Professional Elementary Education Certificate provided they already hold a Class B Professional Elementary Education Certificate.

Note: The appropriate course of study sheets and the assigned department advisor should be consulted in all program matters.

Thesis

A student may elect to write a thesis as part of the program. If the student decides to write a thesis, a thesis committee will be appointed to work with the student and to evaluate the thesis. (IDE 510 and IDE 620 are required.)

Program

The program for the M.Ed. in Elementary Education is the following: 30 minimum hours required (500 level).

A. Curriculum and Teaching (12 semester hours)
EEC 522, EEC 523, RED 531 and EEC 532 or EEC 535 or EEC 537.

B. Foundations/Special Education Elective (3 semester hours)
SPE 500 required if not previously taken, or EDF 515 or EPY 502 or EPY 521

C. Research and Evaluation (3 semester hours)**
IDE 510*
IDE 620 (Thesis Option Only with IDE 510)

D. Technology (3 semester hours)
EDM 510

E. Teaching Field (9 semester hours)
Advisor approved 500 level AED, EEC, RED courses
All certification programs require an introductory special education course SPE 500 required under B above, if not completed at the undergraduate level.
**Students who have not previously completed an evaluation course will be required to complete an approved evaluation course in addition to IDE 510.

ALTERNATIVE M.Ed. IN ELEMENTARY EDUCATION

ALTERNATIVE M.Ed. IN EARLY CHILDHOOD EDUCATION

In general, the program requires a minimum of 42 graduate hours and such additional undergraduate courses or experiences as the Department may require. Please visit http://www.southalabama.edu/coe/coursesofstudy.shtml for specific requirements. See College of Education general section for program admission requirements.

All prerequisites including those listed below are required for admission to the program. Equivalent courses or experiences may be substituted with written approval of the advisor and department chair.

Prerequisites
RED 330
Other courses as the Program may require.

In addition to the above prerequisites, students must also have completed 12 hours in English language arts, mathematics, social sciences, and sciences at the undergraduate level with a grade of "C" or above.

Program

The program for the Alternative M.Ed. in Elementary Education and Early Childhood Education is as follows: 42 minimum graduate hours requires (500 level).

A. Curriculum and Teaching (six semester hours)
EEC 522*, EEC 523*

B. Foundations/Special Education Elective (six semester hours)
SPE 500 and EPY 502

C. Research and Evaluation (three semester hours)
EPY 525

D. Technology (three semester hours)
EDM 510

E. Teaching Field (15 semester hours)
EEC 532, EEC 535, EEC 537*, RED 531. Choose 3 hours from the following: AED, EEC, RED (ECE must take EEC 553)

F. Field Experience (three semester hours)
EEC 557

G. Clinical Field Experience (six semester hours)
EEC 595

(Supervised practice in a school setting in the student's teaching field. The student will work full time in the school for an entire semester).

STATE BOARD OF EDUCATION PRAXIS II TEST INFORMATION

Applicants completing a Alternative Master programs and applying for initial certification after the summer term 2012 will be required to pass Praxis II in their area of certification. Please see specific program requirements on advising sheets. Applicants applying for initial certification will be required to pass the appropriate Praxis II test. **Praxis II test requirements are subject to change as dictated by the ALSDE. Prior to registering for any Praxis II exam, please verify current requirements by going directly to the ALABAMA portion of the Praxis II website at http://www.ets.org/praxis/al**.

READING SPECIALIST CLASS A CERTIFICATION

1. **Admission**. Requirements for admission to the Class A Reading Specialist program shall include:
   a. At least baccalaureate-level professional educator certification in any area of education and master's degree; Candidates without a master's degree may pursue the reading specialist

certification along with the master's degree in Elementary or Early Childhood Education. See advising sheets for details.

b. Two years of successful classroom teaching experience; and

c. Certification in Early Childhood Education, Elementary Education, Collaborative Teacher (K-6 or 6-12), (OR)

d. Certification in any other area of education and completion of two reading courses including an introduction to reading course.

*All certification programs require an introductory course, special education SPE 500, if not completed at the undergraduate level.

2. Program Requirements.

A. Curriculum and Teaching (three semester hours)
EEC 522 or SED 552
EEC 522 (taken by those with an undergraduate secondary certificate)
SED 552 (taken by those with an undergraduate elementary certificate)

B. Foundations/Special Education Elective (three semester hours)
SPE 500 required if not previously taken or EPY 502

C. Research and Evaluation (three semester hours)
IDE 510

D. Teaching Field (18 semester hours with a grade of "B" or above)
EEC 532, RED 531, RED 533, RED 534, RED 541, RED 548

E. Internship (three semester hours)
RED 595

PROGRAMS IN SECONDARY EDUCATION

MASTER OF EDUCATION DEGREE PROGRAMS

M.Ed. programs are designed to enhance and extend the knowledge and qualifications of secondary teachers. See College of Education general section for program admission requirements.

I. Programs in Secondary Education (30 semester hours)

A. Curriculum and Teaching (six semester hours)
SED 552 or
For ESOL - EEC 522 for those with secondary undergraduate cert
Specific Course for certificate area:
Art Education
AED 501
English for Speakers of Other Languages
ELT 530
Language Arts
SED 561
Mathematics
SED 563
Science Programs
SED 564
Social Science Programs
SED 562

B. Foundations/Special Education Elective (three semester hours)
SPE 500 required if not previously taken, or EPY 502, or EDF 515 (ESOL requires ELT 595 Internship instead)

C. Research and Evaluation (six semester hours)
IDE 510
Research Seminar 560 (ESOL requires ELT 595 Internship instead of 560 Research Seminar)

D. Teaching Field (12 semester hours)
Courses selected with advisor approval from student's teaching field.
Language Arts: Courses selected from at least two of these fields with advisor approval: English, speech, communication, drama, and reading.
English for Speakers of Other Languages (ESOL): ELT 525, ELT 545, ELT 553, ELT 558 and ELT 595
Mathematics: Courses selected with advisor approval from Mathematics.
Science Programs: Science Composite; Courses selected from at least two of these fields with advisor approval: biology, chemistry, geology, physics.
Social Science Programs: Social Science Composite: Courses selected from at least two of these fields with advisor approval: economics, geography, history, political science, psychology and sociology.

E. Technology (three semester hours)
EDM 510

Please visit http://www.southalabama.edu/coe/coursesofstudy.shtml for specific requirements.

*All certification programs require an introductory special education course SPE 500, if not completed at the undergraduate level. This is in addition to the 30 semester hour requirement for the ESOL program.

INNOVATIVE MASTER'S DEGREE IN EDUCATION LEADING CLASS B CERTIFICATION

In addition to the traditional master's degree and the alternative master's degree, the Leadership and Teacher Education department offers a new class "B" certification program with the master of education degree. See academic advisor or advising sheets for specific details.

GRADUATE CERTIFICATE IN ENGLISH FOR SPEAKERS OF OTHER LANGUAGES

The Graduate Certificate for ESOL requires a minimum of five courses (15 hours) with grades of "A" or "B". Requirements for the certificate include ELT 525, 530, 545, 553, and 558.

ALTERNATIVE M.Ed. IN SECONDARY EDUCATION

This program is designed to provide initial teacher preparation at the graduate level primarily for students interested in pursuing a career in teaching but whose undergraduate degree did not include a teacher education program. See College of Education general section for program admission requirements.

I. High School Option (42 semester hours 500 level)

A. Curriculum and Teaching (nine semester hours)
SED 555, SED 559
Appropriate methods course for the teaching specialization.

B. Foundations/Special Education Elective (three semester hours)
SPE 500

C. Evaluation (three semester hours)
EPY 525

D. Reading (three semester hours)
RED 541

E. Technology (three semester hours)
EDM 510

F. Teaching Field (15 semester hours)
Selected from approved electives in the student's teaching field. These fields are presently available in this program:
Art Education
Language Arts Composite
English for Speakers of Other Languages
General Science Composite
Mathematics
Social Science Composite
French
German
Spanish

G. Internship (six semester hours)
AED 595 (Art Education), ELT 595 (ESOL), SED 595 (Language Arts), SED 593 (Foreign Language), SED 598 (Math), SED 597 (Science), SED 596 (Social Science)
Supervised practice in a school setting in the student's teaching field. The student will work full time in the school for an entire semester.

H. Each comprehensive teaching field of English language arts, general science, and general social science shall ensure that the candidate has completed at least one course in at least two of the comprehensive fields.

I. Successful completion of PRAXIS II test appropriate to the teaching field and grade level of certification sought is required PRIOR to enrollment in internship.

J. Student must take a comprehensive end of program examination during the semester in which the internship is completed.

Please visit http://www.southalabama.edu/coe/coursesofstudy.shtml for specific requirements.

SPECIAL EDUCATION GRADUATE

The graduate program in Special Education prepares individuals with or without special education backgrounds to work with exceptional children and youth. Students seeking Alabama Class A Professional Certification may select programs of study in the areas of **Collaborative Teaching K-6 or 6-12**.

Post-master's or Sixth-Year Graduate Programs which lead to an Instructional Specialist Degree are available, and for qualified individuals, an Alabama Professional Certificate at the AA level.

ACADEMIC STANDARDS AND STUDENT RESPONSIBILITY

Students should be aware that the Special Education Program requires that certain courses be taken in sequence. Advisors should be consulted to obtain information about sequencing and prerequisite course work.

A committee consisting of graduate faculty members within the program will be selected

by program advisors to assist the student in planning their courses of study following the schedule of course offerings. Such programs of study should be approved before the completion of nine semester hours of work.

The Special Education Program requires that students who receive a grade of "C" in a Special Education course, must repeat that course and attain a grade of "B" or better.

Satisfactory performance in all course work (GPA of 3.0 or greater) is required of all graduate Special Education majors; in the event of unsatisfactory performance (below "C") in a course not in their major area, a student's Graduate Program Committee selects the option of repeating the course and demonstrating satisfactory performance or demonstrating satisfactory performance in an approved alternate course.

Students may be permitted to do their internship/practicum during one of their two final semesters in residence. This is a joint decision between student and advisor.

Students are assigned to advisors in their respective program areas. The student has the sole responsibility for initiating applications and meeting test and other deadline requirements.

MASTER OF EDUCATION DEGREE PROGRAM IN SPECIAL EDUCATION

The requirements for the Master of Education include a minimum of 30 semester hours in the program specialization. All graduate majors will have a graduate program committee plan the individual program of study based upon the student's training, experience, needs and schedule of course offerings.

Those students seeking teacher certification must complete one of the program areas detailed as follows:

PROGRAM FOR COLLABORATIVE TEACHING, K-6 or 6-12

For students with a valid Class "B" certificate in an area of Education. The 30 semester hour minimum program for the M.Ed. in the area of Collaborative Teaching includes:

Curriculum and Teaching (six semester hours)
SPE 512, SPE 516

Educational Foundations (three* semester hours)
Select One:
SPE 500 required if not previously taken, or EPY 502

Technology (three semester hours)
EDM 510

Research and Evaluation (three semester hours)
IDE 510 Educational Research and Evaluation

Teaching Field (eighteen semester hours)
SPE 515, SPE 591, SPE 592
K-6 majors take EEC 523 and Practicum (SPE 588),
6-12 majors take SED 552 and Practicum (SPE 588).

*All certification programs require an introductory special education course SPE 500, if not completed within seven (7) years of entry to the master's program. This is in addition to the 30 semester hour requirement. Students seeking certification in both K-6 and 6-12 must complete a practicum at each level.

ALTERNATIVE M.Ed. IN COLLABORATIVE TEACHING

This is a special alternative program for individuals with a baccalaureate degree in non-teacher education fields and individuals without Class "B" certification in an area of Education. In general the program requires a minimum of 42 graduate hours. The State of Alabama requires that individuals seeking admission to the Alternative Master's program in Special Education have at least 12 semester hours in each of the following areas: English language arts, mathematics, sciences, and social sciences. See College of Education general section for program admission requirements.

All prerequisites must be completed prior to admission to the program. See College section of **Bulletin** for admission requirements.

Foundation Requirements (eighteen semester hours)
EDM 510, EPY 502, EPY 525, RED 531, SPE 500

Teaching Field (twenty-one semester hours)
SPE 589, SPE 512, SPE 514, SPE 515, SPE 516, SPE 591, SPE 592

Internship (three semester hours)
SPE 596 for 6-12 majors or SPE 595 for K-6 majors (Students must have a passing score on the appropriate Praxis II prior to enrollment in the internship). Current admission procedures require a passing score on the appropriate Praxis II prior to admission to the program.

PRAXIS II REQUIREMENT FOR BOTH CLASS A AND ALT A

Applicants completing a special education program and applying for initial special education certification are required to pass the Special Education Praxis II test and the Principles of Learning and Teaching (PLT) Praxis K-6 or 7-12.

Applicants applying for initial certification will be required to pass the appropriate Praxis II test. **Praxis II test requirements are subject to change as dictated by the ALSDE. Prior to registering for any Praxis II exam, please verify current requirements by going directly to the ALABAMA portion of the Praxis II website at http://www.ets.org/praxis/al**.

ADVANCED GRADUATE STUDY: SIXTH-YEAR (POST-MASTER'S) PROGRAMS (Ed.S. and Class AA Certification)

Post-Master's or Sixth-Year Graduate Programs for Educational Specialist which lead to an (Ed.S.) Degree and Class AA (State of Alabama) Professional Certification for Instructional Specialist are available for qualified individuals in the areas listed below.

In addition to college requirements previously stated, students seeking certification will have a graduate program committee plan a program based upon the student's training, experience and needs. This committee will determine if any prerequisite courses are needed.

Core Courses required for the Educational Specialist program include, IDE 620, IDE 640, IDE 650, IDE 692, and Departmental 699.

ELEMENTARY EDUCATION
Teaching Field (12 semester hour minimum)
EEC 601, EEC 610, EEC 622, Advisor approved elective.

SECONDARY EDUCATION
Teaching Field (12 semester hour minimum) in a field listed below:
English language arts, mathematics, science, or social science.

INSTRUCTIONAL LEADERSHIP
Support Field (15 semester hour minimum) from
EDL 603, EDL 611, EDL 621, EDL 631, EDL 695 (req)

READING SPECIALIST
Teaching Field (12 semester hour minimum) from
RED 611, RED 612, RED 613, RED 615, RED 630, RED 640

TEACHER LEADER
Teaching Field (12 semester hour minimum)
LTE 645, LTE 646, LTE 647, and RED 648

COLLABORATIVE TEACHING
Teaching Field (12 semester hour minimum)
Course work to be approved by student's graduate program committee.

SPE 500 is taken only if the student has not had a recent equivalent. The course then becomes an added course to the program.

DOCTOR OF EDUCATION PROGRAM IN EDUCATIONAL LEADERSHIP

The College of Education offers a Doctor of Education degree with two concentrations. One area of focus is for K-12 practitioners, the other for aspiring Higher Education administrators. The purpose of the program is to provide educational leaders with the knowledge and skills to connect research, theory, and practice in leading high performing organizations. For information contact Dr. Peggy Delmas, Department of Leadership and Teacher Education. The program accepts applications through December 15, for yearly cohorts starting the following May.

DESCRIPTIONS OF LEADERSHIP AND TEACHER EDUCATION COURSES:

DESCRIPTION OF ALL ART EDUCATION (AED) COURSES BEGIN ON PAGE 166.

DESCRIPTION OF ALL EDUCATIONAL FOUNDATIONS (EDF) COURSES BEGIN ON PAGE 209.

DESCRIPTION OF ALL EDUCATION LEADERSHIP (EDL) COURSES BEGIN ON PAGE 209.

DESCRIPTION OF ALL ELEMENTARY/ EARLY CHILDHOOD EDUC (EEC) COURSES BEGIN ON PAGE 218.

DESCRIPTION OF ALL ENGLISH LANGUAGE TEACHING (ELT) COURSES BEGIN ON PAGE 224.

DESCRIPTION OF ALL READING EDUCATION (RED) COURSES BEGIN ON PAGE 301.

DESCRIPTION OF ALL SECONDARY EDUCATION (SED) COURSES BEGIN ON PAGE 303.

DESCRIPTIONS OF ALL SPECIAL EDUCATION (SPE) COURSES BEGIN ON PAGE 306.

DEPARTMENT OF PROFESSIONAL STUDIES

Chair: James R. Stefurak (251) 380-2861
Professors: Dagley, Davidson-Shivers, Dempsey, Hayes, Johnson, Litchfield, Robenstine, Strange, Surry, Van Haneghan
Associate Professors: Clark, Fregeau, Guest, Lewis, Millner, Smith, Stefurak
Assistant Professors: Browning, Lomax, McDermott, Upton
Instructor: Tashbin

Department of Professional Studies web site
http://www.southalabama.edu/coe/profstudies

DEPARTMENT OF PROFESSIONAL STUDIES

The Department of Professional Studies offers the Master of Education degree in Educational Media (leading to certification in Library Media), and in Counselor Education in an educational setting leading to certification in School Counseling, and the Master of Science degree in Counselor Education with an emphasis in Clinical Mental Health Counseling. The department also offers the Master of Education and Doctor of Philosophy degree in Instructional Design and Development.

For certification as a school counselor, or library media specialist by the State Department of Education, one must have completed a basic program in a teaching field. Eligibility for certification requires two years of appropriate professional experience. See specific requirements for each program. The initial certificate is valid for five years.

INTERDEPARTMENTAL EDUCATION

Faculty within the department offer foundational course work in Education Technology, Educational Psychology, Educational Foundations, and Educational Research. These courses are offered for students in the undergraduate and graduate programs throughout the college and are designed to broaden and strengthen degree-area preparation.

DOCTOR OF PHILOSOPHY IN CLINICAL AND COUNSELING PSYCHOLOGY

The Doctor of Philosophy in Clinical and Counseling Psychology program is a collaborative effort between the Department of Professional Studies in the College of Education and the Department of Psychology in the College of Arts and Sciences. This program is designed to prepare professionals to provide the most effective types of psychological care for individuals and communities. The graduates of this program will have a set of competencies that will enable them to work successfully with a variety of professionals for the purpose of health promotion and to treat mental disorders. Please see the full program description under the heading of "The Graduate School" for more information.

COUNSELOR EDUCATION PROGRAMS

The programs described below are designed to provide for the acquisition of skills and competencies needed by counselors working in educational, and agency settings.

A grade of "B" or better is required in the professional major sequences.

Counselor educators are ethically required to ensure that students meet academic requirements and demonstrate clinical competencies. Satisfactory progress will be predicated on a combination of factors such as academic success, clinical competence, adherence to ethical standards, and appropriate interpersonal functioning. Students who do not demonstrate satisfactory competence within any of these critical areas of professional performance may be terminated from the program. Core faculty will evaluate students on a continuing basis to determine students' satisfactory progression through the program. Other policies, procedures, and guidelines are addressed in the Counselor Education Graduate Student Handbook.

The Alabama State Department of Education (ALSDE) now offers an expanded certification option for CACREP- accredited programs. Requirements under this option include "completion of a school counseling program that is accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP), and attainment of passing scores on the National Counseling Examination for Licensure and Certification, the basic skills assessments of the Alabama Prospective Teacher Testing Program, and Praxis II test #0421, Professional School Counseling. Note that certification in a teaching field or another area of instructional support is not required for admission to a CACREP-accredited program in school counseling".

ADMISSIONS REQUIREMENTS

The curriculum for the Counselor Education program begins each summer semester and proceeds in a sequenced manner. Applications for graduate programs in counseling are reviewed throughout the year. Deadlines for all application materials (specified below) are: for Fall admission - May 15; for Spring admission - October 1, and for Summer admission - March 1. Requirements for admission are:

1. A completed application for admission to the Graduate School.
2. One official copy of all undergraduate and graduate transcripts.
3. Three letters of recommendation from persons familiar with the applicant's academic and/or professional abilities.
4. A typed double-space statement of 3-5 pages in length regarding the applicant's career goal(s) and purpose(s) for pursuing the Master's program in counseling.
5. Results of the Graduate Record Examination (GRE) or the Miller Analogies Test (MAT).
6. Resume
7. Requirements for School Counseling admission include baccalaureate-level or master's-level professional Educator certification in a teaching field.
8. Applicants whose application portfolio are deemed to be acceptable are required to participate in an interview by counseling program faculty.

Applications, transcripts, letters of recommendation and all supporting materials should be submitted to the Office of Admissions, 2500 Meisler Hall, University of South Alabama, Mobile, Alabama 36688-0002 by the deadlines noted above.

Final admission decisions involve evaluation of the following: grade-point average; scores on the GRE or MAT; letters of reference; professional experience; the applicant's statement of purpose; interview by counseling faculty and program enrollment and availability. All new students are required to attend the Counselor Education Graduate Student Orientation in the first semester following admission to one of the programs.

Students who are not enrolled for three consecutive semesters must complete all admissions requirements again and be reviewed by the program admissions committee.

Comprehensive Examination Type I is required.

The special requirements for completion of the program include demonstration of satisfactory performance in the prescribed curriculum and a written comprehensive examination. For certification in School Counseling, 2 years of satisfactory teaching experience is required.

REQUIREMENTS FOR SCHOOL COUNSELING
(48 Semester hours Minimum)

Major Instructional Support Area:
(36 Semester hours)
CED 565, CED 566, CED 572, CED 574, CED 576, CED 582
CED 584, CED 586, CED 588, CED 591
CED 595 Internship (6 semester hours required; 600 contact hours)

School Counselors are required to successfully complete the PRAXIS II Subject Test prior to enrolling in internship.

Related Studies in Educational Foundations*:
(6 Semester hours)
EPY 521, EPY 555

Research in Education Area:
(3 Semester hours)
IDE 510
*SPE 500Must be taken for three additional hours by students who have not previously satisfied the special education requirement.

REQUIREMENTS FOR CLINICAL MENTAL HEALTH COUNSELING
(60 Semester Hour Minimum)

Required Major Professional Core:
(39 Semester hours)
CED 560, CED 562, CED 566, CED 571, CED 572, CED 574,
CED 576, CED 584, CED 586, CED 588, CED 592
CED 597 (6 semester hours. required; 600 contact hours)
Required Related Professional Courses
(9 Semester hours)
IDE 510, EPY 521, EPY 555

Approved Electives: (12 Semester hours)

GRADUATE CERTIFICATE IN MENTAL HEALTH COUNSELING

The Graduate Certificate in Mental Health Counseling at USA requires a minimum of five courses (15 hours) with grades of "A" or "B". The student may choose from a list of courses to meet requirements for the certificate that provides specific training in the individual's area of counseling emphasis. The student will work with the program director/and or advisor to develop the best plan possible to meet career goals. Admission requirements are as follows:

1. A master's degree in Counseling or Counselor Education
2. Three letters of recommendation from profession references
3. Valid scores on the Graduate Record Exam or Miller's Analogies Test.
4. Transcripts from all undergraduate and graduate institutions attended.
5. A professional resume.
6. A personal statement describing their career goal(s) and how the certificate program will further these goals.
7. An interview

EDUCATIONAL MEDIA PROGRAM ONLINE

The Department of Professional Studies offers two options entirely over the Internet: *Master of Education Degree with Certification in Library Media, and Alabama Class "A" Certification in Library Media.* These options prepare students to plan, design, and administer school libraries and qualify them to serve as school librarians in P-12 schools. Because the programs are nationally recognized and accredited graduates may be able to qualify for certification in states other than Alabama.

The online format offers students the flexibility and convenience of taking graduate courses at home, at the office, or wherever they have access to the Internet. The programs are designed to provide contact with the professor, interaction with other students, and access to the University Library and student services.

Satisfactory progress in the program will be predicated on a combination of factors such as academic success, demonstration of competence in requisite skills, adherence to ethical standards, and appropriate interpersonal functioning. Students who do not demonstrate satisfactory competence with any of these critical areas of professional performance may be terminated from the program. Core faculty will evaluate students on a continuing basis to determine students' satisfactory progression through the program.

ADMISSION REQUIREMENTS

Applications for the Educational Media program are reviewed throughout the year. Deadlines for all application materials (specified below) are: Fall admission - June 15; Spring admission - December 1; and Summer admission - April 1 . Requirements for admission are (in addition to the general Graduate School Standards):

1. A completed application for admission to the Graduate School.
2. One official copy of all undergraduate and graduate transcripts.
3. Two letters of recommendation from persons familiar with the applicant's academic and/or professional abilities. In addition, the letters should reference the applicant's dispositions necessary to help P-12 students learn.
4. A two page narrative from the applicant indicating the applicant's goal(s) and purpose(s) for pursuing the field of Educational Media, and the dispositions that make the applicant a good candidate for helping P-12 students learn.
5. For the master's degree, baccalaureate-level or master's level VALID Certificate in teaching field. For the endorsement only, a master's level VALID Certificate in a teaching field or another area of instructional support.
6. Results of the Graduate Record Examination (GRE), including the Analytical Writing component (required of all applicants, regardless of degrees and certificates previously earned).
7. A resume with a chronology of professional employment.

Applications, transcripts, letters, and all supporting materials should be submitted to the Office of Admissions, 2500 Meisler Hall, University of South Alabama, Mobile, Alabama 36688-0002 by the deadlines noted above. Final admission decision involves evaluation of the following: grade-point average, scores on the GRE, letters of recommendation, applicant's statement of career goal(s) and purpose(s), professional experience, and program enrollment and availability.

Students entering this program must have access to a computer that contains the current Microsoft Office® suite. Specifically, the programs should include Microsoft Word®, Access®, PowerPoint®, Excel®, and Publisher®. Because students will be required to spend a great deal of time searching the Internet, a high-speed Internet connection is highly recommended.

Master of Education Degree with Certification in Library Media (33 semester hours)

Students entering this program must have valid baccalaureate-level or master's level professional educator certification in a teaching field. Program requirements include:

1. Completing a minimum of 30 semester hours as outlined below, with a minimum grade-point average of 3.0 ("B") on all work attempted. A minimum grade of "B" is required for all EDM courses, and a satisfactory performance is required in each of the internship experiences.
2. Passing a written comprehensive and portfolio examination.
3. Passing the PRAXIS II test for Library Media Specialist
   Having at least two years of successful teaching experience at the time application for certification is submitted.

I. Educational Media Core Courses (18 semester hours)
EDM 510 or EDM 520, EDM 533, EDM 552, EDM 580, EDM 581, EDM 583
With the exception of EDM 510, enrollment is limited to Educational Media majors only.

II. Internship (3 semester hours)
EDM 595-A (prerequisite EDM 581), EDM 595-B (prerequisite EDM 580), EDM 595-C (prerequisite EDM 583). See additional information below.

III. Instructional Support Courses (9 semester hours)
EPY 502, IDE 510, SPE 500 (If a survey course in Special Education was previously taken at the undergraduate or graduate level, an advisor-approved elective may be taken in lieu of SPE 500.)

Alabama Class "A" Certification in Library Media (21 semester hours)

To be eligible for admission to this program, students must have a valid Alabama master's level certification in a teaching field or a valid master's level certification in another area of instructional support and must have completed the equivalent graduate course work listed under Instructional Support Courses for the master's degree (9 semester hours). Program requirements include:

1. Completing the Educational Media Core (21 semester hours) as outlined below, with a minimum grade of "B" in all core courses and a satisfactory performance in each of the internship experiences.
2. Passing a written comprehensive and portfolio examination.
3. Passing the PRAXIS II test for Library Media Specialist.
4. Having at least two years of successful teaching experience at the time application for certification is submitted.

I. Educational Media Core Courses (18 semester hours)
EDM 510 or EDM 520, EDM 533, EDM 552, EDM 580, EDM 581, EDM 583
With the exception of EDM 510 enrollment is limited to Educational Media majors only.

II. Internship (3 semester hours)
EDM 595-A (prerequisite EDM 581), EDM 595-B (prerequisite EDM 580), EDM 595-C (prerequisite EDM 583) See additional information below.

In addition, a survey course in Special Education is required if not previously taken at the undergraduate or graduate level.

Students will be required to accumulate a total of 300 contract hours during the three internships: A, B, and C (100 hours in each). Of the 300 contact total hours, 150 must be accumulated in a P-12 school library. Although it is preferred that all internship hours are accumulated in a P-12 school library, other settings may be approved such as a public or university library. Internship A MUST be conducted in a school library. Of the 300 total hours, at least 100 must be at the elementary level (K-6) and at least 100 at the secondary level (7-12); the remaining 100 may be at the level(s) of choice. It is the students' responsibility to initiate the internship experiences by: identifying potential sites and obtaining on-site administrative approval. Final approval of internship arrangements will be made by program faculty. The supervising library media specialist must be certified, currently employed as a media specialist, and have at least three successful years as a media specialist.

For more detailed information, please visit the Educational Media Online program website at: http://USAonline.southalabma.edu/ (click on Academic Information and then Educational Media) or contact Dr. Edward Lomax, University of South Alabama, College of Education, Department of Professional Studies, UCOM

3800, Mobile, AL 36688-0002. Telephone (251) 380-2861; E-mail: elomax@southalabama.edu.

MASTER OF SCIENCE IN INSTRUCTIONAL DESIGN AND DEVELOPMENT PROGRAM

The Master of Science degree program in Instructional Design and Development provides students with the information and skill training to analyze instructional tasks, to design and deliver instructional programs, and to perform evaluative procedures on instructional products and services. The job market potential for graduates of the program includes the management of in-service education in business and industry, health-related institutions and agencies, military agencies, institutions of higher education, K-12 education, and related self-employed activities.

1. Each student will be assigned a major professor and will complete a course-of-study form by the end of the first semester of study.
2. A program committee will be appointed to work with the student.
3. A Master's Comprehensive Examination will be completed by each student during the student's last semester.

The Master's program in Instructional Design and Development (ID&D) has both on-campus and online courses. Although not all courses are taught in both formats, students are able to complete the Master's program in one format or the other, or a combination of on-campus and online courses. Using the Internet and other distance learning technologies, the ID&D online program provides an educational opportunity for those who choose to use similar technology that they might employ for delivering educational and training courses after graduation.

Flexibility is the key to the program, and students can complete courses via the Internet following their individual learning schedules during the semester. Students are able to interact directly with their instructor and classmates to obtain subject information, to work on course and team assignments, and to complete assessments via the Internet. In addition, students have direct access to the University Library and advising services.

For more detailed information, please visit the ID&D web site at http://www.southalabama.edu/coe/bset/idd/ or the University of South Alabama online web site at http://USAonline.southalabama.edu or contact: Ms. Gail McLean, Secretary, College of Education, University of South Alabama, Mobile, AL 36688-0002. Telephone (251) 380-2861; E-mail: gmclean@southalabama.edu.

REQUIREMENTS FOR ADMISSION

Applications for the Instructional Design and Development program are reviewed throughout the year. Requirements for admission are:

1. A completed application for admission to the Graduate School.
2. One official copy of all undergraduate and graduate transcripts.
3. Two letters of recommendation from persons familiar with the applicant's academic and/or professional abilities.
4. A statement of the applicant's career goal(s) and purpose(s) for pursuing the Master's program in Instructional Design and Development.
5. Results of the Graduate Record Examination (GRE) including the writing component or the MAT.

Applications, transcripts, letters, and all supporting materials should be submitted to the Office of Admissions, Administration Building, Room 182, University of South Alabama, Mobile, Alabama 36688-0002.

Final admission decision involves evaluation of the following: grade-point average, scores on the GRE, letters of reference, applicant's statement of career goal(s) and purpose(s), professional experience, and program enrollment and availability.

INTERNSHIP

Many Instructional Design and Development students complete an internship of a minimum of 240 contact hours. Students must complete all foundational core courses prior to enrolling for the internship. The internship component is designed to give students practical experience in design, implementation, and/or evaluation of instructional systems and must have prior approval of the internship coordinator and the student's advisor.

REQUIREMENTS FOR DEGREE

To qualify for the Master's Degree in Instructional Design and Development, candidates must satisfactorily complete the following program with a minimum grade of "B" or better on all course work. Students must complete a written course of study by the end of their first semester in the program.

Students must successfully complete a 1-hour oral comprehensive exam. The exam may be taken only two times.

REQUIREMENTS FOR THE M.S. DEGREE IN INSTRUCTIONAL DESIGN AND DEVELOPMENT PROGRAM (33 semester hours minimum)

I. Foundational Core Courses
(21 semester hours required)
ISD 610, ISD 613, ISD 621, ISD 641, EPY 502, IDE 510, IDE 660

II. Additional Requirements
(9 semester hours required)
ISD 581, ISD 611, ISD 653

III, Field Courses
(Minimum of 3 semester hours required)
ISD 595, ISD 598, ISD 599

GRADUATE CERTIFICATE IN INSTRUCTIONAL DESIGN AND DEVELOPMENT

The Graduate Certificate for Instructional Design and Development requires a minimum of five courses (15 hours) with a grade of B or better. Requirements for the certificate include ISD 613, 621, 622, 642, and 653

GRADUATE CERTIFICATE IN HUMAN PERFORMANCE IMPROVEMENT

The Graduate Certificate for human Performance Improvement requires a minimum of five courses (15 hours) with a grade of B or better. Requirements for the certificate include ISD 611, 640, 641, 645, and one supporting course (ISD 621, 642, or IDE 645).

DOCTOR OF PHILOSOPHY PROGRAM IN INSTRUCTIONAL DESIGN AND DEVELOPMENT

The Doctor of Philosophy degree in Instructional Design and Development consists of components in instructional systems design, instructional technology, learning theory, and research and evaluation. Program emphases are: applying instructional systems design procedures in educational program development; developing instructional models for a variety of subject matter areas and educational settings; matching instructional strategies to student learning styles; evaluating, selecting, and integrating new technologies into instructional systems; and utilizing formative and summative evaluation and research in the development and improvement of instructional systems. Graduates of the program will be prepared to function in school districts, colleges and universities, business and industry, health care organizations, and the military with responsibility for planning, implementing, and evaluating instructional programs.

REQUIREMENTS FOR ADMISSION

Applicants for the doctoral program with a Bachelor's degree or without a Master's degree in Instructional Design and Development from a program deemed to be equivalent by the admissions committee will be required to complete the Foundational Core courses in the Master's degree in IDD and take a qualifying exam on the Foundational Core. Students must satisfy all Foundational Core requirements with a "B" or better and pass the qualifying examination. In addition, the applicant's progress and preparation for advanced work will be reviewed by a committee that will make a decision for or against admission to the regular Ph.D. program.

Applicants with a Master's degree in Instructional Design and Development or equivalent may be admitted to the regular Ph.D. program. After transcript review, however, the admission committee may require additional coursework and/or successful completion of the Master's comprehensive exam. Any additional pre-requisite course work will be indicated in the acceptance letter.

The Admissions Committee will select the most highly qualified candidates to be considered for admission to the program. A positive effort will be made to identify and recruit minority students into the program. The following must be on file for an applicant to be considered.

1. A completed application for admission to the Graduate School.
2. Official GRE scores, including the writing section or the MAT, sent by the testing agency to the Registrar.
3. Official transcripts from all institutions attended.
4. A written statement of the applicant's career goal(s) and purpose(s) for pursuing the Ph.D. program in Instructional Design and Development.
5. Three letters of recommendation from persons familiar with the applicant's academic and/or professional abilities.
6. Curriculum vita

The admission decision involves evaluation of the following: the grade-point average on undergraduate and graduate course work, scores on the GRE or the MAT, letters of recommen-

dation, professional experience, the applicant's statement of purpose, and the program's current enrollment. Final decisions regarding admission will be based on the applicant's personal and professional qualifications as well as the program's ability to accommodate additional doctoral students. Upon acceptance by the College of Education, the applicant will be recommended for admission. Admissions will notify all applicants in writing of the disposition of their applications.

Requests for application forms for admission should be addressed to the Office of Admissions, 2500 Meisler Hall, University of South Alabama, Mobile, Alabama 36688-0002 (Telephone: (251) 460-6141 or 1-(800) 872-5247) or downloaded from the university website http://www.southalabama.edu/admissions/gradrequire.html.

Information about the Ph.D. program should be requested from the Coordinator, Instructional Design and Development Program, UCOM 3800, College of Education, the University of South Alabama, Mobile, Alabama 36688-0002 (Telephone: (251) 380-2861).

All documents for admission review (i.e., transcripts, test scores or letters of recommendation) must be official and mailed from the home institutions or testing agency directly to the Office of Admissions. Once submitted, documents become the property of the University of South Alabama.

PROGRAM

The Doctor of Philosophy degree program in Instructional Design and Development is designed to provide persons with skills required in planning, implementing, and evaluating instructional programs in a variety of educational settings. The program consists of four major components:

1. the instructional design and development foundation core,
2. research methods and statistics,
3. supporting coursework,
4. completion of a dissertation.

A minimum of 60 semester hours of approved graduate course work is required in the program. Refer to the current Instructional Design and Development doctoral handbook for specific requirements.

The requirements for each of the components in the program in Instructional Design and Development are described below. (Any additional requirements will be determined by the student's doctoral advisory committee.)

REQUIREMENTS FOR THE Ph.D. IN INSTRUCTIONAL DESIGN AND DEVELOPMENT PROGRAM (60 semester hours)

To qualify for the Doctor or Philosophy Degree in Instructional Design and Development candidates must satisfactorily complete the following program with a grade of "B" or better in all course work.

Instructional Core (24 semester hours minimum)

EPY 602 or ISD 614, ISD 612, ISD 620, ISD 622, ISD 640, ISD 651, ISD 653, ISD 695

Research Core (21 semester hours minimum)

IDE 620, IDE 621, ISD 623, IDE 630, IDE 631, IDE 635, IDE 710, IDE 711
(IDE 711 is 1 semester hour; must be repeated for three semesters.)

Supporting Course work (minimum 6 semester hours)

Courses must be approved by doctoral advisory committee.

Research/Dissertation (minimum 9 semester hours)

Instructional Core and Research Core comprehensive examinations are required before enrolling in research/dissertation hours. No more than 9 research/dissertation hours count toward the semester hours requirement.

CONTINUOUS ENROLLMENT

Doctoral students must be continuously enrolled for one semester hour or more to remain active in the program. After admission to candidacy and until graduation, students must enroll each academic term for a minimum of one semester hour of IDE 799, Research and Dissertation. A minimum of 9 hours of dissertation credit is required.

Failure to enroll for any hours during any semester will result in a student being removed from the program. Students who voluntarily withdraw from the program may be considered for readmission. The student will be reviewed by the Admissions Committee under standards in effect at the time the student applies for readmission. The student will need to demonstrate that he or she is current with the research literature in the field. This may require additional work on the part of the candidate.

RESIDENCY

Students in the program will complete a minimum of one year of residency during their doctoral studies. Residency is defined as enrollment as a full-time student for a period of two consecutive semesters. Residency is a requirement for admission to candidacy.

EXAMINATIONS

Doctoral students are required to successfully complete two major examinations before admission to candidacy.

Research Core Examination

This Research Core Examination is a one-day examination consisting of a written portion and the analysis of a data set using a computer program of the student's choice. The purpose of the examination is to verify that the student has developed an understanding of research, measurement, evaluation and statistical skills.

Instructional Core Examination

The Instructional Core Examination is a written and oral examination. The purpose of the two-day written portion is to assure that all Instructional Design and Development candidates are prepared in the core areas of the discipline. The two-hour oral examination is intended to review and extend the topics covered in the written parts of the examination. The written exam must be passed in order to sit for the oral exam. The Instructional Core Exam may be taken only two times.

CANDIDACY

Students will be admitted to candidacy for the degree of Doctor of Philosophy in Instructional Design and Development after successful completion of the following program requirements:

1. doctoral advisory committee appointed;
2. program of study established;
3. residency established;
4. Research Core Examination;
5. Instructional Core Examination; and
6. dissertation topic approved.

TRANSFER CREDIT

A maximum of nine (9) semester hours of graduate credit earned at an approved graduate school may be counted toward the Ph.D. plan of study. The credit is approved only after completion of a minimum of nine (9) semester hours of graduate credit at the University of South Alabama and the student must be in regular status. Recommendations concerning transfer credit will be made by the Doctoral Advisory Committee in light of a student's total program of study. All proposed transfer credit must be approved by the Director of Graduate Studies and the student's Doctoral Advisory Committee. Only courses with "A" or "B" grades are acceptable for transfer and must be from a regionally accredited institution.

IDD DOCTORAL STUDENT HANDBOOK

The Instructional Design and Development Doctoral Student Handbook provides additional information about the program. The latest version of the handbook is available from the Professional Studies department secretary or online. In addition to basic information about the program, the IDD Doctoral Handbook includes specific information on requirements doctoral students must complete.

DESCRIPTIONS OF ALL COUNSELOR EDUCATION (CED) COURSES BEGIN ON PAGE 191.

DESCRIPTIONS OF ALL EDUCATIONAL MEDIA (EDM) COURSES BEGIN ON PAGE 210.

DESCRIPTIONS OF ALL EDUCATIONAL PSYCHOLOGY (EPY) COURSES BEGIN ON PAGE 226.

DESCRIPTIONS OF ALL INSTRUCTIONAL DESIGN AND DEVELOPMENT PROGRAM (ISD) COURSES BEGIN ON PAGE 243.

COLLEGE OF ENGINEERING

Dean: John Steadman (251) 460-6140
Associate Dean: James E. Laier
Director of Graduate Studies:
Thomas G. Thomas, Jr.
Instructor: Alexandra Sinclair

College of Engineering web site
http://www.southalabama.edu/engineering/

DEPARTMENTS OF INSTRUCTION

Chemical and Biomolecular Engineering
Civil Engineering
Electrical and Computer Engineering
Mechanical Engineering

DEGREE PROGRAMS OFFERED

The College of Engineering offers programs of study leading to the following degrees:
Bachelor of Science in Chemical Engineering
Bachelor of Science in Civil Engineering
Bachelor of Science in Computer Engineering
Bachelor of Science in Electrical Engineering
Bachelor of Science in Mechanical Engineering
Master of Science in Chemical Engineering
Master of Science in Civil Engineering
Master of Science in Electrical Engineering
Master of Science in Mechanical Engineering
Doctor of Science in Systems Engineering

MISSION STATEMENT

The mission of the College of Engineering is to provide students with quality, accessible undergraduate and graduate engineering education, to prepare graduates for professional careers and lifelong learning, to promote the creation and dissemination of knowledge, to serve society through professional practice and community outreach and to act as a catalyst for economic and technological development of the Gulf Coast region, the State of Alabama and the Nation.

UNDERGRADUATE PROGRAMS

Admission to the University of South Alabama constitutes admission to the College of Engineering for those students wishing to major in engineering. Incoming students should specify a particular discipline in the College as a major as soon as practical in order to receive proper counseling and pursue their engineering course work. Transfer students must declare a major and have all transfer credit evaluated by the Admissions Office. The department chair will approve transfer credit for engineering degree credit except where substitutions are involved; substitutions require the approval of the dean. Transfer students are encouraged to have departmental evaluations accomplished prior to their first registration for classes.

Entering freshmen students not adequately prepared to enter the degree program may be required to take additional preparatory course work. Such preparatory work will not be counted toward the major degree program.

Students must have the prerequisites for the courses in which they enroll; students who enroll without prerequisites are subject to administrative withdrawal. Prerequisites are satisfied by courses taken either at South Alabama or by acceptable transfer credit. Students not exempted from EH 101 will be required to take it as a prerequisite to EH 102.

Today's society is permeated by an extensive technology that affects the lives of everyone. The engineering function in this modern society-while basically unchanged from the goal of using natural resources for the betterment of mankind-has more far-reaching and immediate consequences than ever before through the social, economic, environmental, and political reactions that follow technological developments.

The engineering profession has recognized that to fulfill the social as well as technical responsibilities incumbent upon today's engineer, engineering graduates must not only be technically competent, but must also be as broadly educated as possible within the allotted educational time period. To this end, the College of Engineering strives to prepare its students ultimately to assume their responsibilities by providing technically sound programs of instruction that incorporate a strong component in the humanities and social sciences. Graduates are prepared to take industrial positions, to assume positions with government, or to pursue graduate studies.

Engineering students may also qualify as premedical students should they desire to apply for admission to medical school. Students interested in medical careers should consult with the Dean of the College of Medicine.

PROFESSIONAL COMPONENT STANDING FOR UNDERGRADUATE PROGRAM

All departments in the College of Engineering require Professional Component Standing (PCS) for most 300- and 400-level courses. PCS is awarded by the appropriate department chair when the student does the following:

1. Completes a required set of fundamental courses;
2. Has at least a 2.00 GPA (and a C-grade minimum in all EE/CIS courses in the Computer Engineering Degree) or "C" level competency for certain departmentally specified courses taken at the University of South Alabama (students in Civil Engineering, Mechanical Engineering and Chemical Engineering must have grades of "C" or better in certain department specified courses); and
3. Has at least a 2.00 GPA overall at the University of South Alabama.

Students who fail to maintain PCS criteria will lose PCS and may be required to take or repeat appropriate courses as specified by the department chair to correct their deficiencies and may not be permitted to continue in the 300- and 400-level engineering courses. See departmental policy statements for additional details.

DEGREE REQUIREMENTS FOR A BACHELOR DEGREE

To become a candidate for a Bachelor of Science degree in one of the five major disciplines within the College of Engineering, the student must satisfy the general requirements of the University as set forth in "Academic Policies and Procedures," and must have satisfactorily completed the program of instruction specified by the major department. In addition to these requirements, the Engineering student must have at least a GPA of 2.00 or C-level competency in all subjects taken in the student's major department at the University of South Alabama. Engineering students are required to take and make a "good faith" effort to pass the Fundamentals of Engineering examination prior to their anticipated date of graduation. Students should be aware of the deadline established by the National Council of Examiners for Engineering and Surveying for submission of examination application materials. Failure to meet the deadline could result in delayed graduation.

A transfer student must complete at least 25 percent of the credit hours required for the degree from upper-division courses with at least 16 hours in the upper level of the student's major department at the University of South Alabama.

Engineering students with less than 15 credit hours are required to take EG 101. Requirements for EG 201 can be waived by the student's advisor once it is demonstrated that a particular student has been exposed to material covered in this course and most likely is not going to be benefited from such a course. An appropriate math, science or engineering course must be substituted if the student does not take EG 101.

GENERAL EDUCATION REQUIREMENTS

Engineering students must comply with the University's general education requirements. In the area of Humanities and Fine Arts, engineering students are required to take a total of at least 9 semester hours with a minimum of 3 semester hours in literature and a minimum of 3 semester hours in the arts with the remaining hours from the Humanities and Fine Arts. In the area of History, Social, and Behavioral Sciences, engineering students are required to take at least 9 semester hours with a minimum of 3 semester hours in history and a minimum of 3 semester hours from among the other disciplines in the social and behavioral sciences.

Area I. Written Composition (6 hours)
EH 101 (3)
EH 102 or EH 105H (3)

Area II. Fine Arts and Humanities* (9 hours)
Fine Arts elective
ARH 100, 103, 123
ARS 101
DRA 110
MUL 101

Literature elective
EH 215, 216, 225, 226, 235, 236

Humanities elective
AFR 101
AIS 105
CA 110 (3)**
LG 111, 112, 211, 212
LG 131, 132, 231, 232
LG 171, 172, 271, 272
LG 151, 152, 251, 252
LGS 101, 102, 201, 202
LGS 106, 107, 206, 207
LGS 121, 122, 221, 222
LGS 141, 142, 241, 242
PHL 110, 121, 131, 231, 240

Area III. Natural Sciences and Mathematics (11 hours)
CH 131, 131L
PH 201
MA 125

Area IV. History/Behavioral and Social Sciences* (9 hours)**
HY 101, 102, 135, 136
Behavioral and Social Sciences
AIS 201
AN 100, 101
CA 100, 211
ECO 215, 216
GEO 114, 115
GS 101
IS 100
PSC 130
PSY 120, 121, 250
SY 109, 112
*Must complete 3 hours in literature and 3 hours in fine arts.
**Civil, Computer, Electrical and Mechanical Engineering majors are required to take CA 110 to fulfill the humanities requirement.
***Must complete 3 hours in history and 3 hours in social and behavioral sciences.

HONORS PROGRAM IN ENGINEERING

To receive a designation of "Departmental Honors," students must have at least a 3.5 GPA at the time of graduation and complete a Honors Senior Project in their major. The Honors Senior Project requirement may be satisfied in either of two ways:

1. By completing a Senior Honors Project course that requires completion of a research project under the guidance of a faculty mentor.
2. By completing a special honors design project as part of the capstone engineering design requirement under the guidance of a faculty mentor.

It is required that there be both a written report and oral presentation of the results of the Honors Senior Project.

Students participating in "Departmental Honors" may also elect to take University Honors Seminar and participate in other University Honors Activities upon recommendation of their major advisor.

COMPUTER OWNERSHIP POLICY

College of Engineering undergraduate students will be required to own a personal laptop computer that conforms to the current college minimum standards by the time they enter engineering level courses. This is a one machine per student requirement. For more information consult the Computer Services link at www.southalabama.edu/engineering/.

REQUIREMENTS FOR MINORS IN DISCIPLINES OTHER THAN ENGINEERING

Engineering students may complete a minor in disciplines other than engineering. Students desiring to do so must complete the published requirements for that discipline.

CHOICE OF BULLETIN FOR UNDERGRADUATE DEGREE REQUIREMENTS

After an absence of one calendar year or when transferring into an engineering program, students must use the **Bulletin** in effect at the time of readmission or transfer, or a later version. No student may use a **Bulletin** older than six years from the date of graduation.

COOPERATIVE EDUCATION PROGRAM

The College of Engineering also offers an attractive five year cooperative Education Program. This program allows the student to gain valuable engineering experience as he or she pursues his or her degree. The freshman year is spent as a full time student at the university. During the sophomore and junior years the student alternates working full time with an excellent salary for one semester and taking full time course work the next semester. The student returns to school full time for the senior year.

This program offers many advantages for the student. Interested students should consult with either Career Services Center or the College of Engineering.

MASTER'S PROGRAMS

The College of Engineering offers programs leading to degrees of Master of Science in Chemical, Civil, Electrical and Mechanical Engineering.

The programs of study are designed to provide knowledge of modern engineering concepts and practices; to prepare the graduate for the practice of engineering at a higher level of proficiency than attainable with the bachelor's degree; and to prepare the graduate for further study toward the doctoral degree should the graduate so desire. The programs comprise course work and directed theoretical and experimental inquiry in thesis or project research.

Three plans of study are offered. The **thesis option**, the **project option**, and the **course work only** option. The thesis differs from the project in that the thesis is usually oriented toward original engineering research whereas the project is usually oriented toward engineering applications. The course work only option, while available to all graduate students, is particularly attractive to full time employed engineers that are interested in augmenting and enhancing their engineering skills as part time students. Courses are available in the evening to accommodate employed students.

ADMISSION TO GRADUATE PROGRAMS

The following criteria supplement the Graduate School criteria (see Categories of Admission) and are required for admission to all College of Engineering Master's Programs:

1. **Regular Admission**
   a) A B.S. degree in engineering in a relevant field from an ABET accredited program.
   b) A grade-point average of 3.0 or greater (A=4.0) on all undergraduate work is required.
   c) For international students, a minimum score of 525 on the written Test of English as a Foreign Language (TOEFL) or a minimum of 197 on the computer version of the TOEFL is required.
2. **Provisional Admission**
   a) A B.S. degree in engineering or in a field acceptable to the departmental Graduate Admissions Committee is required. Depending on the student's background additional undergraduate preparatory courses may be required. These courses will not count toward the Master's degree.
   b) A minimum grade-point average of 2.5 (A=4.0) on all undergraduate work including a minimum grade-point average of 2.5 over the last 64 course hours of undergraduate work is required. Alternatively, a minimum grade-point average of 2.75 over the last 64 course hours of undergraduate work is required.
   c) For international students, a minimum score of 525 on the written Test of English as a Foreign Language (TOEFL) or a minimum of 197 on the computer version of the TOEFL is required.
3. **Non-degree Admission**
   a) Non-degree admissions are accepted in accordance with Graduate School requirements.

Each applicant will be reviewed by the Admissions Committee of the appropriate department which may reserve the right to evaluate additional credentials, such as, but not limited to, course work taken, letter of recommendation, etc.

At the beginning of the first semester, international students, except those who have earned a bachelor's or graduate degree at an accredited United States institution of higher learning, are given a foreign language test by the University. Students with deficiencies in English skills as assessed by the test, will be required to take and successfully complete special English Communication ESL courses tailored to Engineering. These courses will be in addition to other requirements for the degree. The above are minimum requirements for admission. Specific requirements for admission differ for each department. For details, see the Master of Science in Chemical Engineering, Master of Science in Civil Engineering, Master of Science in Electrical Engineering and Master of Science in Mechanical Engineering program requirements.

CHANGE OF STATUS FROM PROVISIONAL TO REGULAR STANDING WITHIN THE MASTER'S PROGRAMS

The following requirements are in addition to the Graduate School requirements for change of status: Students required to complete additional undergraduate course work in partial fulfillment of the requirements to advance from Provisional Admission to Regular Admission must obtain a minimum grade-point average of at least 3.00 on the total of all such required courses with a grade of at least "C" in each course.

DEGREE REQUIREMENTS FOR A MASTERS DEGREE

The **thesis option** includes 6 hours of credit for the thesis. The **project option** includes 3 hours of credit for the project. The **course work option** requires credit only for graduate courses. Specific degree requirements differ for each department. For details, see the Master of Science in Chemical Engineering, Master of Science in Civil Engineering, Master of Science in Electrical Engineering and Master of Science in Mechanical Engineering program descriptions.

Required study includes course work in a specific engineering discipline and course work in supporting areas. Supporting areas include mathematics, natural sciences, basic medical sciences, computer sciences, statistics, business, as well as engineering.

All students pursuing a thesis or project option are required to take a one semester hour course in research integrity as part of their engineering course work requirements. A maximum of six hours of directed study may be counted toward the degree. A maximum of six hours of thesis may be counted toward the degree.

All students must satisfactorily complete a comprehensive examination. Students failing this examination may try a second time not sooner than 12 weeks after the first attempt. Students failing the second time will be academically dismissed from the program. The thesis or project candidate must present a satisfactory oral defense of the written report. Should the student present an unsatisfactory defense, a second attempt will be allowed no sooner than 12 weeks after the first attempt. A second unsatisfactory defense will result in dismissal from the program.

An engineering senior at the University of South Alabama who has completed 96 semester hours with a GPA of 3.00 or better may, with approval of the Director of Graduate Studies, enroll in graduate engineering courses in accordance with Graduate School policies. See Graduate Study For Advanced Undergraduates.

DOCTOR OF SCIENCE PROGRAM IN SYSTEMS ENGINEERING

The Doctor of Science (D.Sc.) Program in System Engineering offers students specialization in an interdisciplinary, collaborative approach to engineering design of complex systems. Systems engineering is an interdisciplinary field of engineering that focuses on how complex engineering projects are designed and managed over their life cycles. The main objectives of the D.Sc. Program are to provide a unique interdisciplinary program that meets the needs of industry and the community in the area of systems engineering, to prepare graduates for leadership positions in applied research that require the use of systems engineering tools to solve complex engineering problems, and to capitalize on the opportunities that result from the interactions of a research university with industry. This program is designed primarily for students who wish to pursue research-based careers in industry and government. Course work across several systems- related disciplines is coupled with research on a topic pertaining to systems engineering.

Requirements for Admission:
Minimum admission requirements are as follows:

1. An M.S. degree in engineering from an ABET-accredited (or equivalent) program. A grade point average of 3.0 or grader (on a scale of 4) on all graduate course work.
2. A minimum score of 151 in the Verbal portion and a minimum score 151 in the Quantitative portion of the Graduate Record Examination (GRE).
3. For international students whose native language is not English, a minimum of 71 in the internet-based or 197 in the computer-based Test of English as a Foreign Language (TOEFL).

NOTE: Students applying to this program with a B.S. degree in engineering may get *provisional* admission into the systems engineering doctoral program and will have to complete 24 hours of preparatory graduate course work suggested by the Systems Engineering committee and achieve a grade-point average of 3.0 or greater (on a scale of 4) before they can get regular admission into the doctoral program.

Degree Requirements
Degree requirements for the D.Sc. Program in Systems Engineering are as follows:

1. 24 hours of advanced graduate course work. This includes 9 credit hours of core systems engineering courses (Systems Engineering I, Systems Engineering II, Systems Engineering III) and 15 credit hours of approved electives.
2. Successful completion of doctoral qualifying examination.
3. Successful completion of dissertation proposal defense.
4. 18 dissertation credit hours.
5. Successful completion of written dissertation and oral defense of dissertation.

DESCRIPTION OF ALL GENERAL ENGINEERING (EG) COURSES BEGIN ON PAGE 220.

DEPARTMENT OF CHEMICAL AND BIOMOLECULAR ENGINEERING

Chair: Srinivas Palanki (251) 460-6160
Professors: Harrison, Palanki, Sylvester
Assistant Professors: Glover, Leavesley, West, Wheeler
Professor Emeritus: Rodriguez

Department of Chemical and Biomolecular Engineering web site
http://www.southalabama.edu/engineering/chemical/

Chemical Engineering is a profession in which knowledge of mathematics, chemistry, biology and other natural sciences gained by study, experience, and practice is applied with judgment to develop economical ways of using material and energy for the benefit of mankind. The program required for the degree of Bachelor of Science in Chemical Engineering provides fundamental instruction in mathematics, chemistry, biology, physics, and engineering. This education prepares the graduate to seek employment in petrochemical, pharmaceutical, healthcare, microelectronics, polymers, energy and environmental industries. In addition, the graduate is adequately prepared to pursue graduate school.

Chemical engineering students are required to take the Chemical Engineering discipline specific Fundamentals of Engineering examination of Alabama or another state prior to graduation. All electives must be approved by the student's advisor. Degree requirements include a minimum of 18 semester hours of approved electives in the Humanities and Social Sciences.

Satisfactory completion of the **130 hour** program outlined below leads to a Bachelor of Science in Chemical Engineering. Students must also comply with the College of Engineering Requirements for a Degree, which are covered in the **Bulletin** under College of Engineering.

Program Educational Objectives
The Department's undergraduate chemical engineering program prepares students to achieve the following educational objectives within 3-5 years of graduation:

1. Advance professionally with increasing leadership and responsibility beyond entry level in traditional and non-traditional chemical industries or related fields.
2. Contribute to achievement of organizational objectives with significant societal benefits in an environmentally and ethically responsible manner.
3. Engage in life-long learning through professional activities and training, the pursuit of higher educational degrees, and individual professional development.

Student Outcomes
Graduates of the Chemical Engineering Program at the University of South Alabama will have:

1. an ability to apply knowledge of mathematics, science, and engineering
2. an ability to design and conduct experiments, as well as to analyze and interpret data
3. an ability to design a system, component, or process to meet desired political, ethical, health and safety, manufacturability, and sustainability in chemical engineering
4. an ability to function on multidisciplinary teams
5. an ability to identify, formulate, and solve chemical engineering problems
6. an understanding of professional and ethical responsibility
7. an ability to communicate effectively
8. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
9. a recognition of the need for, and an ability to engage in life-long learning
10. a knowledge of contemporary issues
11. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
12. a working knowledge of chemical process safety and hazards associated with chemical processes.

The Bachelor of Science program in Chemical Engineering is accredited by the Engineering Commission of ABET, http://www.abet.org.

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

FIRST YEAR

Fall		Spring	
EH 101	3	EH 102	3
MA 125	4	MA 126	4
EG 101	2	CH 132	4
CH 131	4	PH 201	4
BLY 121	4	Gen Ed	3
	17		**18**

SECOND YEAR

Fall		Spring	
MA 227	4	MA 238	3
CH 201	4	Chemistry Elective	4
PH 202	4	Tech Elective I (Chem/Bio)	3
CHE 203	4	EG 270	3
Gen Ed	3	Gen Ed	3
	19		**16**

THIRD YEAR

Fall		Spring	
CHE 321	3	CHE 311	3
CHE 331	3	CHE 322	3
CHE 342	3	CHE 332	3
CHE 351	1	CHE 352	1
EG 231	3	CHE 372	3
Tech Elective II	3	Gen Ed	3
	16		**16**

FOURTH YEAR

Fall		Spring	
CHE Elective I	3	CHE Elective II	3
CHE 421	3	CHE 452	3
CHE 441	2	CHE 462	3
CHE 442	2	Gen Ed	3
CHE 461	3	Gen Ed	3
	13		**15**

MASTER OF SCIENCE IN CHEMICAL ENGINEERING

With the ever-increasing pace of technological development in society, new opportunities are becoming available that require chemical engineering graduates with increased levels of specialization. The Department offers a Master of Science degree in Chemical Engineering that blends scholarship and research with advanced course work to provide excellent training for students to pursue careers in the chemical industry. Graduate students have opportunities to undertake cutting-edge research with faculty for both thesis and project work. In addition, a course work-only program is also offered by the department for those who intend to further their professional development while pursuing a graduate degree. Students with a bachelor's degree in a major other than chemical engineering can qualify for admission by taking a prescribed series of undergraduate courses.

ADMISSION TO THE MSChE PROGRAM

The following criteria supplement the College of Engineering admission criteria (see ADMISSION TO GRADUATE PROGRAMS):

1. **Regular Admission Requirements**
   a) A bachelors degree in chemical engineering.
   b) A grade-point average of 3.0 or greater (A=4.0) on all undergraduate work is required.
   c) A minimum score of 150 in the quantitative section of the Graduate Record Examination (GRE) is required.
2. **Provisional Admission Requirements**
   a) A minimum grade-point average of 2.5 (A=4.0) on all undergraduate work is required.
   b) A minimum score of 150 in the quantitative section of the Graduate Record Examination (GRE) is required.
   c) A bachelors degree in chemistry, physics, mathematics or engineering.

DEGREE REQUIREMENTS FOR MSChE

The minimum credit hour requirements for the different options pertaining to the MSChE degree are:

Thesis Option: 30 credit hours
Project Option: 30 credit hours
Course Option: 34 credit hours

Thesis Option: *30 credit hours*
Year 1:

Fall Semester		Spring Semester	
CHE 520	4	CHE 525	4
EG 501	1	CHE 592	4
Elective	3		

Year 2:

Fall Semester		Spring Semester	
CHE 510	4	CHE 551	4
CHE 599	3	CHE 599	4

Project Option: *30 credit hours*
Year 1:

Fall Semester		Spring Semester	
CHE 520	4	CHE 525	4
EG 501	1	CHE 592	4
Elective	3		

Year 2:

Fall Semester		Spring Semester	
CHE 510	3	CHE 525	4
Elective	3	CHE 594	4

Course Work Option: *34 credit hours*
Year 1:

Fall Semester		Spring Semester	
CHE 520	4	CHE 525	4
Elective	3	Elective	3

Summer Semester

Elective	3
Elective	3

Year 2:

Fall Semester		Spring Semester	
CHE 510	4	CHE 551	4
Elective	3	Elective	3

DESCRIPTION OF ALL CHEMICAL ENGINEERING (CHE) COURSES BEGIN ON PAGE 195.

DEPARTMENT OF CIVIL ENGINEERING

Chair: Kevin D. White (251) 460-6174
Professors: Douglass, White
Associate Professor: Laier, Omar
Assistant Professors: Cleary, Islam, Kang, Steward, Webb, Whelton

Department of Civil Engineering web site http://www.southalabama.edu/engineering/civil

Civil Engineering involves the design and construction of systems necessary for our modern society to function. It encompasses many technical specialties whose focus is the design of large, normally one-of-a-kind, facilities such as bridges, buildings, tunnels, highways, dams, waterways, airports, flood control systems, coastal protection systems, water supply networks, and waste treatment plants. As our society expands, challenging opportunities will continue to be available for Civil Engineers practicing in their own private firms, in large companies, or in governmental agencies.

Program Educational Objects:

The educational objectives of the Department of Civil Engineering's undergraduate program are that, within a few years of program completion, graduates should be able to combine skills gained through academic preparation and post-graduation experience so they can:

1. Exhibit technical competence via advancement, professional licensure, and the application of engineering knowledge and problem-solving skills to multiple areas of civil engineering practice.
2. Incorporate economic, environmental, social, and sustainability considerations into the practice of civil engineering.
3. Exhibit effective communication, teamwork, leadership, and professional and ethical behavior as complements to technical competence.
4. Continue their life-long technical and professional development, which may include graduate level education, continuing education, and participation in professional organizations.

Student Outcomes:

By the time of graduation from the Civil Engineering Program, students should attain the following outcomes:

a. An ability to apply knowledge of mathematics through differential equations, science, (including calculus-based physics, general chemistry, and one additional area of science), and engineering.
b. An ability to design and conduct civil engineering experiments, as well as to analyze and interpret the resulting data.
c. An ability to design a system, component, or process to meet desired needs with realistic constraints, such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
d. An ability to function on multidisciplinary teams.
e. An ability to identify, formulate, and solve engineering problems.
f. An understanding of professional and ethical responsibility.
g. An ability to communicate effectively.
h. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
i. A recognition of the need for, and an ability to engage in life-long learning.
j. A knowledge of contemporary issues.
k. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
l. An ability to apply knowledge of four technical areas appropriate to civil engineering.

The curriculum builds on a strong base in mathematics, physical sciences, engineering sciences, and humanities developed primarily during the freshman and sophomore years. During the junior year, students develop an understanding of the fundamentals of each area of Civil Engineering. The specialty areas include:

- Environmental Engineering
- Geotechnical Engineering
- Structural Engineering
- Transportation Engineering
- Water Resources and Coastal Engineering

The senior year focuses on design, construction practices, and the integration of more advanced knowledge in civil engineering. A comprehensive project with students participating in a design team prepares them to enter professional practice.

Satisfactory completion of the program outlined below leads to a Bachelor of Science in Civil Engineering. Students must also comply with the College of Engineering Requirements for a Degree which are covered in this **Bulletin** under College of Engineering.

The Bachelor of Science program in Civil Engineering is accredited by the Engineering Accreditation Commission of the ABET, http://www.abet.org.

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

FIRST YEAR

Fall		Spring	
MA 125	4	MA 126	4
CH 131	4	CH 132	4
EG 101	2	EH 102	3
EH 101	3	CE 102	2
Gen Ed*	3	PH 201	4
	16		**17**

SECOND YEAR

Fall		Spring	
MA 227	4	MA 238	3
Sci Elective**	4	ST 315	3
CE 204	3	EG 284	3
CE 205	1	EG 315	3
EG 283	3	Gen Ed*	3
Gen Ed*	3	Gen Ed*	3
	18		**18**

THIRD YEAR

Fall		Spring	
EH 372	3	Gen Ed*	3
CE 314	3	CE 340	3
CE 315	1	CE 341	1
CE 384	3	CE 352	3
CE 385	1	CE 360	2
EG 231	3	CE 367	1
EG 360	3	CE 370	3
	17	CE 374	1
			17

FOURTH YEAR

Fall		Spring	
CE 431	2	CE 432	4
CE 443	2	Tech Elect****	3
CE 470	3	Tech Elect****	3
CE 471	1	Gen Ed*	3
Str Design***	3	Tech Elect****	3
Str Dsn Lab***	1		**16**
CE 460	3		
	15		

*Students must complete eighteen credit hours of courses in Humanities and Fine Arts and History, Social and Behavioral Sciences that satisfy both college and university General Education requirements. CA 110, Public Speaking is required for all Civil Engineering students.

**BLY 121, GY 111, or GEO 102

***Either CE 480 and CE 481 (Steel Design) or CE 485 and CE 486 (Concrete Design)

****Three Technical Electives from an approved list. A second structural design course may be taken to satisfy a technical elective requirement.

MASTER OF SCIENCE IN CIVIL ENGINEERING

The program leading to the Master of Science in Civil Engineering focuses on civil engineering in the coastal environment and allows for specialization in several possible civil engineering sub-disciplines: Environmental Engineering, Geotechnical Engineering, Structural Engineering, Transportation Engineering, or Water Resources/Coastal Engineering. Program admission and MS Degree requirements, as well as plan of study options (thesis, project, and course work only), are described under the College of Engineering section of this **Bulletin**. Most graduate courses in Civil Engineering are offered in late afternoon or early evening to accommodate practicing engineers. See degree requirements.

ADMISSION TO THE MSCE PROGRAM

The following criteria supplement the College of Engineering admission criteria (see ADMISSION TO GRADUATE PROGRAMS):

1. **Regular Admission**
   a) A grade-point average of 3.0 or greater (A=4.0) on all undergraduate work is required.
   b) A minimum combined score of 294 (1000, old scale) on the verbal and quantitative sections of the GRE is required, with a minimum score of 148 (600, old scale) on the quantitative; section of the GRE is also required.
   c) Names and e-mail addresses of three (3) references who can evaluate the applicant's previous academic and professional work must be submitted with the application.
   d) Verification of registration by examination as a Professional Engineer (P.E.) can be substituted for GPA, GRE and reference requirements.
   e) International students must submit documentary evidence showing TOEFL test scores of 525 or above (197 on computer based test) or 71 on internet based test. IELTS band score of 6.0 or higher.
2. **Provisional Admission**
   a) A minimum grade-point average of 2.5 (A=4.0) on all undergraduate work is required.
   b) A minimum combined score of 294 (1000, old scale) on the verbal and quantitative sections of the GRE is required, with a minimum score of 148 (600, old scale) on the quantitative section of the GRE is also required.
   c) Names and e-mail addresses of three (3) references who can evaluate the applicant's previous academic and professional work must be submitted with the application.
   d) International students must submit documentary evidence showing TOEFL test scores of 525 or above (197 on computer based test) or 71 on internet based test. IELTS band score of 6.0 or higher.

Applicants to the MSCE program must submit official scores on the Graduate Record Exam (GRE). This requirement is waived for students who received the BSCE degree from USA. Those students may be required, however, to present GRE scores to be eligible for some assistantships or fellowships.

DEGREE REQUIREMENTS FOR MSCE

The minimum credit hour requirements for the different options pertaining to the MSCE degree are:

Thesis Option: 31 credit hours
Project Option: 34 credit hours
Course Option: 33 credit hours

DESCRIPTIONS OF ALL CIVIL ENGINEERING (CE) COURSES BEGIN ON PAGE 189.

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

Chair: Mohammad Alam (251) 460-6117

Professors: Alam, Parker, Rahman, Steadman
Associate Professors: Khan, Russ, Sakla, Thomas
Assistant Professors: Al-Assadi, El-Sharkh, Spencer
Emeritus Professors: Bosarge, Gungor, Hayes
Part-time Instructor: Gholson

Department of Electrical and Computer Engineering web site
http://www.southalabama.edu/engineering/ece

The Department of Electrical and Computer Engineering offers the Bachelor of Science in Electrical Engineering (BSEE) and a joint program with the School of Computer and Information Sciences leading to the Bachelor of Science in Computer Engineering (BSCpE), both degrees being granted by the College of Engineering.

The program educational objectives (PEOs) of the Electrical Engineering Degree Program are to produce graduates who, during their first few years after graduation, will:

- Achieve professional advancement with increasing responsibility and leadership.
- Function effectively on multidisciplinary teams, and individually, to develop and apply electrical engineering solutions within a global, societal, and environmental context.
- Communicate effectively and manage resources skillfully as members and leaders of their profession.
- Attain professional competence through life-long learning such as advanced degrees, professional registration, and other professional activities.

The student outcomes (SOs) of the Electrical Engineering Degree program are to produce graduates who at the time of graduation will have:

1. A practical working knowledge of mathematical, scientific, and engineering principles in the field of electrical engineering. [Criterion 3(a)]
2. The ability to plan and conduct experiments in electrical engineering science and design, as well as to analyze and interpret data. [Criterion 3(b)]
3. Design skills sufficient for specification and implementation of electrical systems, processes and components. [Criterion 3(c)]
4. An ability to effectively participate in a multi-disciplinary team environment. [Criterion 3(d)]
5. A capacity for problem identification, formulation, solution generation, and decision making. [Criterion 3(e)]
6. An ability to make ethical decisions in professional life and to cultivate personal integrity. [Criterion 3(f)]
7 a. A capacity for effective graphical and oral communication. [Criterion 3(g)]
   b. A capacity for effective written communication. [Criterion 3(g)]
8. A broad education to understand the role and impact of the electrical engineering profession in a global and societal context. [Criterion 3(h)]
9. Recognition of the need for and an ability to continue life-long learning. [Criterion 3(i)]
10. Knowledge of the changing technological environment and its impact on contemporary issues. [Criterion 3(j)]

11. An ability to use modern engineering techniques, instrumentation, and software tools to practice the electrical engineering profession. [Criterion 3(k)]
12. An appreciation of the unique concerns regarding safety required when designing and working with electrical systems.

Electrical Engineering is among the fastest evolving disciplines in our technological society. The engineering developments in electrical technology have provided, in a substantial way, for improvement in the standard of living of humanity. The domain of the electrical engineer reaches from massive electrical energy systems to microscopic integrated circuits; from life studies in bioengineering to satellite communications systems; and from the control of electromagnetic radiation to the control of information flow in a computer. The Computer Engineering program is geared to students who are interested in the design of digital computing systems, integrating both hardware and software design components.

The highly diverse and rapidly evolving characteristics of these fields require a thorough understanding of fundamentals as well as flexibility in the design of individualized programs of study. Therefore, emphasis is placed on mathematics, physics, humanities, social sciences, basic sciences and engineering sciences during the first two years while sufficient flexibility is provided at the senior level to allow a student, in consultation with an advisor, to prepare a specialized course of study in two areas from the broad field of electrical and computer engineering.

The program educational objectives (PEOs) of the Computer Engineering Degree Program are to produce graduates who, during their first few years after graduation, will:

- Achieve professional advancement with increasing responsibility and leadership.
- Function effectively on multidisciplinary teams, and individually, to develop and apply computer engineering solutions within a global, societal, and environmental context.
- Communicate effectively and manage resources skillfully as members and leaders of their profession.
- Attain professional competence through life-long learning such as advanced degrees, professional registration, and other professional activities.

The student outcomes (SOs) of the Computer Engineering Degree program are to produce graduates who at the time of graduation will have:

1. A practical working knowledge of mathematical, scientific, and engineering principles in the field of computer engineering. [Criterion 3(a)]
2. The ability to plan and conduct experiments in computer engineering science and design, as well as to analyze and interpret data. [Criterion 3(b)]
3. Design skills sufficient for specification and implementation of computer systems, processes and components. [Criterion 3(c)]
4. An ability to effectively participate in a multi-disciplinary team environment. [Criterion 3(d)]
5. A capacity for problem identification, formulation, solution generation, and decision making. [Criterion 3(e)]
6. An ability to make ethical decisions in professional life and to cultivate personal integrity. [Criterion 3(f)]
7. a. A capacity for effective graphical and oral communication. [Criterion 3(g)]
   b. A capacity for effective written communication. [Criterion 3(g)]
8. A broad education to understand the role and impact of the computer engineering profession in a global and societal context. [Criterion 3(h)]
9. Recognition of the need for and an ability to continue life-long learning. [Criterion 3(i)]
10. Knowledge of the changing technological environment and its impact on contemporary issues. [Criterion 3(j)]
11. An ability to use modern engineering techniques, instrumentation, and software tools to practice the computer engineering profession. [Criterion 3(k)]
12. An appreciation of the unique concerns regarding safety required when designing and working with computer systems.

In the Computer Engineering Degree Program, sequences of courses are chosen from Electrical and Computer Engineering and from Computer Science that produce an in-depth treatment of digital logic and systems theory. In addition, means are provided in both degree programs, through the Electrical and Computer Engineering Design Laboratory, for a student to pursue a design topic outside of, but related to, the formal course work.

Students are required to take general education (GenEd) elective courses, in two broad areas:

(i) Literature, Humanities and Fine Arts,
(ii) History, Social, and Behavioral Sciences, provide breadth to the educational experience of Electrical Engineering and Computer Engineering students. These electives must be planned, in consultation with an academic advisor, to reflect a rationale appropriate to the educational objectives of the Departmental Programs, while conforming strictly to the requirements of the Articulation and General Studies Committee of the State of Alabama.

A minimum of 18 semester hours from areas (i) and (ii) above must be successfully completed. Moreover, in area (i), at least one course must be in literature and at least one must be in the arts; in area (ii), at least one course must be in history and at least one course must be from disciplines in the social and behavioral sciences. CA 110, Public Speaking is required for all Electrical and Computer Engineering students.

Students in Electrical Engineering are required to become Student Members of the Institute of Electrical and Electronics Engineers (IEEE) when they enroll in EE 401 and EE 404. Students in Computer Engineering are required to become members of either the Institute of Electrical and Electronics Engineers (IEEE) or the Association for Computing Machinery (ACM) when they enroll in EE 401 and EE 404. Through participation in the activities of such technical organizations the student becomes aware of the activities of electrical and computer engineers in society. An excellent opportunity is provided to students for contact with practicing professionals as well as fellow students.

Any Electrical and Computer Engineering student interested in pursuing a career in medicine or bioengineering should consult with an advisor for an appropriate sequence of courses which will meet the minimum requirements for entry into a medical school or the necessary life sciences background to enter a graduate program in bioengineering.

The attainment of the BSEE or the BSCpE degree will allow the graduate to enter the professions of electrical engineering or computer engineering directly, or to continue his/her education at the graduate level.

The Bachelor of Science program in Electrical Engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING - GENERAL TRACK

FIRST YEAR

Fall		Spring	
MA 125	4	MA 126	4
CH 131	3	EH 102	3
CH 131L	1	PH 201	4
EH 101*	3	CIS 210	3
EG 101	2	Gen Ed	3
Gen Ed	3		**17**
	16		

SECOND YEAR

Fall		Spring	
MA 227	4	EE 223	3
PH 202	4	EE 227	1
EE 263	3	EE 264	3
EE 220	3	EE 268	1
Gen Ed	3	MA 237	3
	17	MA 238	3
		EG 270	3
			17

THIRD YEAR

Fall		Spring	
EE 321	3	EE 328	3
EE 322	3	EE 334	4
EE 331	3	EE 355	2
EE 354	3	EE 337	1
EE 368	1	EE 365	3
EE 381	3	EE 372	3
	16	EE 385	1
			17

FOURTH YEAR

Fall		Spring	
EE 401	1	EE 404	3
EG 231	3	Tech Elec**	3
Gen Ed	3	Tech Elec**	3
Gen Ed	3	Senior Lab***	1
Tech Elect**	3	Gen Ed	3
Tech Elect**	3		**13**
	16		

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING - PREMED TRACK

FIRST YEAR

Fall		Spring	
MA 125	4	MA 126	4
CH 131	3	EH 102	3
CH 131L	1	PH 201	4
EH 101*	3	CIS 210	3
EG 101	2	CIS 132	4
Gen Ed	3		**18**
	16		

SECOND YEAR

Fall		Spring	
MA 227	4	EE 223	3
PH 202	4	EE 227	1
EE 263	3	CH 202	4
EE 220	3	BLY 121	4
CH 201	4	MA 237	3
	18	MA 238	3
			18

THIRD YEAR

Fall		Spring	
EE 268	1	EE 328	3
EE 264	3	EE 334	4
EE 321	3	EE 337	1
EE 322	3	EE 355	2
EE 331	3	EE 365	3
EE 354	3	EE 368	1
BLY 122	4	Gen Ed	3
	20		**17**

FOURTH YEAR

Fall		Spring	
EE 372	3	EE 404	3
EE 401	1	Tech Elec**	3
EG 231	3	Tech Elec**	3
Gen Ed	3	Gen Ed	3
Gen Ed	3	Gen Ed	3
Tech Elect**	3		**15**
	16		

*Students with an adequate ACT/SAT score in English Composition will not be required to take EH 101 as a prerequisite to EH 102.

**EE technical electives must be selected from Electrical Engineering courses carrying a 400 number and must include a two-course concentration from the following concentration areas with permission of the student's advisor:

Control Systems: EE 422, EE 423, EE 424, and EE 427.

Communications and Networks: EE 441, EE 444, EE 456, EE 471, and EE 473.

Digital Systems: EE 440, EE 441, EE 443, EE 454, EE 457, EE 465, EE 468 and EE 469.

Electromagnetics and Optics: EE 450, EE 452, EE 453, EE 458, and EE 488.

Electronics: EE 430, EE 431, EE 432, EE 438, EE 439, EE 455, EE 470, EE 482, and EE 486.

Power Systems: EE 481, EE 482, EE 483, EE 484, EE 485, EE 486, EE 488, and EE 489.

Students may also take EG 480 provided the concentration requirement is satisfied.

***Senior Lab may be chosen from EE 425, EE 446 or EE 447.

Note:

1. A student must complete EH 101, EH 102, MA 125, MA 126, CH 131, PH 201, CIS 210, and EE 220 with a minimum overall GPA of 2.0 to obtain PCS in the Electrical Engineering Program. A grade of C or better is required in EE 220 and CIS 210. A minimum GPA of 2.0 is required in English (EH 101 and EH 102) and basic science (CH 131 and PH 201) courses.
2. Appropriate software tools will be utilized in almost all EE courses.

BACHELOR OF SCIENCE IN COMPUTER ENGINEERING

Coordinators:
Electrical and Computer Engineering:
Adel Sakla (251) 460-6117
School of Computing:
Michael Doran (251) 460-6390

The Bachelor of Science program in Computer Engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

FIRST YEAR

Fall		Spring	
MA 125	4	MA 126	4
CH 131	3	EH 102	3
CH 131L	1	PH 201	3
EH 101*	3	CIS 210	3
EG 101	2	Gen Ed	3
Gen Ed	3		**17**
	16		

SECOND YEAR

Fall		Spring	
MA 227	4	EE 223	3
MA 267	3	EE 227	1
PH 202	4	EE 264	3
EE 220	3	EE 268	1
EE 263	3	CIS 230	3
CIS 211	1	MA 238	3
	18	Gen Ed	3
			17

THIRD YEAR

Fall		Spring	
EE 321	3	EE 328	3
EE 331	3	EE 334	4
EE 368	1	EE 322	3
Gen Ed	3	CSC 322	3
CSC 311	3	Gen Ed	3
EG 231	3	EE 457	3
	16		**19**

FOURTH YEAR

Fall		Spring	
EE 401	1	EE 404	3
EE 446	1	EE 454	3
Tech Elec**	3	Tech Elec**	3
Tech Elec**	3	Tech Elec**	3
Tech Elec**	3	Senior Lab***	1
Gen Ed	3		**13**
	14		

*Students with an adequate ACT/SAT score in English Composition will not be required to take EH 101 as a prerequisite to EH 102.

**Computer Engineering technical electives must be selected with permission of the student's advisor from EE 422, EE 423, EE 424, EE 427, EE 430, EE 431, EE 432, EE 438, EE 439, EE 440, EE 441, EE 443, EE 444, EE 465, EE 469, EE 470, EE 471, EE 473, and EG 480. CIS technical electives must be selected from CSC 410, CSC 411, CSC 412, CSC 413, CSC 414, CSC 415, CSC 416, CSC 417, CSC 434, CIS 439.

***Senior lab may be chosen from either EE 425 or EE 447.

Note:

1. A student must complete EH 101, EH 102, MA 125, MA 126, CH 131, PH 201, CIS 210, and EE 220 with a minimum GPA of 2.0 to obtain PCS in the Computer Engineering Program. A grade of C or better is required in EE 220 and CIS 210. A minimum GPA of 2.0 is required in English (EH101 and EH 102) and basic science (CH 131 and PH 201) courses.
2. Appropriate software tools will be utilized in almost all EE and CIS courses.
3. For technical elective courses, BSCpE students must select one of the following tracks:
   Hardware Track: Students must take 3 senior level EE courses and the remaining 2 courses can be senior level EE or CSC courses.
   Software Track: Students must take CSC 331, CSC 333, CSC 432 and the remaining 2 courses can be senior level EE or CSC courses.

MASTER OF SCIENCE IN ELECTRICAL ENGINEERING

With the ever-increasing pace of technological development in society, new and challenging opportunities are becoming available that require engineering graduates with increased levels of specialization. To provide for this, the Electrical and Computer Engineering Department offers electrical engineering and computer engineering graduates a cutting-edge program in graduate studies leading to the Master of Science in Electrical Engineering (MSEE) degree. The program offers advanced level courses and areas of specialization in computer engineering, digital controls, laser-assisted fabrication, microelectronics, networks, image processing, pattern recognition, wireless communications, optical information processing and power systems. Graduate students have wide opportunities to undertake front-line engineering research alongside faculty for both thesis and project work. In addition, a course work-only program is also offered by the department for those in industry who intend to further their professional development while pursuing a graduate degree.

ADMISSION TO THE MSEE PROGRAM

The following criteria supplement the College of Engineering admission criteria (see ADMISSION TO GRADUATE PROGRAMS):

1. Regular Admission
   a) Minimum GPA (undergraduate): 3.0 on a scale of 4.0.
   b) Minimum GRE score requirement = 283 (verbal + quantitative). GRE scores are not required from applicants who received their undergraduate degrees in electrical or computer engineering from ABET accredited institutions.
   c. Minimum TOEFL score requirement: 525 or higher or computer based test score of 197 or higher, or internet based test score of 71 or higher.
2. **Provisional Admission**
   a) Minimum GPA (undergraduate): >=2.5 or <3.0 on a scale of 4.0.
   b) Minimum GRE score requirement = 283 (verbal + quantitative). GRE scores are not required from applicants who received their undergraduate degrees in electrical or computer engineering from ABET accredited institutions.
   c. Minimum TOEFL score requirement: 525 or higher or computer based test score of 197 or higher, or internet based test score of 71 or higher.

DEGREE REQUIREMENTS FOR MSEE

The minimum credit hour requirements for the different options pertaining to the MSEE degree are:

Thesis Option: 31 credit hours
Project Option: 31 credit hours
Course Option: 30 credit hours

The details of each option are contained in the Electrical and Computer Engineering Department Guidelines for the MSEE program.

DESCRIPTIONS OF ALL ELECTRICAL AND COMPUTER ENGINEERING (EE) COURSES BEGIN ON PAGE 212.

DEPARTMENT OF MECHANICAL ENGINEERING

Chair: David A. Nelson (251) 460-6168
Professors: Donovan, Hsiao, Nelson, Phan
Associate Professor: Cauley
Assistant Professors: Dougherty, Jefferson, Richardson, Yazdani
Professor Emeritus: Engin
Instructors: Borowski, Roberts

Department of Mechanical Engineering web site
http://www.southalabama.edu/engineering/mechanical

Mechanical Engineering is one of the broadest engineering disciplines. Mechanical engineers invent, analyze and design systems that produce power or convert energy. This encompasses such diverse applications as designing next-generation aircraft and automobiles, inventing novel methods of generating energy from renewable sources, and developing sophisticated new medical devices and systems. Mechanical engineers are in the forefront of exciting new technological fields, including nano-engineering, biomedical engineering, and fuel cell research.

The basic fields of study for mechanical engineers include:

- *Materials science*, which is the study of the relationship between structure, properties, and processing of materials.
- *Thermodynamics and heat transfer* deal with basic concepts and applications of work, energy, and power. Applications include power generation from fossil fuels, from renewable sources (solar, wind energy) and fuel cells.
- *Engineering mechanics* is the study of static and dynamic effects of forces applied to rigid and flexible solid bodies.
- *Fluid mechanics* is the study of the forces and motions of liquids and gases. Included in this area of study are hydraulics, gas dynamics, aerodynamics, and design and application of pumps, compressors, and turbines.
- *Control systems* include studies of transient and steady-state response of systems to external inputs.
- *Design synthesis* integrates all fields of engineering in the production of safe, practical, efficient, and economically feasible solutions to real problems.

All BSME students complete a senior-year "capstone" design project, in which a team of students defines and solves a unique, real-world engineering problem.

The curriculum leading to the Bachelor of Science in Mechanical Engineering (BSME) is designed so that graduates can work in any Mechanical Engineering field, or continue their educations at the graduate level.

By the time of graduation from the BSM program, a student will have demonstrated attainment of the following outcomes:

a. an ability to apply knowledge of mathematics, science, engineering
b. an ability to design and conduct experiments, as well as to analyze and interpret data
c. an ability to design a system, component or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
d. an ability to function on multidisciplinary teams
e. an ability to identify, formulate, and solve engineering problems
f. an understanding of professional and ethical responsibility
g. an ability to communicate effectively
h. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
i. a recognition of the need for, and an ability to engage in life-long learning
j. a knowledge of contemporary issues
k. an ability to use techniques, skills, and modern engineering tools necessary engineering practice.

The BSME curriculum is designed to ensure the attainment of the student outcomes.

BSME Program Objectives:

Within five years of graduation, alumni of the Bachelor of Science in Mechanical Engineering (BSME) program should accomplish the following milestones;

1. Graduates will achieve professional advancements or promotions which entail progressively higher levels of responsibility, technical ability, competency and professional and ethical judgment.
2. Graduates will develop designs, patents, inventions and other forms of intellectual property which contribute to societal, economic or environmental well-being or sustainability.
3. Graduates will demonstrate commitments to lifelong learning and continuous professional development through activities such as mentoring other engineers and technical professionals, participating in professional societies, completing advanced degrees and achieving professional registration or other certification.

The Bachelor of Science in Mechanical Engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

FIRST YEAR

Fall		Spring	
EH 101	3	EH 102	3
MA 125	4	MA 126	4
CH 131	4	PH 201	4
EG 101	2	CA 110	3
Gen Ed*	3	ME 135	3
	16		**17**

SECOND YEAR

Fall		Spring	
MA 227	4	MA 238	3
MA 237	3	EG 220	3
PH 202	4	EG 270	3
EG 283	3	EG 284	3
Gen Ed*	3	ME 228	3
	17	Gen Ed	3
			18

THIRD YEAR

Fall		Spring	
EG 231	3	ME 312	3
EG 315	3	ME 314	3
EG 360	3	ME 316	3
ME 326	3	ME 317	3
ME 328	3	ME 319	1
Gen Ed*	3	ME 336	1
	18		**14**

FOURTH YEAR***

Fall		Spring	
ME 412	1	ME 414	1
ME 413	2	ME 416	1
ME 426	3	ME 429	1
Design Elect+	3	ME 472	3
Tech Elect I***	3	ME Elect**	3
Tech Elect II***	3	Tech Elect III***	3
	15	Gen Ed*	3
			15

*Eighteen hours of Humanities/Social Science courses are required. These must include nine hours in Humanities, nine hours in Social Sciences including one sequence. Also required is one literature course, one fine arts course, CA 110 (Public Speaking), one history course and one Social and Behavioral Science course.

**The Mechanical Engineering elective must be an approved Mechanical Engineering course.
***The technical electives are approved 300- or 400- level courses from mathematics, science, computer and information sciences, or engineering.
****All required 100- and 200-level courses are prerequisite to 400-level courses.
+Either ME 411 (Thermal Systems Design) or ME 421 (Mechanical Systems Design).

MASTER OF SCIENCE IN MECHANICAL ENGINEERING

Admission and MS Degree requirements in Mechanical Engineering as well as three plans of study (thesis option, project option, course work only option) are stated at the beginning under College of Engineering section. Some graduate courses in Mechanical Engineering are offered at night for the benefit of full-time employed engineers within commuting distance of the campus.

The program leading to the degree of Master of Science in Mechanical Engineering has several possible specializations: biomechanics, materials engineering, heat transfer, fluid mechanics, computational mechanics, vibrations, dynamics, simulation and controls.

ADMISSION TO THE MSME PROGRAM

The following criteria supplement the College of Engineering admission criteria (see ADMISSION TO GRADUATE PROGRAMS):

1. **Regular Admission**
   a) A grade-point average of 3.0 or greater (A=4.0) on all undergraduate work is required.
   b) A minimum of 151 on the quantitative GRE and a minimum score of 138 on the verbal GRE are required.
   c) For foreign students, a minimum score of 79 on the internet-based TOEFL or a minimum IELTS band score of 6.5 is required.
2. **Provisional Admission**
   a) A minimum grade-point average of 2.5 (A=4.0) on all undergraduate work is required.
   b) A minimum score of 151 on the quantitative GRE and a minimum score of 138 on the verbal GRE are required.
   c) For foreign students, a minimum score of 79 on the internet-based TOEFL or a minimum IELTS band score of 6.5 is required.

Applicants to the MSME program must submit official scores on the Graduate Record

Exam (GRE). This requirement is waived for students who received the BSME degree from USA. Those students may need to present GRE scores to be eligible for some assistantships or fellowships however.

DEGREE REQUIREMENTS FOR MSME

The minimum credit hour requirements for the different options pertaining to the MSME degree are:
Thesis Option: 31 credit hours
Project Option: 34 credit hours
Course Option: 33 credit hours

Master of Science students in Mechanical Engineering must complete four approved core courses, including one in solid mechanics, one in fluid mechanics, one in thermal sciences and fourth core course may be selected from any of the three areas mentioned above. All candidates for the MSME degree also must complete MA 507 and MA 508. Students selecting the project or thesis option must complete EG 501.

DOCTOR OF PHILOSOPHY (PH.D.) IN BIOMEDICAL ENGINEERING/ BASIC MEDICAL SCIENCES

Students may pursue a doctorate in Biomedical Engineering through the Interdisciplinary Graduate Program in Basic Medical Sciences. This program is offered in collaboration with faculty of the USA College of Medicine. The program combines an interdisciplinary core curriculum with advanced course work and research in biomedical engineering. Students must meet requirements established for the Basic Medical Sciences graduate program in the College of Medicine. Prospective students should contact Dr. David Nelson, Director, Biomedical Engineering Graduate Program.

DESCRIPTIONS OF ALL MECHANICAL ENGINEERING (ME) COURSES BEGIN ON PAGE 260.

COLLEGE OF MEDICINE

Dean of the College of Medicine:
Samuel J. Strada, Ph.D.
Director of Graduate Studies: Thomas Rich, Ph.D.
(For Doctor of Medicine see separate Bulletin)

College Of Medicine web site
http://www.usahealthsystem.com/comadmissions

The Interdisciplinary Graduate Program in Basic Medical Sciences at the University of South Alabama College of Medicine awards the Ph.D. degree in Basic Medical Science and is designed for students interested in careers in biomedical investigation. Students receive specialized research training in one of the following tracks: Cancer Biology, Cell & Molecular Biology, Lung Biology, Vascular Biology, and Biomedical Engineering.

REQUIREMENTS FOR ADMISSION

The requirements for admission to the Interdisciplinary Graduate Program for the Doctor of Philosophy degree in Basic Medical Sciences are:

1. The applicant shall possess, by the time of matriculation, a baccalaureate degree or the equivalent from an accredited college or university.
2. Two semesters or three quarters of undergraduate work are recommended in each of the following: physics, general chemistry, organic chemistry, biology, English composition, and mathematics (including calculus and statistics).
3. A grade-point average of at least 3.0 for all undergraduate and graduate work, on a 4.0 scale.
4. Satisfactory standing at the last educational institution attended.
5. Satisfactory scores on all standardized achievement examinations. The Graduate Record Examination is required. In addition, foreign applicants must present evidence of competence and fluency in spoken and written English with a TOEFL score of at least 100.

Matriculation is contingent upon review and recommendation by the Admissions Committee of the Graduate Program in Basic Medical Sciences.

PROCEDURES FOR ADMISSION

Applications for the Basic Medical Sciences Interdisciplinary Graduate Program are accepted for matriculation in the Fall Semester. Matriculation in the Summer Semester is possible in limited circumstances. The Basic Medical Sciences Graduate Program does not accept students on a "non-degree" or "provisional" basis.

Applications for admission (U.S. citizens) are available through the Office of Admissions, 2500 Meisler Hall, University of South Alabama, Mobile, Alabama, 36688-0002. Foreign applicants should apply through the Office of International Services at 2200 Meisler Hall, University of South Alabama, Mobile, Alabama, 36688-0002. Application materials are also available through the university's web site: www.southalabama.edu.

Information for the graduate program can be obtained on-line http://www.usahealthsystem.com/ (**click on admissions**) or by contacting the Director of the Interdisciplinary Graduate Program in Basic Medical Sciences, 5851 USA Drive N., MSB 2366, College of Medicine, University of South Alabama, Mobile, Alabama 36688-0002; Telephone: (251) 460-6153; FAX: (251) 460-6071; E-mail: lflagge@southalabama.edu.

To be considered for review by the Admissions Committee, an applicant must submit the following:

1. A completed application form.
2. A certified transcript from each college or university attended.
3. An official report of all scores on standardized achievement examinations (GRE, TOEFL).
4. Supplemental materials required for the program in Basic Medical Sciences must be submitted directly to the Graduate Office for the Basic Medical Sciences Interdisciplinary Graduate Program at 5851 University Drive N., MSB 2366, College of Medicine, University of South Alabama, Mobile, Alabama, 36688-0002 Supplemental materials include:
   a. Three letters of recommendation from instructors, advisors, or other persons qualified to evaluate the student's academic performance and potential in graduate school.
   b. A personal statement

All other documents for admission review (transcripts, test scores and letters of recommendation) must be official, and become the property of the University of South Alabama.

PROGRAM

Required Course Work

Students will matriculate into the first year interdisciplinary core curriculum for the Ph.D. Program in Basic Medical Sciences without the necessity to choose an advanced program prior to entry. In year one, students complete IDL 576, IDL 577, IDL 580, IDL 581, GIS 501, and four research rotations. The purpose of rotations is to acquaint the students with various research problems under investigation and aid in the selection of a major professor in their area of specialization.

By the end of the first year, each student selects a major professor and matriculates into an advanced program. Advanced curricula are determined by the program, in conjunction with the student's Dissertation Committee. Students will develop communication skills by presentation of formal lectures and seminars and the completion and approval of a written research proposal.

Dissertation Committee

Typically, by the end of one and a half years of study, the student will consult with their major professor, departmental Chair, and the Director of the Graduate Program to select at least four additional graduate faculty members to serve on the Dissertation Committee. At least two members should be from outside the student's major department or program. In special situations, one member may be selected from another institution with the recommendation of the departmental Chair, the Director of the Graduate Program, and approval of the Dean of the Graduate School. The student shall convene the first committee meeting no later than six months following the selection of the Dissertation Committee.

The purpose and duties of the Dissertation Committee are:

1. To establish a suitable academic and research training program for each student.
2. To counsel the student in professional development.
3. To administer and judge a written and oral qualifying exam plus a closed defense of the dissertation at the end of a student's training program.
4. To assist the student in receiving superior scientific training and obtaining opportunities for postdoctoral training and/or employment upon graduation.

The student, in consultation with the major professor, shall prepare and submit a two page research project description to the Dissertation Committee no later than the end of one and a half years of study. This document must be reviewed and approved by the Dissertation Committee.

The Dissertation Committee shall meet with the student at six-month intervals to review progress. At each meeting, the student shall make an oral presentation of the progress being made on the project in an orderly and professional manner and discuss any significant problems which have arisen with a view toward gaining constructive criticism from the committee. At the conclusion of each of these reviews, the Dissertation Committee shall meet in executive session to discuss the acceptability of the student's progress. Documentation of the committee meeting and the student's progress report shall be submitted to the Graduate Office after each meeting.

A student whose progress is found to be unsatisfactory by a majority of the committee members at two such successive meetings shall be placed on probation. If the student's progress is then found to continue to be unsatisfactory, the Director of the Graduate Program (in consultation with the Dissertation Committee, the Student Evaluation and Promotions Committee (SPEC), and the departmental Chair in the student's area of specialization) may take necessary action up to and including a recommendation to the Dean of the Graduate School for academic dismissal of the student.
Changes in the composition of an established Dissertation Committee may be initiated by the student with the consent of the Chair of the Dissertation Committee. Changes in committee composition must be recommended by the Chair of the student's program of study and the Director of the Graduate Program, and approved by the Dean of the Graduate School.

Qualifying Examination

The Qualifying Examination, composed of separate written and oral examinations, will be completed no later than the end of the third year in the program. The written component will focus on the student's approved research project and be prepared in the form of a hypothesis-driven research grant proposal. The written document must be approved by the Examination Committee (the student's Dissertation Advisory Committee and one outside member of the Graduate Faculty appointed by the Department Chair or Program Director who serves as its Chair) prior to scheduling of an oral examination. The student's oral defense of the written proposal and their knowledge of the underlying basic medical science discipline will comprise the oral component of the Qualifying Exam. Should the student fail one or both components of the Qualifying Exam, the student will be allowed to retake that component of the exam once more.

Candidacy

The approved research proposal must be filed in the Graduate Office and will be submitted as the formal Research Proposal to the Graduate School within one month of the student's successful completion of the Qualifying Examination. The Research Proposal must also be approved by the Dean of the Graduate School. Upon satisfactory completion of the Qualifying Exam and acceptance of the Research Proposal, the student will be admitted to candidacy for the Ph.D. Students will not be permitted to register for Dissertation Research (799) until the candidacy requirement is satisfied.

ACADEMIC STANDARDS

To remain in good academic standing in the Interdisciplinary Graduate Program in Basic Medical Sciences, a student must maintain a cumulative grade-point average of 3.0. If the cumulative GPA falls below 3.0, the Graduate School will place the student on academic probation. The student must return to good academic standing within two semesters from the time of being placed on probation. When it becomes evident that it is impossible to remove the probationary status, the Director will recommend dismissal from the Graduate Program.

At the request of the Director of the Graduate Program, SPEC will review student progress and could recommend dismissal on the basis of unsatisfactory performance on preliminary/qualifying examinations, unsatisfactory research progress, scientific misconduct or failure to meet other requirements of the Ph.D. program in a timely manner. When appropriate, SPEC will meet with the student prior to formulating a recommendation to the Director of the Graduate Program.

STUDENT APPEALS

Any student wishing to appeal a SPEC recommendation for dismissal must present their case at a meeting of the SPEC which may also be attended by a student advocate (e.g. Department Chair, Program Director or other designated member of the College of Medicine Graduate Faculty). The student advocate can speak on the student's behalf during this meeting. Following the appeal hearing, SPEC will render a decision in a closed session. A majority vote of committee members present is required. Any recommendation regarding the appeal will be forwarded to the Director of the Graduate Program and Dean of the College of Medicine. Following administrative review, the Dean will communicate the recommendations to the Dean of the Graduate School. In the event that a student is dissatisfied with the appeals decision rendered by SPEC, he or she can initiate an "administrative appeals procedure" as stipulated in the University **Undergraduate/Graduate Bulletin**. In the case of administrative appeal, the Dean will serve as the final arbitrator for the College of Medicine.

DEGREE REQUIREMENTS

In addition to the requirements set by the Graduate School, the following requirements must be completed for the Ph.D. degree in the Basic Medical Sciences: completion of the core and advanced curricula, a minimum overall 3.0 grade-point average on all work attempted for credit, qualifying examination, a completed dissertation approved by the student's major professor and a majority of the Dissertation Committee, and closed and open defenses of the research presented in the dissertation.

All requirements for the Ph.D. degree should normally be completed within four to five years from the date of matriculation, and must be completed within seven years. A student who has not satisfactorily completed a dissertation in a seven-year period must apply for a defined extension to complete the degree. This request must be approved by the major professor, the Chair of the department, the Basic Medical Sciences Graduate Program Executive Committee, the Director of the Graduate Program, and the Dean of the Graduate School.

If the student does not complete the degree requirements in the defined extension period, the Director of the Graduate Program, with the advice of the Graduate Executive Committee, may recommend to the Dean of the Graduate School appropriate action up to and including dismissal.

Additional information is available by contacting Department Chairs or Track Coordinators.

DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY

Chair: William Gerthoffer (251) 460-6402

DEPARTMENT OF CELL BIOLOGY AND NEUROSCIENCE

Chair: Glenn Wilson (251) 460-6490

DEPARTMENT OF COMPARATIVE MEDICINE

Chair: Jonathan Scammell (251) 460-6239

DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY

Chair: David Wood (251) 460-710

DEPARTMENT OF PHARMACOLOGY

Chair: Mark Gillespie (251) 460-6497

DEPARTMENT OF PHYSIOLOGY

Chair: Thomas Lincoln (251) 460-7004

TRACKS:

BIOMEDICAL ENGINEERING

Coordinator: David Nelson (251) 460-6168

CANCER BIOLOGY

Coordinator: Ming Tan (251) 445-9853

CELL AND MOLECULAR BIOLOGY

Coordinator: Ronald Balczon (251) 460-6776

INFECTIOUS DISEASE AND HOST DEFENSE

Coordinator: Paul Brett (251) 414-8179

LUNG BIOLOGY

Coordinator: Mary Townsley (251) 460-6815

VASCULAR BIOLOGY

Coordinator: David Weber (251) 460-6840

DESCRIPTIONS OF ALL COLLEGE OF MEDICINE COURSES:

DESCRIPTIONS OF ALL INTERDISCIPLINARY BASIC MEDICAL SCIENCE (IDL) COURSES (CANCER BIOLOGY, LUNG BIOLOGY AND VASCULAR BIOLOGY) BEGIN ON PAGE 239.

DESCRIPTIONS OF ALL BIOCHEMISTRY (BCH) COURSES BEGIN ON PAGE 178.

DESCRIPTIONS OF ALL CELL BIOLOGY AND NEUROSCIENCE (CBN) COURSES BEGIN ON PAGE 188.

DESCRIPTIONS OF ALL MICROBIOLOGY AND IMMUNOLOGY (MIC) COURSES BEGIN ON PAGE 267.

DESCRIPTIONS OF ALL PHARMACOLOGY (PHA) COURSES BEGIN ON PAGE 290.

DESCRIPTIONS OF ALL PHYSIOLOGY (PHS) COURSES BEGIN ON PAGE 292.

DESCRIPTIONS OF BIOMEDICAL ENGINEERING COURSES (EG) BEGIN ON PAGE 220.

COLLEGE OF NURSING

Dean: Debra C. Davis (251) 445-9400
Senior Associate Dean for Academic Affairs: Rosemary Rhodes (251) 445-9400
Associate Dean for Research/Development: Catherine Dearman (251) 445-9400
Associate Dean Baldwin County: Rosemary Rhodes (251) 517-5370
Associate Dean for Academic Affairs: Heather Hall (251) 445-9400
Associate Dean for Clinical Affairs: Robin Lawson (251) 445-9427
Professors: Buckner, Chilton, D.C. Davis, Dearman, Dolan, Gunn, Hall, Harris, Holloway, Jacobs, King, Lawson, Majors, Myers, Norris, Pattillo, Rhodes, A. Smith, K. Smith, VandeWaa, Varner, K. Williams
Associate Professors: Fruh, Hamilton, Harlan, Hedger, Myers, Williams-Evans
Assistant Professors: Azok, Bolton, Brown, Bydalek, Carlisle, Cheese, Crow, Dearmon, Elkins, Farmer, Fuller, Goodnough, Gilligan, Godfrey, S. Harlan, Hill, Huey, Huffman, Johnson, Lang, Lawrence, Lollar, Marass, McMullan, T. Meyer, Minchew, Moore, Morgan, Nadler, Pharez, Raber, Riley, Roberts, Styron, Swanzy, Taylor, Townsend, Turnham, Walls, Whitworth, Wright, Younce
Senior Instructors: Bertolla, L. Jones, S.G. Williams, M. Meyer, Bihan
Instructors: Anderson, Bowen, Baughn, Breazeale, C. Butler, Cockrell, A. Davis, Erdlitz, Graves, Guy, Herf, Horton, Jordan, Keasler, Miller, Moore, Necaise, Norris, Platt, Rodgers, Rudd, Scott, Thompson, Waweru, Woodmansee

Department Chair, Adult Health Nursing: Valorie Dearmon
Department Chair, Community/ Mental Health Nursing: James Harris
Department Chair, Maternal/ Child Health Nursing: Anita Smith
Academic Advisors: Leigh Holland, Mavis Jarrel, Eric Light, Mary Phillips, Kristyn Seawell

College of Nursing web site
http://www.southalabama.edu/nursing

The College of Nursing is dedicated to the education of professional nurses who provide the highest quality health care to the communities they serve. The practice of nursing is both an art and a science; the focus of nursing is the diagnosis and treatment of human responses to actual or potential health problems.

The College of Nursing has two locations, one is on the USA main campus, and the other is on the USA Baldwin County campus in downtown Fairhope. The resources of the University, the USA Hospitals and clinics, and the numerous clinical agencies provide excellent opportunities for students to acquire the knowledge and skills essential for professional nursing.

MISSION

The mission of the College of Nursing is to provide quality innovative educational programs to a diverse student body, to participate in research and scholarly activities, and to provide service to the University, the profession, and the public. The College accomplishes this by providing a caring, engaging environment for the empowerment of student learning potential, the professional development of faculty, and the promotion of the nursing profession.

GOALS

1. Cultivate a caring and engaging environment to facilitate teaching, learning, scholarship, and service.
2. Deliver innovative quality nursing programs that meet the needs of a diverse student body and other communities of interest.
3. Promote the discovery, communication, and preservation of knowledge through scholarly activities and leadership.
4. Provide service to the University, the profession, and the public.
5. Develop community partnerships to promote nursing and the enhancement of the health care delivery system.

ACCREDITATION

The baccalaureate program is approved by the Alabama Board of Nursing and the baccalaureate, master's, and doctor of nursing practice programs are accredited by the Commission on Collegiate Nursing Education (One Dupont Circle, NW, Suite 530, Washington, D.C. 20036-1120: Telephone (202)877-6791.

DEGREES OFFERED

The College of Nursing offers the Bachelor of Science in Nursing (BSN) degree, the Master of Science in Nursing (MSN) degree, and the Doctor of Nursing Practice (DNP) degree.

CERTIFICATES OFFERED

Post-Graduate Certificates are awarded to students completing planned programs of study in a nursing specialty area and subspecialty areas. The following are offered:
Adult-Gerontological Acute Care Nurse Practitioner
Adult-Gerontological Primary Care Nurse Practitioner
Clinical Nurse Leader
Clinical Nurse Specialist in Adult-Gerontological Nursing
Emergency (Family NP/Adult Acute Care Dual Role)
Executive Nursing Administration
Family Nurse Practitioner
Family Psychiatric Nurse Practitioner
Neonatal Nurse Practitioner
Nursing Informatics
Pediatric Acute Care Nurse Practitioner
Pediatric Primary Care Nurse Practitioner
Women's Health Nurse Practitioner
Nursing Education
Cardiovascular
Oncology
Palliative Care

APPLICATION PROCEDURES

Application forms are available on the College of Nursing's web site. A ($50.00 for BSN; $85.00 for MSN or DNP) non-refundable application fee must be submitted with the application. Money orders or personal checks ($20.00 fee on returned checks) are acceptable. MSN and DNP applicants are also required to complete a primary application in Nursing CAS at www.Nursingcas.org.

For fall semester admission applications should be submitted by April 1 for BSN and MSN programs and March 1 for DNP program. For spring semester admission applications should be submitted by August 1 for BSN, MSN, and DNP programs.

For summer semester admission applications should be submitted by February 1 for BSN and MSN programs.

Applications received at other times will be considered on a space available basis for RN-BSN track only.

Students who choose not to attend during the term in which they are accepted, are not permitted to *roll admission* status to another semester. Students who wish to be considered

for a future semester must *reapply* pay another application fee, and compete with other applicants without guarantee of acceptance. Students who drop out of the program for two or more consecutive semesters must apply for readmission through the Office of the Registrar. Readmission is not automatic.

Students not accepted during a certain term who choose to roll their *application* to the following semester will not be assessed another application processing fee. Students who choose to roll their application a *second time*, or if the length of time between applications is greater than one semester, then an application processing fee will be collected in order for the application to be considered for the given term.

STUDENT RESPONSIBILITY

While the University of South Alabama will endeavor to provide timely and accurate advisement, it is the responsibility of the student to know and satisfy the degree requirements of the academic program, to be aware of the University calendar and to understand and comply with University academic policies and procedures.

GRADES

A Excellent 4 grade-points per semester hour
B Good 3 grade-points per semester hour
S Satisfactory (certain designated courses only)
C Marginal 2 grade-points per semester hour
D Unsatisfactory 1 grade-point per semester hour
U Unsatisfactory (certain designated courses only)
F Failure no grade points

The following symbols are substitutes for grades. **They are not grades**:

I Incomplete
X Absent for final exam
WD Withdrawal in good standing
P Course in progress. P grades remain in effect until they are changed to a letter grade, or until the time limits for a graduate degree have expired.
AU Audit
UA Unsatisfactory audit (did not meet attendance requirement)
N No grade or invalid grade

See academic policies and procedures for further explanation of the above grades and symbols.

CHANGE OF GRADE

Grades reported for students by instructors to the Registrar may not be changed except in case of error in records or in evaluation. Grade changes require the approval of the instructor of record, the department chair, the Dean, and in situations involving the Master of Science in Nursing Program, the Dean of the Graduate School. Grades on record for one-calendar year may not be changed for any reason.

TRANSIENT COURSE CREDIT

Any courses taken at another institution to meet degree requirements must have prior approval of the College of Nursing Dean. Failure to obtain prior approval may result in loss of transfer credit for the course work.

TRANSFER CREDIT FOR PROFESSIONAL NURSING COURSES

Nursing course work taken at other institutions prior to admission to the University of South Alabama will be evaluated on an individual basis. Courses determined by the appropriate department chairs and the Associate Dean for Academic Affairs to be equivalent to USA courses will be accepted based on the following data:

1. Only course work taken at accredited programs will be considered.
2. For the Baccalaureate program, only courses with grades of "C" or above will transfer.
3. For the Masters or Doctoral programs, no more than 12 semester hours of grades of "B" or above will transfer.
4. Only courses that have been completed within five years of the anticipated date of graduation from the USA program will be considered.

EXPENSES

Students enrolled in clinical courses must maintain current CPR certification and must keep all immunizations current. **Students are responsible for all personal health care expenses including expenses resulting from injury or accident, etc. while the student is engaged in learning experiences required by the College of Nursing**. Therefore, all students are required to have adequate health care insurance. All students are charged for professional liability insurance by the University. Students are responsible for all travel expenses to clinical sites and classes at the University.

Students are responsible for purchase of uniforms and required clinical equipment and supplies. Students are also responsible for costs related to immunization submission, drug testing and criminal background checks.

COMPUTER OWNERSHIP POLICY

College of Nursing undergraduate students will be required to own a Windows-based Netbook computer that conforms to the current college minimum standards by the time they enter the professional component of the nursing curriculum. This is a one machine per student requirement.

For more information consult the Technology Requirements link at http://www.southalabama.edu/nursing/technology.html.

HANDHELD DEVICE (PDA) OWNERSHIP POLICY

College of Nursing undergraduate students will be required to own a personal handheld device that conforms to the current college minimum standards by the time they enter the professional component of the nursing curriculum. This device cannot have phone or camera capabilities. This is a one device per student requirement. For more information consult the Technology Requirements link at http://www.southalabama.edu/nursing/technology.html.

DRUG SCREENS AND BACKGROUND CHECKS

Those students accepted into the professional component and graduate programs will be required to have a drug test and a background check before beginning classes. Admission will be withdrawn for a student testing positive on their drug test. Admission will be withdrawn for students with a revoked license in any health care profession. Admission may be withdrawn for students who in the judgment of the Dean and the Admissions Committee have been convicted of or have pending criminal charges that would not be acceptable to our clinical agencies. Random drug screens or testing for reasonable suspicion are conducted. Students must submit to drug testing for controlled substances and background checks as requested. Failure to submit to testing or a positive drug test and/or unsuitable background check will result in the student's dismissal from the program. Students who sit out of the program for three semesters are required to repeat their drug screening and background check.

ADMISSION OF INTERNATIONAL STUDENTS

International students should contact the Office of International Services, 2200 Meisler Hall, University of South Alabama, Mobile, Alabama 36688-0002; Telephone (251) 460-6050. Deadlines for applications and supporting documents for new international students are usually at least one month earlier than the deadlines for U.S. citizens. Refer to the "International Students" section for details. International students are required to complete the internet based TOEFL (minimum acceptable score of 25 on each subsection), or a bachelor's or graduate degree earned at an accredited United States institution of higher learning and are required to demonstrate proficiency on the English Language Proficiency Examination administered by the University. Official transcripts for MSN and DNP applicants must be translated and evaluated by Educational Credential evaluations. The evaluations should be sent to Nursing CAS at www.Nursingcas.org. in lieu of foreign transcripts.

BACHELOR OF SCIENCE IN NURSING PROGRAM (BSN)

The BSN program prepares graduates for professional nursing practice. Upon completion of the program graduates are eligible to apply for the National Council Licensure Examination (NCLEX) to become licensed as a Registered Nurse.

The BSN program is offered in a traditional four year format with nursing courses concentrated in the junior and senior years. The BSN program is also offered in an accelerated format and there is a special track for Associate Degree and diploma prepared nurses.

BSN PROGRAM LEARNING OUTCOMES

Upon completion of the Baccalaureate Program, graduates should be able to:

1. Deliver professional nursing care for diverse populations across the lifespan to optimize health care outcomes.
2. Apply theory and evidence from contemporary nursing science and related disciplines as a basis for clinical reasoning, management, and evaluation of professional nursing care.
3. Model responsibility and accountability for one's personal and delegated nursing care and lifelong learning to ensure excellence in nursing practice.
4. Translate evidence into professional nursing practice to individualize patient care designed to improve care outcomes.
5. Select principles of leadership and management that guide nursing, influence health policy, and transform health care delivery systems.

6. Collaborate with inter-professional health care teams and consumers in delivering and advocating for safe and effective use of health care resources.
7. Integrate professional nursing values in meeting current and emerging health needs in a dynamic, global society.
8. Evaluate effective use of technology and information management to provide patient centered care across the lifespan in a variety of environments.

COLLEGE OF NURSING EARLY ACCEPTANCE PROGRAM (CONEAP)

The College of Nursing has an early acceptance program for highly qualified high school seniors and students who have completed their freshman year at USA. Students selected for the early acceptance program and who fulfill all program requirements are guaranteed admission to the upper division professional component of the nursing curriculum. To be considered for the CONEAP, high school seniors must complete all application procedures, have earned a minimum high school grade-point average of 3.5 based on a 4.0 system as computed by USA, submit an ACT score of at least 25 composite (or 1100 SAT), and must have demonstrated leadership qualities and motivation toward the study of nursing. Students are admitted to the CONEAP must complete all Pre-Professional Nursing courses at USA; their curriculum includes core requirements and prerequisites for the upper division nursing program. Students participating in the College of Nursing's Early Acceptance Program must maintain an overall GPA of 3.2 on all required prerequisite courses and must be continuously enrolled a minimum of 12 credit hours each semester (does not include summer terms) and making acceptable progress toward completing the pre-professional component of the curriculum to be admitted to the professional component of the program. All application documents must be submitted by the end of the senior year in high school to be considered. Applications received at other times will be considered on a space available basis. For questions and applications, contact USA Admissions, 2500 Meisler Hall, Mobile, Alabama 36688-0002 or call (800) 872-5247 or (251) 460-6141.

A second opportunity for participation in the CONEAP is available to students who have completed their freshman year of pre-nursing prerequisite courses at USA and have achieved an overall GPA of 3.2 or above (as computed by the USA Registrar's Office). Additional requirements are that the student has completed the following courses at USA: BLY 101 with Lab, MA 110 or 112, and CH 101 with Lab and is approved by the Associate Dean for Academic Affairs for the College of Nursing. To remain in the CONEAP the student must maintain a 3.2 GPA throughout all pre-nursing prerequisite course work and all final grades must be a C or better. Application documents will be accepted at the end of the spring term of the freshman year up until the beginning of the fall term of the sophomore year.

CURRICULUM MODEL FOR BACHELOR OF SCIENCE IN NURSING DEGREE (Fall Semester Entry)

Prerequisite Pre-Professional Component

FRESHMAN YEAR

1st Semester		**2nd Semester**	
EH 101	3	EH 102	3
BLY 101 & BLY 101L	4	CH 101 & CH 101L	4
CIS 150	3	HY/Soc/Beh Sc Elective	3
History Elective*	3	CA 110	3
Total	**13**	MA 110 or MA 112	3
		Total	**16**

SOPHOMORE YEAR

1st Semester		**2nd Semester**	
BMD 114	4	BMD 115	4
BMD 210 or BLY 213	3	ST 210 or BUS 245	3
Literature Elective*	3	PSY 120	3
Economics	3	2nd HY or 2nd LIT	3
Fine Arts	3	HUM or HY Elective depending on sequence	3
Total	**16**	**Total**	**16**

***Must have a 2 semester sequence in either History or Literature.**

Professional Component

JUNIOR YEAR

1st Semester		**2nd Semester**	
NU 325	3	CMN 350	2
NU 327	3	CMN 351	2
HSC 342	1	NU 300	5
HSC 343	3	NU 301	3
NU 311	3	HSC 332	3
Total	**13**	**Total**	**15**

3rd Semester

NU 304	3
MCN 347	3
MCN 348	4
Total	**10**

SENIOR YEAR

1st Semester		**2nd Semester**	
AHN 447	4	NU 412	3
AHN 448	4	NU 414	3
CMN 420	3	NU 460	5
CMN 421	1	**Total**	**11**
Total	**12**		

Total Credits 122

R.N. TO B.S.N. PATHWAY FOR ASSOCIATE DEGREE AND DIPLOMA NURSES

The College of Nursing has a Pathway designed especially for registered nurses pursuing the Bachelor of Science in Nursing Degree. The college also offers a Pathway for diploma and associate degree RNs who want the MSN degree (see MSN section). Once prerequisites are completed (see prerequisite professional component section on the BSN curriculum model) the professional component of the nursing curriculum can be completed in one calendar year. Courses are offered online and practice integration requirements can be completed in the student's home community if approved by faculty. Thirty-six hours of nursing credit are awarded the semester students graduate.

CURRICULUM MODEL FOR THE REGISTERED NURSE R.N.-B.S.N. PATHWAY

The following courses comprise the RN-BSN Pathway. Students are admitted to the professional component after completing all prerequisite courses (see courses listed in the Freshman and Sophomore years in the curriculum model for the Bachelor of Science in Nursing Degree above).

Prerequisite Pre-Professional Component

Professional Component for R.N.-B.S.N. Pathway

1st Semester

NU 410	6
NU 425	3
NU 422	3
Total	**12**

2nd Semester

NU 427	3
CMN 411	4
NU 404	3
Total	**10**

3rd Semester

NU 461	4
NU 415	3
NU Elective	2
Total	**9**

Total USA Nursing credits: 31

ADMISSION CRITERIA FOR THE B.S.N.

The College of Nursing Admissions Committee and the Dean of the College reserve the right to select applicants best qualified for and most likely to succeed in the study of nursing.

Enrollment into the pre-professional component as a nursing major does not assure the student admission to the Professional Component. Enrollment in the Professional Component is limited and competitive. Students are admitted without regard to race, color, creed, national origin, sex, or qualified disability. Students must be in good standing with all academic institutions/ nursing programs that they have attended in order to be admitted to the BSN program:

The following are required to be considered for admission to the BSN program.

1. Submission of a completed application with a $50 fee.
2. Minimum GPA of 2.50 on all prerequisite courses and in good standing within the University.
3. Minimum University GPA of 2.0.
4. Minimum grade of "C" in all pre-professional courses.
5. Submission of health data forms and evidence of health insurance.
6. Evidence of CPR certification.
7. Admission will be contingent on a negative drug screen and results of an acceptable background check.
8. Interview - applicants may be invited for a personal interview. Verbal and written communication skills will be assessed during the interview.

In addition to the items listed above registered nurses applying for admission to the RN-BSN track must show evidence of completion of an approved diploma or associate degree in nursing and a current unrestricted RN license. Nurses with any restriction on their license, including participating in a voluntary disciplinary alternative program, cannot be admitted.

PROGRESSION REQUIREMENTS

Students will progress in nursing courses according to the established sequence. The College will recommend for promotion only those students who, in the judgment of the faculty, satisfy the requirements of health, conduct, scholastic achievement, and aptitude for nursing. Students continually in adjustment difficulties may be dismissed from the nursing program.

Once students are admitted to the professional component of the BSN curriculum the program must be completed within FIVE years. If a student's progression is interrupted for any reason, it is the student's responsibility to contact the Office of Student Services and apply for readmission. Students are readmitted on a space available basis. Any alteration in usual progression may lengthen the student's program. In keeping with dynamic changes in health care and nursing, the curriculum may undergo change. Changes in curricula and/or admission requirements will be published as far in advance as possible. Advisors are available to assist students in adapting to those changes and planning their course of study accordingly.

ACADEMIC STANDARDS FOR THE B.S.N. PROGRAM

In accordance with University policy, students may not use the Grade Replacement Policy to replace professional nursing courses. A grade of "C" or higher is required for all professional nursing courses. A student may repeat only one professional nursing course in the curriculum. A second "D", "F", or "U" will result in academic dismissal from the nursing program. The number of times a student may withdraw failing is limited to two. A third withdrawal failing will result in academic dismissal from the College of Nursing. A student achieving a grade of less than "C" in a course in combination with two withdrawal failings from the College of Nursing will also be dismissed. Successful completion of a dosage calculation exam is required each term prior to promotion in clinical courses. All students are required to take a Midcurricular Exam. Students who do not successfully pass this exam are required to complete a 3 hour directed study, prior to progressing in the curriculum. Students are also required to complete an exit exam as part of course requirements. If the student is unsuccessful on the exit exam, a grade of "u" will be given for the course and student must retake the course the next term. (Registered nurse students are exempt from the dosage calculation, midcurricular and exit examinations). A minimum GPA of 2.0 at the University of South Alabama is required to continue in the program and for graduation. **Failure to comply with legal, moral, and legislative standards required for licensure to practice as a registered nurse merits immediate dismissal from the program**.

ACCELERATED B.S.N./M.S.N. PATHWAY

The College of Nursing has a special Accelerated BSN/MSN Pathway for academically qualified and highly motivated individuals that have a bachelor's degree in another field. The preprofessional component as listed below must be completed prior to admission to the professional component. The professional component of the curriculum which normally takes five semesters to complete can be completed in 12 months of full-time study. The curriculum and contact hours are the same as required for the traditionally taught BSN degree offered by the College, except that the course schedule is accelerated and is not confined by the traditional academic calendar. Students in the first 12 months of the Accelerated BSN/MSN Pathway follow the same promotion/progression policies as the students in the traditionally taught BSN. Students having difficulty maintaining the pace of the program may request a transfer to the traditional program if they are in good academic standing. At the end of the 12-months of study, students are awarded the BSN degree and are prepared for the RN licensure (NCLEX) examination. During the first 12 months of the accelerated BSN/MSN Pathway students complete 3 graduate bridge courses that are not applied towards completion of the BSN degree. These 3 graduate courses "bridge" undergraduate and graduate knowledge in pharmacology, pathophysiology, and health assessment. These courses may be applied towards a graduate degree if grades received in the course comply with graduate progression policies.

Students then begin the specialty component of the curriculum to prepare for a career in informatics, nursing administration, as a clinical nurse leader, or clinical nurse specialist in adult/gerontological nursing. Students who wish to pursue nurse practitioner preparation must obtain a minimum of two years of clinical experience before beginning clinical nurse practitioner specialty courses. Courses for the specialty component of the curriculum are offered online. Clinical requirements are completed in faculty-facilitated preceptorships.

REQUIREMENTS FOR ADMISSION TO THE ACCELERATED BSN/MSN PATHWAY

Admission is selective and competitive. The curriculum is intensive and fast paced. The College of Nursing reserves the right to select students determined to be the best qualified and most likely to succeed in this challenging graduate program in nursing.

1. Graduate of a baccalaureate program with a minimum 3.0 GPA on a 4.0 scale.
2. Applicants must have completed all prerequisite course work as listed below with a minimum GPA of 3.0 ("A"=4.0) and no grade less than a "C".

   Prerequisite Courses
   EH 101
   EH 102
   Biology with Lab
   Anatomy and Physiology I and Lab
   Anatomy and Physiology II and Lab
   Microbiology or Infectious Disease
   Statistics
   Finite Math or Precalculus algebra (or higher)
   Chemistry and Lab
   General Psychology
3. Submission of completed application by April 1 for Fall and August 1 for Spring.
4. Payment of $50.00 non-refundable application fee.
5. Submission of Health Data Forms and evidence of health insurance.
6. Admission will be contingent on a negative drug screen and results of an acceptable background check.
7. Submission of a resume.
8. Interview - after initial review of applications a limited number of applicants may be invited for a personal interview. Verbal and written communication skills will be assessed during the interview.

ADDITIONAL INFORMATION FOR ACCELERATED BSN/MSN

Students are admitted as undergraduates during the foundation component of the curriculum (first 12 months). During the first twelve months of the program, tuition is charged at the undergraduate rate for undergraduate courses and at the graduate rate for the three graduate level bridge courses. Financial aid is restricted to the types and amounts for which an undergraduate student is eligible.

Upon satisfactory completion of the foundation component of the curriculum, the student will complete all necessary paperwork for reclassification as a graduate student and will continue through the remainder of the program. During this phase of the curriculum, financial aid is restricted to the types and amounts for which a graduate student is eligible.

MASTER OF SCIENCE IN NURSING PROGRAM (MSN)

Organized within the graduate school at the University, the College of Nursing has several pathway, specialization, and subspecialization options within the MSN program. In addition to admitting baccalaureate prepared registered nurses, the college offers an accelerated BSN/MSN track for non-nurses (see Bachelor of Science in Nursing section), a pathway for associate degree or diploma prepared nurses who have a baccalaureate degree in a field other than nursing, a special pathway for highly qualified associate degree and diploma nurses who do not hold a baccalaureate degree, and tracks for MSN prepared nurses who are interested in certification in a new specialty area.

Areas of Specialization

Several concentration areas are offered to meet the career goals of students. Students may prepare as a clinical nurse leader or for advanced nursing practice in one of nine nurse practitioner roles or the clinical nurse specialist role. Available NP include Family Nursing, Emergency Nursing (Family/Adult Acute Dual Role), Family Psychiatric Nursing, Pediatric Acute Care Nursing, Pediatric Primary Care Nursing, Women's Health Nursing, Neonatal Nursing, Adult-Gerontological Primary Care Nursing, and Adult-Gerontological Acute Care Nursing. Clinical Nurse Specialist is available in Adult-Gerontological Nursing. Concentrations are also available for students pursuing careers in Executive Nursing Administration and Nursing Informatics. Subspecializations are available in Cardiovascular, Oncology, Palliative Care, and Nursing Education.

GRADUATE ASSISTANTSHIPS

A limited number of graduate assistantships are available to students in full-time status. Additional information and an application can be obtained by contacting the College of Nursing graduate office.

MASTER OF SCIENCE IN NURSING PROGRAM LEARNING OUTCOMES

Upon completion of the Master of Science in Nursing Program, graduates should be able to:

1. Integrate advanced knowledge and theories from nursing and related disciplines into a specialized area of advanced nursing practice.
2. Demonstrate competence in advanced nursing roles to meet current and emerging health needs of a global changing society.
3. Use scientific inquiry to identify problems and individualize patient care designed to improve care outcomes.
4. Apply advanced knowledge of leadership and management to influence health policy to transform care delivery systems.
5. Contribute to the focus and direction of the nursing profession.

M.S.N. CURRICULA FOR B.S.N. PREPARED REGISTERED NURSES

OPTION I Executive Nursing Administration

A. Core Courses (9 credits)

NU 607	3	NU 613	3
NU 610	3		

B. Research Courses (3 credits)

NU 608	3

C. Support Courses (6 credits)

NU 562	3	NU 539	3

D. Specialty Courses (19 credits)

NU 565	3	NU 566	3
NU 561	3	NU 567	4
NU 568	3	HSC 571	3

Total Credits 37

OPTION II Nurse Practitioner

A. Core Courses (9 credits)

NU 607	3	NU 613	3
NU 610	3		

B. Research Courses (3 credits)

NU 608	3

C. Support Courses (9 credits)

NU 545	3	NU 578	3
NU 518	3		

D. Specialty Courses - Select One Track

Advanced Adult-Gerontological Primary Nursing (24 credits)

AHN 588	3	AHN 593	3
AHN 589	1	AHN 594	3
AHN 581	2	AHN 595	3
AHN 591	3	AHN 596	3
AHN 592	3		

Advanced Adult-Gerontological Acute Care Nursing (24 credits)

AHN 568	3	AHN 569	1
AHN 571	2	AHN 572	3
AHN 573	3	AHN 574	3
AHN 575	3	AHN 576	3
AHN 577	3		

Advanced Family Psychiatric Nursing (24 credits)

CMN 548	3	CMN 549	1
CMN 551	2	CMN 552	3
CMN 553	3	CMN 554	3
CMN 555	3	CMN 556	3
CMN 557	3		

Advanced Family Nursing (24 credits)

CMN 568	3	CMN 569	1
CMN 571	2	CMN 572	3
CMN 573	3	CMN 574	3
CMN 575	3	CMN 576	3
CMN 577	3		

Advanced Women's Health Nursing (24 credits)

MCN 538	3	MCN 539	1
MCN 541	2	MCN 542	3
MCN 543	3	MCN 544	3
MCN 545	3	MCN 546	3
MCN 547	3		

Advanced Pediatric Acute Nursing (24 credits)

MCN 558	3	MCN 559	1
MCN 571	2	MCN 562	3
MCN 563	3	MCN 564	3
MCN 565	3	MCN 566	3
MCN 567	3		

Advanced Pediatric Primary Nursing (24 credits)

MCN 548	3	MCN 549	1
MCN 551	2	MCN 552	3
MCN 553	3	MCN 554	3
MCN 555	3	MCN 556	3
MCN 557	3		

Advanced Emergency Nursing (Family NP/Adult Geron Acute Care Dual Role) (36 credits)

AHN 538	2	AHN 549	4
AHN 548	4	AHN 551	5
AHN 550	4	AHN 553	4
AHN 552	4	AHN 555	5
AHN 554	4		

Total Credits 45-57

OPTION III Clinical Nurse Specialist (Adult-Geronological)

A. Core Courses (9 credits)

NU 607	3	NU 613	3
NU 610	3		

B. Research Courses (3 credits)

NU 608	3

C. Support Courses (9 credits)

NU 518	3	NU 578	3
NU 545	3		

D. Specialty Courses (15 credits)

NU 524	3	NU 520	3
AHN 525	4	AHN 526	5

Total Credits 36

OPTION IV Clinical Nurse Leader

A. Core Courses (9 credits)

NU 607	3	NU 613	3
NU 610	3		

B. Research Courses (3 credits)

NU 608	3

C. Support Courses (9 credits)

NU 518	3	NU 578	3
NU 545	3		

D. Specialty Courses (15 credits)

NU 535	3	NU 537	3
NU 536	5	NU 538	4

Total Credits 36

OPTION V Nursing Informatics

A. Core Courses (9 credits)

NU 607	3	NU 613	3
NU 610	3		

B. Research Course (3 credits)

NU 608	3

C. Support Courses (9 credits)

NU 565	3	ISC 555	3
ISC 550	3	NU 562	3

D. Specialty Courses (13 credits)

NU 539	3	NU 558	3
NU 556	3	NU 559	2
NU 557	2		

Total Credits 37

Subspecialities: The following can be added to the above pathways as designated.

Cardiovascular - students who are in Adult-Gerontological Acute Care NP and emergency specialty can add these 8 credits.

Oncology - students who are in an Adult-Gerontological Primary Care NP, Adult-Gerontological Acute Care NP, Advanced Emergency Nursing Dual Role, Clinical Nurse Specialist-Adult Health, Family NP, Psychiatric (Family) NP or Women's NP can add these 10 credits.

Palliative Care - students who are in an Adult-Gerontological Primary Care NP, Adult-Gerontological Acute Care NP, Clinical Nurse Specialist-Adult Health, or Family NP can add these 9 credits.

Nurse Educator - any student can add these 11 credits to their curriculum.

Cardiovascular Option (8 credits)

AHN 630	2	AHN 631	2
AHN 632	2	AHN 633	2

Oncology Option (11 credits)

AHN 621	2	AHN 622	2
AHN 623	2	AHN 624	2
AHN 625	1	AHN 626	2

Palliative Care Option (15 credits)

AHN 530	2	AHN 531	2
AHN 532	2	AHN 533	3-9

Nurse Educator Option (11 credits)

AHN 620	2	NU 621	3
AHN 622	2	NU 623	3

REQUIREMENTS FOR ADMISSION TO THE M.S.N. PATHWAY FOR B.S.N. PREPARED R.N.'S

Admission to the program is limited and selective. All documents required for admission review must be official. Transcripts must be mailed from the home institution to the Nursing Centralized Application System (NursingCAS). These documents become the property of the NursingCAS and will not be returned to the applicant. Students applying for admission must pay a non-refundable $85.00 processing fee and submit a supplemental application by the deadline date, in addition to primary application requirements for the NursingCAS.

Application forms and other information may be obtained from the College of Nursing's web site http://www.southalabama.edu/nursing/msn.html or by contacting the college directly at College of Nursing, University of South Alabama, Mobile, Alabama 36688; congrad@southalabama.edu; Telephone: (251) 445-9400. Applications are accepted year round, and must adhere to the following application deadlines: April 1 - Fall Admission, August 1 - Spring Admission, and February 1 - Summer Admission. Students are admitted to a specialty track and may not change their track without prior permission. Students must be in good standing with all academic institutions/nursing programs that they have attended in order to be admitted to the MSN program.

Regular Admission

1. Graduate of an approved bachelor's program with a major in nursing.
2. Current registered nurse licensure with no restrictions. Nurses with any restrictions on their license, including participation in a

voluntary disciplinary alternative program, cannot be admitted.
3. A grade-point average of 3.0 on all undergraduate work (A=4.00).
4. Submission of a resume which documents clinical experience. (Note: Prior to enrolling in nurse practitioner clinical course, students are required to have at least 2 years of experience in an area appropriate to the specialty track.)
5. After acceptance into the program, admission is contingent upon a negative drug screen, results of an acceptable background check, submission of Health Data Forms, evidence of Health Insurance, and completion of Certified Profile Medical Records Manager. Instructions provided in acceptance letter.

Note: An earned graduate degree from any accredited institution of higher education may qualify the applicant for regular standing.

Provisional Admission

1. Graduate of an approved bachelor's program with a major in nursing.
2. Current registered nurse licensure with no restrictions. Nurses with any restrictions on their license, including participation in a voluntary disciplinary alternative program, cannot be admitted.
3. A minimal grade-point average of 2.75 on all undergraduate work (A=4.00).
4. Submission of a resume which documents clinical experience. (Note: Prior to enrolling in a nurse practitioner clinical course, students are required to have at least two years of experience in an area appropriate to the specialty track.)
5. After acceptance into the program, admission is contingent upon a negative drug screen, results of an acceptable background check, submission of Health Data Forms, evidence of Health Insurance, and completion of Certified Profile Medical Records Manager. Instructions provided in acceptance letter.

(Note: Prior to enrolling in a nurse practitioner clinical course, students are required to have at least two years experience in an area appropriate to the Specialty track.)

Non-Degree Admission

1. Hold a bachelor's degree from accredited institution.
2. Current registered nurse licensure with no restrictions. Nurses with any restrictions on their license, including participation in a voluntary disciplinary alternative program, cannot be admitted.
3. A minimal grade-point average of 2.75 on all undergraduate work (A=4.00). Enrollment in selective courses may not be available to non-degree students due to class size or required prerequisite.

Enrollment in selective courses may not be available to non-degree students due to class size or required prerequisite.

PROGRESSION REQUIREMENTS FOR THE M.S.N. PATHWAY FOR B.S.N. PREPARED R.N.'S

A maximum of two (2) courses with a grade "C" can be counted towards a degree, however, only one (1) "C" is permitted in support or specialization courses. If a second "C" or lower is earned in a support or specialization course, the course in which the second "C" or lower is obtained must be repeated. Any combination of three (3) courses with grades of "C" or less (C, D, U, F) including "C" grades which have been repeated, will result in academic dismissal from the graduate program. Two courses with a grade "D" or "F" will result in academic dismissal from the graduate program. Failure to comply with legal, moral, and legislative standards required for licensure to practice as a registered nurse merits immediate dismissal from the program.

If a student's progression is interrupted for any reason, it is the student's responsibility to contact the Associate Dean for Academic Affairs. Because of limited spaces in the advanced clinical courses, any alteration in progression may lengthen the student's program.

DEGREE REQUIREMENTS FOR THE M.S.N. TRACK FOR B.S.N. PREPARED R.N.'S

The MSN program must be completed within five years of matriculation. A minimum of 45 semester credits are required for the M.S.N. degree with preparation in a nurse practitioner track. Minimum credits for preparation in Executive Nursing Administration and Nursing Informatics requires 37 semester credits; Clinical Nurse Leader and Clinical Nurse Specialist. requires 36 semester credits.

POST-GRADUATE CERTIFICATE PATHWAY

The Post-graduate certificate pathway are designed for registered nurses with a graduate degree in nursing who seek academic preparation in a new specialty or subspecialty area of advanced practice nursing. Post-graduate students can select any of the specialty options offered by the program. Each certificate pathway is designed to be in compliance with national certification requirements including required support courses, didactic specialty courses, and clinical hours.

Admission to the program is limited and selective. All documents required for admission review must be official. Transcripts must be mailed from the home institution to the NursingCAS. These documents become the property of the NursingCAS and will not be returned to the applicant. Students applying for admission must pay a non-refundable $85.00 processing fee and submit a supplemental application by the deadline date in addition to primary application requirements for the NursingCAS.

Application forms and other information may be obtained from the College of Nursing's web site http://www.southalabama.edu/nursing/msn.html or by contacting the college directly at College of Nursing, University of South Alabama, Mobile, Alabama 36688; congrad@southalabama.edu; Telephone: (251) 445-9400. Applications are accepted year round, and must adhere to the following application deadlines: April 1 - Fall Admission, August 1 - Spring Admission, and February 1 - Summer Admission.

REQUIREMENTS FOR ADMISSION TO THE POST GRADUATE CERTIFICATE PATHWAY

1. Graduate of an approved master's or doctoral program with a major in nursing.
2. Current registered nurse licensure with no restrictions. Nurses with any restrictions on their license, including participation in a voluntary disciplinary alternative program, cannot be admitted.
3. A grade-point average of 3.0 on all graduate work (A=4.00). Enrollment in selective courses may not be available to non-degree students due to class size or required prerequisite.
4. Submission of a resume which documents clinical experience. (Note: Prior to enrolling in nurse practitioner clinical course, students are required to have at least two years of experience in an area appropriate to the specialty track.)
5. After acceptance into the program, admission is contingent upon a negative drug screen, results of an acceptable background check, submission of Health Data Forms, evidence of Health Insurance, and completion of Certified Profile Medical Records Manager. Instructions provided in acceptance letter.

PROGRESSION REQUIREMENTS FOR THE POST M.S.N. PATHWAY

Students follow the progression policies for the MSN Pathway for BSN prepared RN's.

PROGRAM COMPLETION REQUIREMENTS FOR THE POST M.S.N. CERTIFICATE PATHWAY

Students are required to complete all specialty courses and any support courses not previously completed. Post-MSN certificate students are not required to complete graduate core or research courses (see the previous section on MSN Curriculum for the BSN prepared RN for a listing of courses for each specialty area).

R.N. - M.S.N PATHWAY FOR RN'S WITH A NON-NURSING BACCALAUREATE DEGREE

This pathway is available to persons who are registered nurses and have a baccalaureate degree from an accredited institution in a discipline other than nursing.

Admission to the program is limited and selective. All documents required for admission review must be official. Transcripts must be mailed from the home institution to the NursingCAS. These documents become the property of the NursingCAS and will not be returned to the applicant. Students applying for admission must pay a non-refundable $85.00 processing fee and submit a supplemental application by the deadline date in addition to primary application requirements for the NursingCAS.

Application forms and other information may be obtained from the College of Nursing's web site http://www.southalabama.edu/nursing/msn.html or by contacting the college directly at College of Nursing, University of South Alabama, Mobile, Alabama 36688; congrad@southalabama.edu; Telephone: (251) 445-9400. Applications are accepted year round, and must adhere to the following application deadlines: April 1 - Fall Admission, August 1 - Spring Admission, and February 1 - Summer Admission.

REQUIREMENTS FOR ADMISSION TO THE R.N. - M.S.N. PATHWAY FOR RN'S WITH A NON-NURSING BACCALAUREATE DEGREE

Students are admitted to this pathway as Provisional Admission; the admissions criteria are the same as for Provisional Admission to the

M.S.N. track for BSN prepared RN's listed above except for #1 (bachelor's degree in nursing).

PROGRESSION REQUIREMENTS FOR R.N. - M.S.N. PATHWAY FOR NURSES WITH NON-NURSING BACCALAUREATE DEGREES

The following nursing courses must be completed with a GPA of at least 2.75 prior to enrolling in graduate nursing specialty courses: NU 410, CMN 411, NU 404, NU 425 or NU 530. Students who have earned a GPA of less than 2.5 will be academically dismissed from the Graduate School. Students in the R.N. to M.S.N. track follow the same progression as students in the regular M.S.N. program.

PROGRAM COMPLETION REQUIREMENTS FOR R.N. - M.S.N. FOR REGISTERED NURSES WITH NON-NURSING BACCALAUREATE DEGREES

Students in the RN - MSN pathway follow the same degree requirements and progression policies as students in the MSN track for BSN prepared RN's with the addition of the above listed courses.

R.N. - M.S.N. PATHWAY FOR R.N.'S WHO DO NOT HOLD A BACCALAUREATE DEGREE

The College of Nursing has a special program to facilitate associate and diploma prepared registered nurses attain the Master of Science in Nursing degree.

Upon completion of the first phase of the program, students will be awarded a BSN degree. Upon completion of the second phase of the program, the student will earn the MSN degree.

REQUIREMENTS FOR ADMISSION TO THE R.N. - M.S.N. PATHWAY FOR REGISTERED NURSES WHO DO NOT HOLD A BACCALAUREATE DEGREE

Students admitted to this track will be licensed registered nurses and will have completed all prerequisite course work for the BSN degree (see BSN curriculum section), have at least 90 semester hours of college credits with an overall "B" average, and have met all admission criteria.

In the first phase of the program, students will be classified as an undergraduate student and any financial aid is restricted to the types and amounts for which undergraduate students are eligible. During this phase, students will enroll in both undergraduate level and graduate level bridge courses. Students will be charged undergraduate course tuition for undergraduate courses and graduate course tuition for graduate level courses. At the end of this phase the BSN degree must be awarded.

Prior to beginning the second phase of the program, students will complete all necessary paperwork for reclassification as a graduate student. Financial aid is restricted to the types and amounts for which a graduate student is eligible. At the end of phase two the MSN will be awarded.

PROGRESSION REQUIREMENTS FOR THE R.N. - M.S.N. PATHWAY FOR REGISTERED NURSES WHO DO NOT HOLD A BACCALAUREATE DEGREE

Students must maintain an overall GPA of 3.0 on all work attempted in the program and must complete the degree requirements for the BSN prior to enrolling in the MSN phase of the program. A maximum of two (2) courses with a grade of "C" can be counted toward a degree, however, only one "C" is permitted in the graduate level specialization courses or in the following bridge courses; NU 530 Health Assessment, NU 531 Advanced Pathophysiology. If a second "C" is earned in these courses the course in which the second "C" is obtained must be repeated. Any combination of three (3) courses with grades of "C" or less including "C" grades of repeated courses will result in dismissal from the program.

PROGRAM COMPLETION REQUIREMENTS FOR THE R.N. - M.S.N. PATHWAY FOR REGISTERED NURSES WHO DO NOT HOLD A BACCALAUREATE DEGREE

Students in this pathway complete the following 31 credit curriculum for the BSN phase of the program. Undergraduate courses - NU 410, CMN 411, NU 404, NU 415, NU 422 and NU 461.; Graduate Level Bridge Courses - NU 530 and NU 531.

The Master of Science in Nursing phase of the program consist of core courses, research courses, support courses, and specialty courses for each track. See curriculum below:

OPTION I Executive Nursing Administration

A. Graduate Core Courses (9 credits)

NU 607	3		
NU 610	3		
NU 613	3		

B. Research Courses (3 credits)

NU 608	3		

C. Support Course (6 credits)

NU 562	3	NU 539	3

D. Specialty Courses (19 credits)

NU 565	3	NU 566	3
NU 561	3	NU 567	4
NU 568	3	HSC 571	3

Total Credits 34

OPTION II Nursing Informatics

A. Graduate Core Courses (9 credits)

NU 607	3		
NU 610	3		
NU 613	3		

B. Research Courses (3 credits)

NU 608	3		

C. Support Courses (12 credits)

NU 565	3	ISC	3
ISC 550	3	NU 562	3

D. Specialty Courses (16 credits)

NU 539	3	NU 558	3
NU 556	3	NU 559	2
NU 557	2		

Total Credits 37

OPTION III Clinical Nurse Specialist (Adult Gerontological)

A. Graduate Core Courses (9 credits)

NU 607	3		
NU 610	3		
Nu 613	3		

B. Research Core (3 credits)

NU 608	3		

C. Support Courses (3 credits)

NU 578	3		

D. Specialty Courses (15 credits)

NU 520	3	AHN 525	4
NU 524	3	AHN 596	5

Total Credits 30

OPTION IV Clinical Nurse Leader

A. Graduate Core Courses (9 credits)

NU 607	3		
NU 610	3		
NU 613	3		

B. Research Core Courses (3 credits)

NU 608	3		

C. Support Course (3 credits)

NU 578	3		

D. Specialty Courses (15 credits)

NU 535	3	NU 536	5
NU 537	3	NU 538	4

Total Credits 30

OPTION V Nurse Practitioner

A. Graduate Core Courses (9 credits)

NU 607	3		
NU 610	3		
NU 613	3		

B. Research Core Courses (3 credits)

NU 608	3		

C. Support Course (3 credits)

NU 578	3		

D. Specialty Courses

Advanced Adult/Gerontological Primary Care Nursing (24 credits)

AHN 581	2	AHN 593	3
AHN 588	3	AHN 594	3
AHN 589	1	AHN 595	3
AHN 591	3	AHN 596	3
AHN 592	3		

Advanced Adult/Gerontological Acute Care Nursing (24 credits)

AHN 568	3	AHN 569	1
AHN 571	2	AHN 572	3
AHN 573	3	AHN 574	3
AHN 575	3	AHN 576	3
AHN 577	3		

Advanced Family Psychiatric Nursing (24 credits)

CMN 548	3	CMN 549	1
CMN 551	2	CMN 552	3
CMN 553	3	CMN 554	3
CMN 555	3	CMN 556	3
CMN 557	3		

Advanced Family Nursing (24 credits)

CMN 568	3	CMN 569	1
CMN 571	2	CMN 572	3
CMN 573	3	CMN 574	3
CMN 575	3	CMN 576	3
CMN 577	3		

Advanced Women's Health Nursing (24 credits)

MCN 538	3	MCN 539	1
MCN 541	2	MCN 542	3
MCN 543	3	MCN 544	3
MCN 545	3	MCN 546	3
MCN 547	3		

Advanced Pediatric Acute Care Nursing (24 credits)

MCN 558	3	MCN 559	1
MCN 571	2	MCN 562	3
MCN 563	3	MCN 564	3
MCN 565	3	MCN 566	3
MCN 567	3		

Advanced Pediatric Primary Care Nursing (24 credits)

MCN 548	3	MCN 549	1
MCN 551	2	MCN 552	3
MCN 553	3	MCN 554	3
MCN 555	3	MCN 556	3
MCN 557	3		

Advanced Neonatal Nursing (24 credits)

MCN 568	3	MCN 569	1
MCN 571	2	MCN 572	3
MCN 573	3	MCN 574	3
MCN 575	3	MCN 576	3
MCN 577	3		

Advanced Emergency Nursing (Family NP/Adult/Geron Acute Care Dual Role) (36 credits)

AHN 538	2	AHN 549	4
AHN 548	4	AHN 551	5
AHN 550	4	AHN 553	4
AHN 552	4	AHN 555	5
AHN 554	4		

Total Credits 39-51

ACCELERATED BSN/MSN TRACK

See BSN section.

Subspecialities: The following subspecialties can be added to the above pathways as designated.

Cardiovascular - students who are in an Adult-Gerontological Acute Care NP can add these 8 credits.

Oncology - students who are in an Adult-Gerontological Primary Care NP, Adult-Gerontological Acute Care NP, Advanced Emergency Nursing Dual Role, Clinical Nurse Specialist-Adult Gerontological Health, Family NP, Psychiatric (Family) NP or Women's Health NP can add these 10 credits.

Palliative Care - students who are in an Adult-Gerontological Primary Care NP, Adult-Gerontological Acute Care NP, Clinical Nurse Specialist-Adult Gerontological Health, or Family NP can add these 9 credits.

Nurse Educator - any student can add these 11 credits to their curriculum.

Cardiovascular Option (8 credits)

AHN 630	2	AHN 631	2
AHN 632	2	AHN 633	2

Oncology Option (11 credits)

AHN 621	2	AHN 622	2
AHN 623	2	AHN 624	2
AHN 625	1	NU 626	2

Palliative Care Option (9 credits)

AHN 530	2	AHN 531	2
AHN 532	2	AHN 533	3

Nurse Educator Option (11 credits)

NU 620	3	NU 621	3
NU 621	2	NU 623	3

DOCTOR OF NURSING PRACTICE DEGREE PROGRAM

The Doctor of Nursing Practice (DNP) is a professional degree and prepares graduates to provide the most advanced level of nursing care for individuals and communities. This includes the direct care of individual patients, management of care for individuals and populations, administration of health care and nursing systems, and the development and implementation of health policy. The program is designed to be in compliance with the Essentials for Doctor of Nursing Practice programs as put forth by the American Association of Colleges of Nursing.

The College of Nursing has several pathway, specialization, and subspecialization options within the DNP program. The pathways include the Masters in Nursing to DNP for Advanced Nursing Practice roles, Masters in Nursing to DNP adding a new advanced practice certification area, Masters in Nursing to DNP Bridge Pathway for Clinical Nurse Leaders, and the BSN to DNP.

AREAS OF SPECIALIZATION

Several concentration areas are offered to meet the career goals of students. Available Nurse Practitioner options include Adult-Gerontological Acute Care Nursing, Adult-Gerontological Primary Nursing, Emergency Nursing (Family/Adult-Gerontological Acute Dual Role), Family Nursing, Family Psychiatric Nursing, Neonatal Nursing, Pediatric Acute Care Nursing, Pediatric Primary Care Nursing, Women's Health Nursing. Clinical Nurse Specialist is available in Adult-Gerontological Nursing. Concentrations are also available for students pursuing careers in Executive Nursing Administration, Bridge CNL to Executive Nursing Administration, and Nursing Informatics. Subspecializations are available in Cardiovascular, Oncology, Palliative Care, and Nursing Education.

DOCTOR OF NURSING PRACTICE PROGRAM LEARNING OUTCOMES

Upon completion of the Doctor of Nursing Practice program, graduates should be able to:

1. Assume organizational and system leadership in the analysis, delivery, and management of nursing care.
2. Implement the highest level of advanced nursing care to produce high quality, cost-effective outcomes for diverse patient outcomes.
3. Use theories, concepts, and analytic methodologies to design, implement, and evaluate practice by applying evidence to transform nursing systems.
4. Contribute to the knowledge of best-practices and dissemination of outcomes through professional writing and presentations.
5. Develop practice standards based on the integration of ethics and evidence-based nursing care.

REQUIREMENTS FOR ADMISSION TO THE MASTERS IN NURSING DNP PATHWAY

Admission to the program is limited and selective. Application forms and other information may be obtained from the College of Nursing's web site at http://www.southalabama.edu/nursing/dnpadmiss.html or by contacting the college directly at College of Nursing, University of South Alabama, Mobile, Alabama 36688; condnp@southalabama.edu; Telephone: (251) 445-9400.

To be considered for admission to the DNP program, the applicant must meet the following requirements:

1. Citizen or Permanent Resident of the United States of America.
2. Master of Science in Nursing degree with preparation in an area of advanced practice nursing offered by the USA College of Nursing as listed under the DNP areas of specialization.
3. Current registered nurse licensure with no restrictions. Nurses with any restrictions on their license, including participation in a voluntary disciplinary alternative program, cannot be admitted.
4. Completion of Primary and Supplemental Applications:
   a. Primary Application submitted through Nursing Centralized Application System (NursingCAS) at www.NursingCAS.org. Official transcripts of all college and university studies, regardless of the outcome of enrollment, must be sent directly from the home institution to the NursingCAS. These documents become the property of the NursingCAS and will not be returned to the applicant. Applicants are responsible for any fees required by NursingCAS for their services.
   b. Supplemental Application submitted directly to the DNP Office at the USA College of Nursing. This application requires a non-refundable processing fee of $85.00, a Personal Goal Statement, and a resume/CV documenting clinical experience. Note: Prior to enrolling in nurse practitioner clinical courses, students are required to have at least two years experience in an area appropriate to their specialty track.
5. Structured phone interview with graduate nursing faculty members may be required.
6. Students are admitted to a specialty track and may not change their track without permission.
7. Students must be in good standing with all academic institutions/nursing programs that they have attended in order to be admitted to the DNP program.

REQUIREMENTS FOR ADMISSION TO THE BSN-DNP PATHWAY

The admissions criteria is the same as the MSN to DNP Pathway except applicants to the BSN-DNP program must have an overall undergraduate GPA no less than 3.0 as calculated by NursingCAS.

Upon admission to the program, all students must submit Health Data Forms, and evidence of Health Insurance. All students are admitted pending the results of a drug screen and background check. Admission will be withdrawn for students who test positive on the drug screen as per the College of Nursing policy or whose background check would prevent the student from completing residency requirements. Students who sit out of the program for three consecutive semesters must apply for readmission through the Registrar's Office and repeat their drug screening and background check.

PROGRESSION POLICY FOR STUDENTS IN THE MASTERS IN NURSING TO DNP FOR ADVANCED PRACTICE ROLES

Students must maintain an overall GPA of 3.0 to remain in the program. Only one grade of "C" can be earned in the MSN to DNP program. A student earning a second "C" or lower will be academically dismissed from the program. A student earning a grade of "D" or "F" in the program will be academically dismissed. Any term in which a graduate student drops below a 3.0 Program GPA, the student is placed on probationary status and has a period of two terms to attain a 3.0 Program GPA or be dismissed. A student who has been academically dismissed is not eligible for readmission to the DNP program.

PROGRESSION POLICY FOR STUDENTS IN THE MASTERS IN NURSING TO DNP ADDING A NEW CERTIFICATION AREA, MASTERS IN

NURSING TO DNP BRIDGE PROGRAM FOR CNL, AND BSN TO DNP

Students must maintain an overall GPA of 3.0 to remain in the program. Students in these programs can have a maximum of two Cs. A maximum of two (2) courses with a grade of "C" can be counted towards a degree; however, only one (1) "C" is permitted in support or specialization courses. If a second 'C" or lower is earned in a support or specialization course, the course in which the second "C" or lower is obtained must be repeated. A student earning a third "C" or lower will be academically dismissed from the program. A student earning two grades of "D" or "F" in the program will be academically dismissed. Any term in which a graduate student drops below a 3.0 Program GPA, the student is placed on probationary status and has a period of two terms to attain a 3.0 Program GPA or be dismissed. A student who has been academically dismissed is not eligible for readmission to the DNP program and is not eligible for admission to the MSN program.

Students in the Doctor of Nursing Practice program may initiate a grade appeal under procedures set forth by the Final Course Grade Grievance Policy. A copy of this policy is available in the Dean's Office or on the University's web site in *The Lowdown* at http://www.southalabama.edu/lowdown/.

A student dismissed from the program as the result of an academic misconduct penalty will not be eligible for readmission to the DNP program. Students in the Doctor of Nursing Practice program may initiate an appeal of a charge of Academic Misconduct under procedures set forth by the Academic Standards Policy. A copy of this policy is available in the Deans Office or on the University's web site under *The Lowdown* at http://www.southalablama.edu/lowdown/.

Students are expected to complete the DNP project requirements while enrolled in the Residency courses. Students who do not complete the DNP project during the Residency courses will receive a grade for the course based on faculty evaluation of the student's work on the project. Students receiving an acceptable grade ("C" or higher, except that the grade is not the second "C" received in the curriculum) will be required to enroll in one hour of directed study every semester until the project is completed.

If a student's progression is interrupted for any reason, it is the student's responsibility to contact the Associate Dean for Academic Affairs through their Academic Advisor. Because of limited space in the advanced clinical courses, any alteration in progression may lengthen the student's program.

APPLICATION FOR DEGREE FOR MASTERS IN NURSING TO DNP FOR ADVANCED NURSING PRACTICE ROLE AND MSN TO DNP BRIDGE PROGRAM FOR CNL

Each candidate for the Doctor of Nursing practice degree must submit an application for the degree the semester preceding their anticipated graduation through the Registrar's Office. See the University Calendar for specific deadlines.

APPLICATION FOR DEGREE FOR MASTERS IN NURSING TO DNP ADDING A NEW CERTIFICATION AREA

The MSN to DNP adding a new certification area will only apply to graduate with the DNP degree. The Post-Graduate Certificate will be awarded through the College of Nursing upon the completion of all certificate requirements.

APPLICATION FOR DEGREE FOR BSN TO DNP

Students in the BSN-DNP program will apply for two separate graduations. Applications should be submitted to the Registrar's Office the semester before the anticipated graduation. Each candidate must make application for the Master of Science in Nursing degree upon completion of the degree requirements. Upon completion of requirements for the Doctor of Nursing practice degree, each candidate must submit an application for that degree. The student's curriculum schedule indicates the semester in which each degree should be awarded. See the University Calendar for specific application deadlines.

MASTERS IN NURSING TO DNP CURRICULUM FOR ADVANCED NURSING PRACTICE

The DNP curriculum consists of 36 credits for the student holding a Master of Science in Nursing degree with preparation in an area of advanced practice nursing. The MSN-DNP program can be completed in three semesters of full-time study. Full-time study is defined as six or more credits per semester. Permission to take more than 12 credits per semester must be obtained from the Associate Dean of Academic Affairs. Part-time study is also available. The program must be completed in five years of matriculation for the MSN to DNP program.

Course work for the MSN to DNP program is offered completely online. Students are not required to come to campus during the MSN to DNP program. Electives can be taken but are not required. The program does not require a thesis or dissertation; however, students are required to complete a major synthesis project that results in a quality improvement change and has a substantial effect on health care outcomes. Residency requirements for the synthesis project can be completed in the student's home region with an approved mentor.

MSN TO DNP COURSES

Clinical Prevention and Population Health (3 credits)
Critical Analysis of the Scientific Underpinnings of Advanced Nursing Practice (3 credits)
Data and Decision Making in Complex Health Care Systems (3 credits)
Evidence Based Practice and Quality Improvement in Health Care (3 credits)
Organizational and System Leadership (3 credits)
Program Evaluation and Improvement of Clinical Outcomes (3 credits)
Project Planning and Development (3 credits)
Strategic Resource Management in Health Care (3 credits)
Translating Evidence into Practice Systems (3 credits)
Residency I (3 credits)
Residency II (3 credits)
Residency III (3 credits)

MASTERS IN NURSING TO DNP ADDING A NEW CERTIFICATION AREA CURRICULUM

OPTION I Adult/Gerontological Acute Care Nurse Practitioner

A. Core Course 18 credits)			
NU 610	3	NU 607	3
NU 613	3	NU 612	3
NU 616	3	NU 615	3
B. Research Courses (6 credits)			
NU 608	3	NU 611	3
C. Specialty Courses (33 credits)			
AHN 568	3	AHN 569	1
AHN 571	2	AHN 572	3
AHN 573	3	AHN 574	3
AHN 575	3	AHN 576	3
AHN 577	3	AHN 604	3
AHN 619	3	AHN 618	3

Total Credits 60

OPTION II Acute Gerontological Primary Care Nurse Practitioner

A. Core Course (18 credits)			
NU 610	3	NU 607	3
NU 613	3	NU 612	3
NU 616	3	NU 615	3
B. Research Courses (6 credits)			
NU 608	3	NU 611	3
C. Specialty Courses (36 credits)			
AHN 581	2	AHN 589	1
AHN 588	3	AHN 591	3
AHN 592	3	AHN 593	3
AHN 594	3	AHN 595	3
AHN 596	3	AHN 693	3
AHN 694	3	AHN 695	3
AHN 696	3		

Total Credits 60

OPTION III Advanced Emergency (Family NP/Adult/Gerontological Acute Care NP Dual Role)

A. Core Course (18 credits)			
NU 610	3	NU 607	3
NU 613	3	NU 612	3
NU 616	3	NU 615	3
B. Research Courses (6 credits)			
NU 608	3	NU 611	3
C. Specialty Courses (48 credits)			
AHN 538	2	AHN 548	4
AHN 549	4	AHN 550	4
AHN 551	5	AHN 552	4
AHN 553	4	AHN 554	4
AHN 555	5	AHN 604	3
NU 617	1	NU 618	4
NU 619	4		

Total Credits 72

OPTION IV Family Nurse Practitioner

A. Core Course (18 credits)			
NU 607	3	NU 610	3
NU 613	3	NU 612	3
NU 616	3	NU 615	3
B. Research Courses (6 credits)			
NU 608	3	NU 611	3
C. Specialty Courses (36 credits)			
CMN 568	3	CMN 569	1
CMN 571	2	CMN 572	3
CMN 573	3	CMN 574	3
CMN 575	3	CMN 576	3
CMN 577	3	CMN 680	3
CMN 681	3	CMN 682	3
CMN 683	3		

Total Credits 60

OPTION V Acute Care Pediatric Nurse Practitioner

A. Core Course (18 credits)

NU 610	3	NU 607	3
NU 613	3	NU 612	3
NU 616	3	NU 615	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3

C. Specialty Courses (36 credits)

MCN 558	3	MCN 559	1
MCN 571	2	MCN 562	3
MCN 563	3	MCN 564	3
MCN 565	3	MCN 566	3
MCN 567	3	MCN 604	3
MCN 617	3	MCN 618	3
MCN 619	3		

Total Credits 60

OPTION VI Primary Care Pediatric Nurse Practitioner

A. Core Course (18 credits)

NU 607	3	NU 610	3
NU 612	3	NU 613	3
NU 615	3	NU 616	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3

C. Specialty Courses (36 credits)

MCN 548	3	MCN 549	1
MCN 551	2	MCN 552	3
MCN 553	3	MCN 554	3
MCN 555	3	MCN 556	3
MCN 557	3	MCN 654	3
MCN 655	3	MCN 656	3
MCN 657	3		

Total Credits 60

OPTION VII Family Psychiatric-Mental Health Nurse Practitioner

A. Core Course (18 credits)

NU 607	3	NU 610	3
NU 612	3	NU 613	3
NU 615	3	NU 616	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3

C. Specialty Courses (36 credits)

CMN 548	3	CMN 549	1
CMN 551	2	CMN 552	3
CMN 553	3	CMN 554	3
CMN 555	3	CMN 556	3
CMN 557	3	CMN 604	3
CMN 617	3	CMN 618	3
CMN 619	3		

Total Credits 60

OPTION VIII Women's Nurse Health Nurse Practitioner

A. Core Course (18 credits)

NU 607	3	NU 610	3
NU 612	3	NU 613	3
NU 615	3	NU 616	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3

C. Specialty Courses (36 credits)

MCN 538	3	MCN 539	1
MCN 541	2	MCN 542	3
MCN 543	3	MCN 544	3
MCN 545	3	MCN 546	3
MCN 547	3	MCN 644	3
MCN 645	3	MCN 646	3
MCN 647	3		

Total Credits 60

OPTION IX Neonatal Nurse Practitioner

A. Core Course (18 credits)

NU 607	3	NU 610	3
NU 612	3	NU 613	3
NU 615	3	NU 616	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3
NU 518	3	NU 545	3
NU 578	3		

C. Specialty Courses (36 credits)

MCN 568	3	MCN 569	1
MCN 571	2	MCN 572	3
MCN 573	3	MCN 574	3
MCN 575	3	MCN 576	3
MCN 577	3	MCN 674	3
MCN 675	3	MCN 676	3
MCN 677	3		

Total Credits 60

OPTION X Clinical Nurse Specialist - Adult/Gerontological

A. Core Course (18 credits)

NU 607	3	NU 610	3
NU 612	3	NU 613	3
NU 615	3	NU 616	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3

C. Specialty Courses (27 credits)

NU 520	3	AHN 525	4
NU 524	3	AHN 526	5
AHN 634	3	AHN 635	3
AHN 636	3	AHN 637	3

Total Credits 51

OPTION XI Executive Nursing Administration

A. Core Course (18 credits)

NU 607	3	NU 610	3
NU 612	3	NU 613	3
NU 615	3	NU 616	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3

C. Support Courses (6 credits)

NU 562	3	NU 539	3

D. Specialty Courses (31 credits)

NU 561	3	NU 565	3
NU 566	3	NU 567	4
NU 568	3	HSC 571	3
NU 661	3	AHN 662	3
NU 663	3	AHN 664	3

Total Credits 61

OPTION XII Nursing Informatics

A. Core Course (18 credits)

NU 607	3	NU 610	3
NU 612	3	NU 613	3
NU 615	3	NU 616	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3

C. Support Courses (12 credits)

NU 562	3	NU 565	3
ISC 550	3	ISC 555	3

D. Specialty Courses (25 credits)

NU 539	3	NU 556	3
NU 557	2	NU 558	3
NU 559	2	NU 656	3
NU 657	3	NU 658	3
NU 659	3		

Total Credits 61

MASTER OF NURSING TO DNP BRIDGE PATHWAY FOR CNL TO EXECUTIVE NURSING ADMINISTRATION

OPTION I Clinical Nurse Leader

A. Bridge Courses 6 credits)

NU 565	3	NU 624	3

B. Core Course 18 credits)

NU 610	3	NU 607	3
NU 613	3	NU 612	3
NU 616	3	NU 615	3

C. Research Courses (6 credits)

NU 608	3	NU 611	3

D. Specialty Courses (12 credits)

NU 661	3	NU 662	3
NU 663	3	NU 664	3

Total Credits 42

BSN TO DNP CURRICULUM

The BSN to DNP curriculum consist of 69 to 87 credits. The program can be completed in 9 semesters of full-time study or in twelve semesters of part-time study. Full-time study is defined as six or more credits per semester. Permission to take more than 12 credits per semester must be obtained from the Associate Dean of Academic Affairs prior to the student enrolling. The program must be completed within seven years of matriculation.

Course work is offered online and students are required to come to campus one time when they begin the clinical portion of their specialty program for an intensive classroom and evaluation sessions. Specialty tracks within the College of Nursing's graduate program require a practice component. Although faculty assists students in locating a site and preceptor if it is indicated. Students who are unsuccessful in being accepted by an agency in their home community may have to travel to another area to complete practice requirements or withdraw from the program. Please review the list of clinical affiliations found under the "Current Student" tab on the College of Nursing Web Site at http://www.southalabama.edu/nursing/ClinicalAgencies.html. If there is not a clinical site listed near you or you are interested in a site not listed, negotiations should be initiated as soon as you begin the program through the Track Coordinator for your specialty.

The program does not require a thesis or dissertation; however, students are required to complete a major synthesis project that results in a quality improvement change and has a substantial effect on health care outcomes. Residency requirements for the synthesis project can be completed in the student's home region with an approved mentor.

BSN TO DNP CURRICULUM FOR B.S.N. PREPARED REGISTERED NURSES

OPTION I Adult/Gerontological Acute Care Nurse Practitioner

A. Core Course 18 credits)

NU 610	3	NU 607	3
NU 613	3	NU 612	3
NU 616	3	NU 615	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3

C. Support Courses (9 credits)

NU 518	3	NU 545	3
NU 578	3		

D. Specialty Courses (33 credits)

AHN 568	3	AHN 569	1
AHN 571	2	AHN 572	3
AHN 573	3	AHN 574	3
AHN 575	3	AHN 576	3
AHN 577	3	AHN 604	3
AHN 619	3	AHN 618	3

Total Credits 66

OPTION II Acute Gerontological Primary Care Nurse Practitioner

A. Core Course (18 credits)

NU 610	3	NU 607	3
NU 613	3	NU 612	3
NU 616	3	NU 615	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3

C. Support Courses (9 credits)

NU 518	3	NU 545	3
NU 578	3		

D. Specialty Courses (36 credits)

AHN 581	2	AHN 589	1
AHN 588	3	AHN 591	3
AHN 592	3	AHN 593	3
AHN 594	3	AHN 595	3
AHN 596	3	AHN 693	3
AHN 694	3	AHN 695	3
AHN 696	3		

Total Credits 69

OPTION III Advanced Emergency (Family NP/Adult/Gerontological Acute Care NP Dual Role)

A. Core Course (18 credits)

NU 610	3	NU 607	3
NU 613	3	NU 612	3
NU 616	3	NU 615	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3

C. Support Courses (9 credits)

NU 518	3	NU 545	3
NU 578	3		

D. Specialty Courses (48 credits)

AHN 538	2	AHN 548	4
AHN 549	4	AHN 550	4
AHN 551	5	AHN 552	4
AHN 553	4	AHN 554	4
AHN 555	5	AHN 604	3
NU 617	1	NU 618	4
NU 619	4		

Total Credits 81

OPTION IV Family Nurse Practitioner

A. Core Course (18 credits)

NU 607	3	NU 610	3
NU 613	3	NU 612	3
NU 616	3	NU 615	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3

C. Support Courses (9 credits)

NU 518	3	NU 545	3
NU 578	3		

D. Specialty Courses (36 credits)

CMN 568	3	CMN 569	1
CMN 571	2	CMN 572	3
CMN 573	3	CMN 574	3
CMN 575	3	CMN 576	3
CMN 577	3	CMN 680	3
CMN 681	3	CMN 682	3
CMN 683	3		

Total Credits 69

OPTION V Acute Care Pediatric Nurse Practitioner

A. Core Course (18 credits)

NU 610	3	NU 607	3
NU 613	3	NU 612	3
NU 616	3	NU 615	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3

C. Support Courses (9 credits)

NU 518	3	NU 545	3
NU 578	3		

D. Specialty Courses (36 credits)

MCN 558	3	MCN 559	1
MCN 571	2	MCN 562	3
MCN 563	3	MCN 564	3
MCN 565	3	MCN 566	3
MCN 567	3	MCN 604	3
MCN 617	3	MCN 618	3
MCN 619	3		

Total Credits 69

OPTION VI Primary Care Pediatric Nurse Practitioner

A. Core Course (18 credits)

NU 607	3	NU 610	3
NU 612	3	NU 613	3
NU 615	3	NU 616	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3

C. Support Courses (9 credits)

NU 518	3	NU 545	3
NU 578	3		

D. Specialty Courses (36 credits)

MCN 548	3	MCN 549	1
MCN 551	2	MCN 552	3
MCN 553	3	MCN 554	3
MCN 555	3	MCN 556	3
MCN 557	3	MCN 654	3
MCN 655	3	MCN 656	3
MCN 657	3		

Total Credits 69

OPTION VII Family Psychiatric-Mental Health Nurse Practitioner

A. Core Course (18 credits)

NU 607	3	NU 610	3
NU 612	3	NU 613	3
NU 615	3	NU 616	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3

C. Support Courses (9 credits)

NU 518	3	NU 545	3
NU 578	3		

D. Specialty Courses (36 credits)

CMN 548	3	CMN 549	1
CMN 551	2	CMN 552	3
CMN 553	3	CMN 554	3
CMN 555	3	CMN 556	3
CMN 557	3	CMN 604	3
CMN 617	3	CMN 618	3
CMN 619	3		

Total Credits 69

OPTION VIII Women's Health Nurse Practitioner

A. Core Course (18 credits)

NU 607	3	NU 610	3
NU 612	3	NU 613	3
NU 615	3	NU 616	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3

C. Support Courses (9 credits)

NU 518	3	NU 545	3
NU 578	3		

D. Specialty Courses (36 credits)

MCN 538	3	MCN 539	1
MCN 541	2	MCN 542	3
MCN 543	3	MCN 544	3
MCN 545	3	MCN 546	3
MCN 547	3	MCN 644	3
MCN 645	3	MCN 646	3
MCN 647	3		

Total Credits 69

OPTION IX Neonatal Nurse Practitioner

A. Core Course (18 credits)

NU 607	3	NU 610	3
NU 612	3	NU 613	3
NU 615	3	NU 616	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3

C. Support Courses (9 credits)

NU 518	3	NU 545	3
NU 578	3		

D. Specialty Courses (36 credits)

MCN 568	3	MCN 569	1
MCN 571	2	MCN 572	3
MCN 573	3	MCN 574	3
MCN 575	3	MCN 576	3
MCN 577	3	MCN 674	3
MCN 675	3	MCN 676	3
MCN 677	3		

Total Credits 69

OPTION X Clinical Nurse Specialist - Adult/Gerontological

A. Core Course (18 credits)

NU 607	3	NU 610	3
NU 612	3	NU 613	3
NU 615	3	NU 616	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3

C. Support Courses (9 credits)

NU 518	3	NU 545	3
NU 578	3		

D. Specialty Courses (27 credits)

NU 520	3	AHN 525	4
NU 524	3	AHN 526	5
AHN 634	3	AHN 635	3
AHN 636	3	AHN 637	3

Total Credits 60

OPTION XI Executive Nursing Administration

A. Core Course (18 credits)

NU 607	3	NU 610	3
NU 612	3	NU 613	3
NU 615	3	NU 616	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3

C. Support Courses (6 credits)

NU 562	3	NU 539	3

D. Specialty Courses (31 credits)

NU 561	3	NU 565	3
NU 566	3	NU 567	4
NU 568	3	HSC 571	3
NU 661	3	NU 662	3
NU 663	3	NU 664	3

Total Credits 61

OPTION XII Nursing Informatics

A. Core Course (18 credits)

NU 607	3	NU 610	3
NU 612	3	NU 613	3
NU 615	3	NU 616	3

B. Research Courses (6 credits)

NU 608	3	NU 611	3

C. Support Courses (12 credits)

NU 562	3	NU 565	3
ISC 550	3	ISC 555	3

D. Specialty Courses (25 credits)

NU 539	3	NU 556	3
NU 557	2	NU 558	3
NU 559	2	NU 656	3
NU 657	3	NU 658	3
NU 659	3		

Total Credits 61

Subspecialities: The following can be added to the above pathways as designated.

Cardiovascular - students who are in Adult-Gerontological Acute Care NP and emergency specialty can add these 8 credits.

Oncology - students who are in an Adult-Gerontological Primary Care NP, Adult-Gerontological Acute Care NP, Advanced Emergency Nursing Dual Role, Clinical Nurse Specialist-Adult Health, Family NP, Psychiatric (Family) NP or Women's NP can add these 10 credits.

Palliative Care - students who are in an Adult-Gerontological Primary Care NP, Adult-Gerontological Acute Care NP, Clinical Nurse Specialist-Adult Health, or Family NP can add these 9 credits.

Nurse Educator - any student can add these 11 credits to their curriculum.

Cardiovascular Option (8 credits)

AHN 630	2	AHN 631	2
AHN 632	2	AHN 633	2

Oncology Option (11 credits)

AHN 621	2	AHN 622	2
AHN 623	2	AHN 624	2
AHN 625	1	NU 626	2

Palliative Care Option (15 credits)

AHN 530	2	AHN 531	2
AHN 532	2	AHN 533	3-9

Nurse Educator Option (11 credits)

NU 620	3	NU 621	3
NU 622	2	NU 623	3

GRADUATE ASSISTANTSHIPS

A limited number of graduate assistantships are available to students in full-time status. Additional information and an application can be obtained from the Scholarships Web Page on the USA College of Nursing Web Site at http://www.southalabama.edu/nursingcamputsmscholarship.html.

DESCRIPTIONS OF ALL NURSING COURSES:

Nursing (NU) 276
Adult Health Nursing (AHN) 166
Community/Mental Health Nursing (CMN) 200
Maternal/Child Nursing (MCN) 257
Health Sciences (HSC) 234

SCHOOL OF COMPUTING

Dean: Alec F. Yasinsac (251) 460-6390

School of Computing web site
http://www.soc.southalabama.edu

DEPARTMENTS OF INSTRUCTION

Computer Science
Health Informatics
Information Systems
Information Technology
School of Computing Graduate Studies

DEGREE PROGRAMS OFFERED

The School of Computing (SoC) offers programs of study leading to the following degrees:

Bachelor of Science in Computer Science (CSC)
Bachelor of Science in Health Infomatics (HI)
Bachelor of Science in Information Systems (ISC)
Bachelor of Science in Information Technology (ITE)
Master of Science in Computer and Information Sciences (CIS)

ACCREDITATION

The Bachelor of Science in Computer Science, Information Systems, and Information Technology programs are accredited by the Computing Accreditation Commission of ABET, http://www.abet.org. For a quick understanding of what accreditation is and why an accredited program should be chosen, go to http://www.abet.org/why-accreditation-matters/. For an in-depth understanding of the accreditation process, go to http://www.abet.org/the_basics.shtml.

MISSION STATEMENT

The mission of the School of Computing is to prepare graduates who are professionally competent, motivated to lifelong learning, and demonstrate ethical behavior in the computing sciences; to provide an atmosphere for faculty to demonstrate research and teaching excellence; and to provide service in the computing sciences to our community and discipline.

ADMISSION TO THE DEGREE PROGRAMS AND COURSES

In order to be admitted as an undergraduate major in the School of Computing, a student must be "calculus ready". For a major in Computer Science, "calculus ready" means that the student is eligible to enroll in MA 125 (Calculus I). For a major in either Information Systems or Information Technology, "calculus ready" means that the student is eligible to enroll in MA 120, (Calculus and Its Applications).

GENERAL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREES IN THE SCHOOL OF COMPUTING

Majors in the School of Computing must complete requirements for one of the four Bachelor of Science Programs offered: Computer Science, Health Informatics, Information Systems, or Information Technology. Under special circumstances, and with approval of the Dean, a student may select a unique curriculum plan in which the general philosophy and requirements of the selected program are not violated.

All undergraduate students in the School of Computing must comply with the University's general education requirements, (See Academic Policies and Procedures). Although these requirements are not specifically organized according to the four general education areas, each of the bachelor of science programs in the School of Computing, incorporates general education requirements within the published programs.

In addition to an overall grade-point average of 2.0, all courses in the major, prerequisites for courses in the major and required supporting courses for the major, must be passed with a minimum grade of "C." Any course taken at the University of South Alabama with a grade of "D" or "F" may be retaken only at the University of South Alabama.

Any courses taken at another institution to meet degree requirements must have prior approval of the School of Computing Dean. Failure to obtain prior approval may result in loss of transfer credit for the course work.

LAPTOP OWNERSHIP POLICY

All students enrolling in any undergraduate or graduate courses offered by the School of Computing except for CIS 101, CIS 110, CIS 150, CIS 175, CIS 210, CIS 211, CIS 227, CIS 250 and CIS 500, are required to own a personal laptop computer system that conforms to the current School's minimum published standards. This is a one-student one-machine requirement. Students must register their laptops with the School of Computing Office in Shelby Hall Room 2303 during the first week of the semester.

For more information consult the Laptop Policy at http://www.soc.southalabama.edu.

TRANSFER STUDENTS

Transfer students must complete at least eighteen (18) credit hours of courses at the 300-level or above of courses in their chosen program of study in the School of Computing. All undergraduate transfer students are required to satisfactorily complete CIS 300, Information Technology in Society at the University of South Alabama.

FIVE-YEAR COMBINED BACHELORS AND MASTERS DEGREE PROGRAMS

Qualified students may enroll in a program that results in both a bachelors degree and a masters degree. Students in this program will normally complete a B.S. degree in one of the four programs in the School of Computing in four (4) years and complete the M.S. Degree in one (1) additional calendar year. Admission to the program is competitive. Students must apply in the second semester of their junior year. The minimum gpa requirement is 3.0. Financial aid is available to qualified students admitted to the program.

CHOICE OF BULLETIN UNDER WHICH A STUDENT GRADUATES

Majors in the School of Computing may choose any bulletin from their entry date to their time of graduation. This applies for entering freshmen and transfer students. Students at the University of South Alabama changing their choice of major in the School of Computing, changing their major in another college to a major in one of the programs in the School of Computing or who interrupt their program of study for more than one calendar year are considered new students with respect to bulletin selection.

PROFICIENCY EXAMINATION

The School of Computing administers a Computer Proficiency Examination (CPE) for the Computing Proficiency requirement for some majors and for placement in CIS 250.

Students wishing to sit for the CPE are required to enroll in CIS 010, Computer Proficiency Exam. Enrollment in a section of CIS 010 results in an assignment of a specific time, date, and location for an administration of the CPE.

For more details see http://www.cpe.soc.southalabama.edu.

THE MASTER OF SCIENCE IN COMPUTER AND INFORMATION SCIENCES

GENERAL REQUIREMENTS FOR THE MSCIS PROGRAM

The Master of Science in Computer and Information Sciences degree program is designed for students and professionals wishing to further their knowledge and expertise in

computing. There are two major areas of specializations within the degree program:

1. **COMPUTER SCIENCE (CSC)** for students interested in the theoretical aspects of the discipline with an emphasis on the construction of system software or the development of scientific applications using software engineering principles. For more information about the Master of Science in CIS, Computer Science specialization, go to http://soc.southalabama.edu/index.php/computer-science-csc.
2. **INFORMATION SYSTEMS (ISC)** for students interested in business and organizational applications and information systems management. For more information about the Master of Science in CIS, Information Systems specialization, go to http://soc.southalabama.edu/index.php/information-systems-isc.

FULL LOAD OF COURSE WORK PER SEMESTER

Permission of the School of Computing dean is required to take more than 12 semester hours.

NATIONAL CENTER OF ACADEMIC EXCELLENCE IN INFORMATION ASSURANCE EDUCATION

The University of South Alabama was awarded a National Center of Academic Excellence in Information Assurance Education (CAE/IAE) designation in June 2011. This designation is awarded to institutions after a rigorous review for programs that have demonstrated their commitment to academic excellence in Information Assurance education. Student wishing to comply with USA's CAE/IAE graduate curriculum in conjunction with their specialization (Computer Science or Information Systems), must complete all required courses and must choose courses designated as IA in the specialization wherever an optional choice is presented.

REQUIREMENTS FOR ADMISSION

Students are admitted each semester. Applicants who have earned an undergraduate or graduate degree from an accredited institution of higher education and who satisfy the admission criteria for the Graduate School (see http://southalabama.edu/graduateprograms/gradadmiss.html) may qualify for admission to the School of Computing Graduate Program. The School of Computing rarely accepts Non-Degree admissions to the Master of Science in Computer and Information Sciences.

Applicants whose highest degree is a graduate degree from an accredited institution of higher education will not be required to provide GRE scores since these applicants may qualify for Regular Admission based upon their previous graduate work.

Applicants whose highest degree is an undergraduate degree from an accredited institution of higher education must provide official scores on the Verbal, Quantitative, and Analytical Writing sections of the GRE Revised General Test in addition to the Graduate School requirements for Regular or Provisional Admission.

Applications and **Graduate Bulletins** are available from the Admissions website, or the Director of Admissions, Meisler Hall, Suite 2500, University of South Alabama, Mobile, AL 36688-0002. Telephone (251) 460-6141 or (800) 872-5247.

Final admission decisions are made based upon an evaluation of the applicant's complete file which consists of all official academic transcripts; undergraduate grade-point average; GRE scores (when required); three (3) letters of reference regarding the applicant's ability to succeed in the Master of Science program in Computer and Information Sciences; the applicant's statement of purpose; TOEFL or IELTS scores (for international applicants); and program enrollment and availability.

SCHOOL OF COMPUTING GRADUATE PROFESSIONAL COMPONENT AND PROGRAM OF STUDY

All School of Computing graduate courses require SoC Graduate Professional Component Standing. Prior to enrollment in CIS graduate courses, the entering graduate student must meet with the coordinator of the student's specialization area (CSC or ISC) to prepare the student's personal program of study. The specialization coordinator reviews the student's previous academic work and results from any required School of Computing Foundation Placement Examinations to determine if any courses from the CIS Graduate Foundation or the Required/Supporting courses are to be included as part of the student's personal program of study. These prescribed courses form the CIS Graduate Professional Component requirement for the student. A student attains CIS Graduate Professional Component Standing if either a) the student is not prescribed Professional Component courses or b) the student successfully completes each prescribed Professional Component course with a minimum grade of "B". A student who earns a grade of less than "B" in any prescribed Professional Component course must repeat the course until a minimum grade of "B" is attained. The School of Computing Foundation and Requirement/Supporting Courses for each specialization are enumerated below:

1. **SCHOOL OF COMPUTING GRADUATE FOUNDATION COURSES:**

A. Computer Science (CSC)

Required School of Computing Foundation courses for the CSC specialization are:

a. CSC 120 Problem Solving and Programming Concepts I and or
   CSC 121 Problem Solving and Programming Concepts II
   CIS 401 Accelerated Programming
b. CSC 230 Advanced Data and File Structures
c. CSC 311 Networking and Communications
d. CSC 322 Operating Systems

Supporting Courses for the Computer Science specialization are:

a. MA 125 Calculus I
b. MA 126 Calculus II

Recommended Courses

CSC 228 Digital Logic
CIS 324 Database Design Development, and Management

B. Information Systems (ISC)

Required School of Computing Foundation courses for the ISC specialization are:

a. CIS 115 Beginning Programming
   ISC 285 Intermediate Programming
b. ISC 272 Systems Architecture
c. CIS 321 Data Communications and Networking
d. CIS 324 Database Design, Development, and Management

Supporting Courses for the Information Systems specialization are:

a. BUS 245 Applied Business Statistics I OR
   ST 210 Statistical Reasoning
b. MA 120 Calculus and Its Applications

INTERNATIONAL STUDENTS' SPECIAL REQUIREMENTS

International students must submit documentary evidence showing IELTS test scores of at least 6.0 or TOEFL test scores of at least 525 on the paper version, 197 on the computer version, or 71 on the internet version or an equivalent level of competence as exhibited by a bachelor's degree from an accredited university in the United States. The School of Computing reserves the right to exclude students with more than five course failures.

CHOICE OF BULLETIN UNDER WHICH A STUDENT GRADUATES

Students entering the SoC masters program may choose any bulletin from their entry date to their time of graduation. This applies for new students and transfer students. Students at the University of South Alabama changing their graduate specialization in School of Computing, changing their major to School of Computing, or who interrupt their program for more than one calendar year are considered new students with respect to bulletin selection.

COURSES TAKEN OUTSIDE THE SCHOOL OF COMPUTING

No more than four graduate courses, maximum of twelve (12) semester hours taken outside of the School of Computing may be applied toward the degree. Only grades of "A" or "B" may be accepted. Transfer credit is approved only after completion of a minimum of nine (9) semester hours of graduate credit towards the degree. A formal request for transfer credits must be made to the coordinator of the student's specialization area (CSC or ISC). Any such transfer courses must be approved by the SoC Director of Graduate Studies and may not have been used to fulfill the requirements of another graduate degree.

SCHEDULING OF COURSES

The graduate program courses are scheduled to accommodate full-time students (normally two or three courses per semester) and part-time students (one course per semester). Special topics, directed study, and thesis courses are available as needed.

TIME LIMITATION

All requirements for the Master of Science in Computer and Information Sciences degree must be completed within seven (7) calendar years from the date of matriculation as a School

of Computing graduate student. The seven calendar year constraint also applies to all accepted transfer courses.

GRADUATE RESEARCH SEMINAR

The School of Computing Graduate Research Seminar is scheduled periodically during each semester as a forum for students and faculty to present and discuss research issues, ideas, and results. Attendance is expected of all graduate students. Attendance is required for students enrolled in any of these special courses: CIS 518, CIS 594, and CIS 599. Moreover students enrolled in these special courses are required to give a presentation each semester based on their work in the course in which they are enrolled.

PROFESSIONAL PARTICIPATION

Masters students are expected to take an active part in at least one (1) professional computing organization. They are expected to be aware of the social impact of computing and adhere to the ACM/AITP code of ethics. For more information consult Current Student Information, Websites of Interest at http://www.soc.southalabama.edu.

GRADUATE ASSISTANTSHIPS AND FELLOWSHIPS

A limited number of graduate assistantships are available on a competitive basis and are awarded on the recommendation of the School of Computing. Applications are available online at: www.southalabama.edu/graduateprogramsforms.html.

All graduate assistants must enroll in CIS 597, CIS Graduate Seminar.

COMPREHENSIVE EXAMINATION

All School of Computing masters students must complete a comprehensive examination for the CORE courses in their Specialization (Computer Science or Information Systems). The comprehensive examination may be repeated no more than twice. A written examination is required of students who choose the Course Only Concentration and an oral examination is required of students who complete the Thesis Concentration.

The School of computing Comprehensive Examination Policies and Procedures document and the Comprehensive Examination Application form are available at http://www.soc.southalabama.edu.

GRADUATE SCHOOL STANDARDS

For all other graduate policies and procedures not specifically stated for the Master of Science in Computer and Information Sciences degree program, refer to the Graduate School at http://www.southalabama.edu/bulletin/graduate.htm.

DESCRIPTIONS OF GENERAL COMPUTING (CIS) COURSES BEGIN ON PAGE 196.

COMPUTER SCIENCE

Coordinator: Tom Johnsten
Professors: Doran, Yasinsac
Associate Professors: Andel, Johnsten, McDonald
Assistant Professors: Huang, Mark Yampolskiy
Senior Instructor: McKinney
Instructor: Whitston

Computer Science web site
http://cs.soc.southalabama.edu

School of Computing web site
http://www.soc.southalabama.edu/

Computer Science Graduate Studies

COMPUTER SCIENCE (CSC):

Computer Science is a discipline that involves the understanding and design of computers and computational processes. In its most general form, it is concerned with the understanding of information transfer and transformation. Particular interest is placed on making processes efficient and endowing them with some form of intelligence. The discipline includes both advancing the fundamental understanding of algorithms and information processes in general, as well as the practical design of efficient, reliable software to meet given specifications. Courses offer students the opportunity to explore current trends in computing such as: game development, robotics, graphics, and data mining.

EDUCATIONAL OBJECTIVES FOR COMPUTER SCIENCE GRADUATES

The Bachelor of Science in Computer Science produces graduates who:

1. are skilled, competent, and contribute to the work force in their specialty and/or can continue their graduate education.
2. have identified and implemented a plan of continuous learning related to their career.
3. can assume positions of leadership within their organization.
4. display continued high ethical standards within the community and profession.

LEARNING OUTCOMES FOR COMPUTER SCIENCE MAJORS

The learning outcomes for the Bachelor of Science in Computer Science program, have been adapted from those specified by the Computing Accreditation Criteria, for Accrediting Computing Programs. (See http://www.abet.org). The program enables students to achieve, by the time of graduation:

(a) An ability to apply knowledge of computing and mathematics appropriate to the discipline.
(b) An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.
(c) An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.
(d) An ability to function effectively on teams to accomplish a common goal.
(e) An understanding of professional, ethical, legal, security and social issues and responsibilities.
(f) An ability to communicate effectively with a range of audiences.
(g) An ability to analyze the local and global impact of computing on individuals, organizations, and society.
(h) Recognition of the need for and an ability to engage in continuing professional development.
(i) An ability to use current techniques, skills, and tools necessary for computing practice.
(j) An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the trade-offs involved in design choices.
(k) An ability to apply design and development principles in the construction of a software systems of varying complexity.

ACCREDITATION

The Bachelor of Science in Computer Science program is accredited by the Computing Accreditation Commission of ABET, http://www.abet.org. For a quick understanding of what accreditation is and why an accredited program should be chosen, go to http://www.abet.org/why_choose.shtml. For in-depth information on accreditation, go to http://www.abet.org/the_basics.shtml.

REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN COMPUTER SCIENCE (CSC)

All General Education courses are marked with the symbol GEd.

Area I - Written Composition and Communication - Twelve (12) credit hours, with a minimum grade of "C" in each course, are required as follows:

GEd	EH 101*	English Composition I	3
GEd	EH 102	English Composition II	3
	OR EH 105	Honors Composition	
	CA 275	Small Group Communications	3
	EH 372	Technical Writing (W)	3

Area II - Humanities and Fine Arts - Twelve (12) hours consisting of:

GEd	CA 110	Public Speaking (minimum grade of "C" is required)	3
GEd	one course (3 semester hours) from ARS 101, DRA 110, MUL 101, ARH 100, ARH 103, or ARH 123		3
GEd	one course from EH 215, EH 216, EH 225, EH 226, EH 235, EH 236		3
GEd	one additional course (3 semester hours) from Art, Drama, Foreign Languages, Music, Philosophy and Literature,		3

Two courses must be either a Literature sequence from (EH 215-216, EH 225-226, EH 235-236) OR a History sequence from (HY 101-102, HY 135-136).

Area III -Natural Sciences and Mathematics

A.	**GEd Natural Sciences** - Twelve (12) credit hours of natural sciences, which must include laboratory experiences, are required. Completion of one of the following sequences is required. PH 201, 201L, 202, 202L; CH 131, 131L, 132, 132L; GY 111, 111L, 112, 112L; BLY 121, 121L, 122, 122L	8
	Four (4) credit hours of any approved natural science courses and the associated laboratory experience	4
B.	**GEd Mathematics and Statistics** - Twenty (20) credit hours, with a minimum grade of "C" in each course, are required as follows:	
	MA 125	4
	MA 126	4
	MA 267 or MA 367	3
	ST 315	3
	2 additional courses from the approved math minor courses.	6

Area IV - History, Social and Behavioral Sciences - Twelve (12) credit hours are required consisting of:

GEd	one course from HY 101, HY 102, HY 135, or HY 136:	3
GEd	three additional courses (9 semester hours) from the following approved areas: Anthropology, Economics, Geography, History, Political Science, Psychology, and Sociology.	9

Two courses must be either a Literature sequence from (EH 215-216, EH 225-226, EH 235-236) OR a History sequence from (HY 101-102, HY 135-136).

Computer Science Major Requirements - Forty-five (45) credit hours, with a minimum grade of "C" in each course, are required as follows:

CSC 108	Introduction to Computer Science	3
CSC 120	Introduction to Programming I	4
CSC 121	Introduction to Programming II	4
CSC 228	Digital Logic and Comp Architecture	3
CSC 230	Data Structures	3
CIS 300	Information Technology in Society	1
CSC 311	Networking and Communications	3
CSC 320	Computer Organization and Architecture	3
CSC 322	Operating Systems	3
CSC 331	Software Engineering Principles (W)	3
CSC 333	Program Language Theory	3
CSC 340	Secure Software Engineering	3
CSC 432	Perform Eval of Algorithms	3
CSC 434	Formal Language and Automata Theory	3
CIS 497	Senior Project (W)	3
CIS 498	Senior Semina	0

Computer Science Electives - Twelve (12) credit hours, with a minimum grade of "C" in each course, are required. Select any four (4) of the following courses:

CSC 410 Compiler Design & Construction
CSC 411 Communication & Network Analysis
CSC 412 Real-Time Systems
CSC 413 Computer Graphics
CSC 414 Modeling and Simulation
CSC 415 Numerical Analysis
CSC 416 Artificial Intelligence Theory and Programming
CSC 417 Game Development
CSC 490 Computer Science Special Topics
CIS 439 Windows Programming
CSC 490 Computer Science Special Topics
CSC 324 Database Concepts
CSC 457 Data Warehousing

Computer Science General Studies Electives - Hours as needed to meet degree and 125 semester hour requirement. All General Studies Electives must be approved by the Computer Science Coordinator.

SUGGESTED FRESHMAN COURSES
Computer Science Major

Fall	**Spring**
CA 275	CA 110
CSC 108	CSC 121
CSC 120	MA 126
MA 125	EH 102
EH 101*	Humanities and Fine Arts Elective

*Students with a sufficient ACT/SAT score in English Composition will not be required to take EH 101.

Transfer students:

1. Alabama community college students who wish to transfer into the Computer Science program should consult http://www.southalabama.edu/admissions/transfer/al/cs.html.
2. Mississippi and Florida college students who wish to transfer into the Computer Science program should consult http://www.southalabama.edu/admissions/transfer/index.html.

REQUIREMENTS FOR A MINOR IN COMPUTER SCIENCE

(23 hours) A student wishing to obtain a minor in Computer Science must complete all courses below with a minimum grade of "C".

CSC 120
CSC 121
CSC 228
CSC 230
CSC 311
CSC 322
One of: (CSC 320, CSC 324, CSC 331)

***At least 9 hours of courses in the minor, including all 300 level courses, must be completed at the University of South Alabama.**

REQUIREMENTS FOR MASTERS DEGREE WITH COMPUTER SCIENCE (CSC) SPECIALIZATION

Students must satisfactorily complete all prescribed Graduate Professional Component courses, a comprehensive examination, and thirty-six (36) graduate credit hours for the Master of Science degree with Computer Science specialization. Required prerequisite courses are prescribed by the Computer Science Coordinator after reviewing prior academic work and results from any required School of Computing Foundation Placement Examinations.

Computer Science Specialization majors must complete their Computer Systems program with a minimum grade of "B" in core courses, a minimum grade of "C" in CIS 518, and an overall GPA of 3.0. The thirty-six (36) graduate semester hours consisting of twelve (12) semester hours of CORE courses, six (6) semester hours of REQUIRED courses, and eighteen (18) semester hours of approved elective courses according to the selected concentration option as follows:

1. **CORE COURSES (12 semester hours)**:
   All core courses must be completed with a minimum grade of "B".
   CSC 522 Performance Evaluation of Algorithms
   CSC 527 Software Engineering Principles
   CSC 520 Computer Architecture
   IA-CSC 580 Data Security
2. **REQUIRED COURSES (6 semester hours)**:
   CIS 518 CIS Research Methodologies
   A-CSC 532 Distributed Systems
3. **CONCENTRATIONS (18 semester hours)**:
   Two concentrations of study are available to students who select the Computer Science Specialization in the SoC masters program. These are THESIS and COURSE-ONLY concentrations.

A. THESIS CONCENTRATION

For the Thesis Concentration, eighteen (18) semester hours of required and elective course work are required.

a. Research Development
A minimum of three (3) semester hours credit of CIS 595, Computer and Information Sciences Research Development, are required. A Thesis Concentration student may only enroll in CIS 595, CIS Research Development, after successfully completing CIS 518 and their core courses. A Thesis Concentration student must be enrolled in CIS 595 in the semester during which they defend their thesis prospectus. A grade of "C" or lower in CIS 595 will result in the dismissal of the student from the Thesis and Project Concentrations to the Course-Only Concentration.

b. Thesis
A minimum of three (3) semester hours credit of CIS 599, Computer and Information Sciences Thesis, must be applied towards the degree for the Thesis Concentration. Students may only enroll in CIS 599 after successfully defending their thesis prospectus (minimum grade of "B" in CIS 595). A Thesis Concentration student must be enrolled in CIS 599 in the semester during which they defend and/or submit their thesis.

c. Elective Course Work
Twelve (12) semester hours of additional approved electives are required. A maximum of three (3) semester hours of Special Permission courses may be applied to the degree for the Thesis Concentration. A list of Pre-Approved Computer Science courses and a list of Special Permission courses are given at the end of this section. IA thesis concentration students must choose CSC 510 (Compiler Design and Construction) and CSC 582 (Network Security).

d. Comprehensive Examination
All students in the Thesis Concentration must pass an oral comprehensive examination administered after the thesis committee accepts the thesis. The School of Computing Comprehensive Examination Policies and Procedures document and the Comprehensive Examination Application form are available at http://www.soc.southalabama.edu.

B. COURSE ONLY CONCENTRATION

For the Course Only Concentration, eighteen (18) semester hours of elective course work are required.

a. Elective Course Work
A maximum of six (6) semester hours of Special Permission courses may be applied to the degree for the Course Only Concentration. No credits from CIS 599 may be applied to the Course Only Concentration. A list of Pre-Approved Computer Science courses

and a list of Special Permission courses are given at the end of this section.

b. Comprehensive Examination
Students in the Course Only Concentration must pass a written examination. Students should take the examination as soon as possible after successfully completing CIS 518 and Computer Science core courses. Students wishing to sit for the examination must apply online to the Director of SoC Graduate Studies by the Friday of the last week of classes in the semester prior to which the examination is to be taken. The comprehensive examination is offered at least once a year. The School of Computing Comprehensive Examination Policies and Procedures document and the Comprehensive Examination Application form are available at http://www.soc.southalabama.edu.

4. COMPUTER SCIENCE ELECTIVES
A list of Pre-Approved Computer Science elective courses and a list of Special Permission courses are given below. All other courses must be approved by the Computer Sciences Coordinator. A maximum of six (6) credit hours of non-CSC or non-CIS courses will be allowed.

A. PRE-APPROVED COMPUTER SCIENCE ELECTIVES

IA-e CSC 510	Compiler Design and Construction
IA-CSC 511	Communications and Network Analysis
IA-e CSC 512	Real-Time Software Systems
CSC 513	Computer Graphics
CSC 514	Modeling and Simulation
CSC 515	Numerical Analysis
CSC 516	Artificial Intelligence Theory and Programming
CSC 517	Game Development
CSC 524	Computer Language Design
CSC 526	Data Mining
CSC 533	Artificial Intelligence and Heuristic Programming
IA-eCIS 530	Information Assurance and IT Auditing
IA-eCIS 535	Digital Forensic Analysis
IA CSC 582	Network Security
CSC 590	Special Topics in Computer Science
CSC 557	Data Warehousing
ISC 559	Information Systems Applications Design and Implementation
ISC 561	Information Systems Database Management
ISC 572	Advanced Data Management

B. SPECIAL PERMISSION COURSES
Approval of the Computer Science Coordinator and the Director of the School of Computing Graduate Studies is required for CIS graduate faculty sponsorship of a Special Permission course. A maximum of nine (9) credit hours of Special Permission courses may be applied to the degree for the Thesis Concentration or the Project Concentration; a maximum of six (6) credit hours of Special Permission courses may be applied to the degree for the Course Only Concentration.

CIS 594	Directed Study
CIS 595	Computer and Information Sciences Research Development

DESCRIPTIONS OF ALL COMPUTER SCIENCE (CSC) BEGIN ON PAGE 204.

HEALTH INFORMATICS

Coordinator: Matt Campbell
Professors: Landry, Pardue
Assistant Professor: M. Campbell
Instructor: J. Holifield
Adjunct: A. Campbell

Health Informatics web site
http://www.hisoc.southalabama.edu

School of Computing web site
http://www.soc.southalabama.edu

HEALTH INFORMATICS (HI):
Technology is revolutionizing the way that healthcare is delivered both in the United States and around the world. The Health Informatics discipline focuses on improving patient care and outcomes through the use of information systems. Health Informaticists accomplish this in three main ways: supporting the healthcare provider, improving the efficiency and effectiveness of the healthcare organization, and empowering the patient to be more involved in their own care. health Informatics graduates pursue professional careers with hospitals, large clinics, healthcare software vendors, and various state and federal agencies. The combination of healthcare, technical, and interpersonal skills allow HI graduates to enter these organization and be productive immediately without the additional training that other traditional technologists may require. health Informatics is a rapidly growing field that provides graduates who save lives and impact society through the use of technology.

EDUCATIONAL OBJECTIVES FOR HEALTH INFORMATICS GRADUATES
Graduates of the Bachelor of Science program in Health Informatics will have the ability to:
1. Use information technologies in the healthcare/clinical setting to improve the performance of healthcare providers
2. Use information technologies in the healthcare/clinical setting to improve health care outcomes and reduce healthcare costs
3. Use information technologies in the healthcare/clinical setting to improve patient safety (reduce medical errors)
4. Establish a professional career in the healthcare/clinical IT workforce

LEARNING OUTCOMES FOR HEALTH INFORMATICS MAJORS
By the time of graduation, graduates of the Bachelor of Science program in Health Informatics will have the ability to perform:
1. Analysis: evaluate process workflows, perform process workflow redesign through user requirements analysis, and participate in implementation of redesigned process workflows
2. Evaluation: assist in vendor and software selection, evaluate technology/software/system alternatives, and assist in network planning and needs assessment
3. Management: manage implementation project plans, act as liaison among healthcare providers, IT staff, and systems vendors, and communicate existing and emerging trends to healthcare providers and IT staff
4. Data management: manage healthcare data and record structures, work with IT staff to ensure documentation/security/privacy requirements for medica records, and analyze and present data for healthcare decision making such as evidence-based practice
5. Assessment: apply a working knowledge of biostatistics and epidemiology to assess healthcare outcomes and risks

REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN HEALTH INFORMATICS (HI)

COMMUNICATIONS
Nine (9) credit hours are required as follows:

EH 101	*English Composition I
EH 102	English Composition II
CA 275	Small Group Communications

THE FINE AND PERFORMING ARTS AND THE HUMANITIES
Twelve (12) credit hours are required consisting of:
A. CA 110 Public Speaking
B. One course (3 semester hours) from ARS 101, DRA 110, MUL 101, ARH 100, ARH 103, ARH 123, ARH 240 or ARH 242
C. One course from EH 215, EH 216, EH 225, EH 226, EH 235 or EH 236
D. One additional course (3 semester hours) from Art.

Drama, Foreign Languages, Music, Philosophy and Literature.
Two courses must be either a Literature sequence from (EH 215-216, EH 225-226,
EH 235-236) OR a History sequence from (HY 101-102, HY 135-136)

THE SOCIAL SCIENCES
Twelve (12) credit hours are required from the consisting of:
A. PSY 120 General Psychology
B. One course from HY 101, HY 102, HY 135, or HY 136
C. Two additional courses (6 semester hours) from the following approved areas: Anthropology, Criminal Justice, Economics, Geography, History, Political Science, Psychology, and Sociology

Two courses must be either a Literature sequence from (EH 215-216, EH 225-226, EH 235-236) OR a History sequence from (HY 101-102, HY 135-136)

THE NATURAL SCIENCES
Eight (8) credit hours are required. (Must include associated lab) Approved areas: PH, CH, GY, BLY, GEO

MATHEMATICS AND STATISTICS
Nine (9) credit hours are required as follows:
A. MA 112 or higher

B. BUS 245 Applied Business Statistics I or ST 210 - Statistical Reasoning
C. BUS 255 Applied Business Statistics II or ST 310 - Statistical Research Techniques

INFORMATION SYSTEMS ENVIRONMENT

Thirty-Three (33) credit hours are required as follows:

A CIS 150 Intro to Computer Applications
B. ACC 211 Accounting Principles I
C. MGT 300 Management Theory and Practice
D. ISC 245 Information Systems in Organizations
E. ISC 272 Systems Architecture
F. CIS 324 Database Design, Development and Management
G. ISC 360 Information Systems Analysis and Design (W)
H. ISC 462 Information Systems Strategy and Policy
I. CIS 321 Data Communications and Networking
J. ISC 475 Information Systems Project Management
K. CIS 496 Internship

CORE COURSES

Twelve (12) credit hours are required as follows:

A. HI 300 Health Informatics Clinical Environment
B. HI 410 Health Informatics
C. HI 450 Health Date Security Compliance
D. HI 455 Health Decision Support Systems

HEALTH CARE ENVIRONMENT

Twenty-four (24) credit hours are required as follows:

A. BMD 210 Infectious Disease in Health Care Environment
B. EMT 210 Medical Terminology
C. NU 325 Health Assessment
D. NU 327 Pathophysiological Basis of Nursing
E. AHP 401 Seminar in AHP
F. BMD 214 Human Anatomy and Physiology I
G. BMD 215 Human Anatomy and Physiology II

GENERAL ELECTIVES

Hours as needed to meet degree and 122 semester-hour-requirements. All General Electives must be approved by the Health Informatics Coordinator.

INFORMATION SYSTEMS GENERAL STUDIES ELECTIVES

Hours as needed to meet degree and 122 semester-hour-requirements. All General Electives must be approved by the Health Informatics Coordinator.

SUGGESTED FRESHMAN COURSES

Information Systems Major

Fall	**Spring**
BMD 114	BMD 115
CIS 150	MA 112
EH 101*	Humanities Elective
Social Science Elective	EH 102
CA 110	History

*Students with a sufficient ACT/SAT score in English Composition will not be required to take EH 101.

Transfer Students:

1. Alabama community college students who wish to transfer into the Information Systems program should consult http://www.southalabama.edu/admissions/transfer/al/is.html for additional guidance for use of the Information Systems STARS template.
2. All students who wish to transfer into the Information Systems program http://www.southalabama.edu/admissions/transfer/index.html for transfer assistance

REQUIREMENTS FOR A CERTIFICATION IN HEALTH INFORMATICS

A certificate in health informatics from the School of Computing requires completion of the five courses listed below. All courses must be completed with a minimum grade of "C".

HI 300 Health Informatics Clinical Environment
HI 410 Health Informatics
HI 450 Health Date Security and Compliance
HI 455 Health Decision Support Systems
HI 475 Information Systems Project Management

DESCRIPTIONS OF ALL HEALTH INFORMATICS COURSES HEALTH INFORMATICS (HI) BEGIN ON PAGE 232.

INFORMATION SYSTEMS

Coordinator: Harold Pardue
Professors: Feinstein, Landry, Pardue
Assistant Professors: Campbell, Chapman
Instructor: Smith

Information Systems web site
http://is.soc.southalabama.edu

School of Computing web site
http://www.soc.southalabama.edu

Information Systems Graduate Studies

INFORMATION SYSTEMS (ISC):

Computer-based information systems have become a critical part of products, services, and management of organizations. The Information Systems discipline centers on the development of systems that will improve the performance of people in organizations. Information systems are vital to problem identification, analysis, and decision making at all levels of management. Information Systems professionals must analyze the evolving role of information and organizational processes. Their work includes the design, implementation and maintenance of the information systems that form the backbone of today's global economy. Information Systems professionals distinguish themselves by integrating technology into business. Information Systems graduates pursue professional careers as application developers, database analysts, business analysts and into managerial positions. The combination of business, technical, and interpersonal skills are what recruiters demand of Information Systems professionals.

EDUCATIONAL OBJECTIVES FOR INFORMATION SYSTEMS GRADUATES

The Bachelor of Science program in Information Systems produces graduates who are able to:

1. Succeed as skilled, competent information systems professionals.
2. Apply knowledge and skill in one or more information systems specialty areas, such as data management, application development, systems analysis and design, networking, life cycle methodologies, and project management.
3. Demonstrate effective interpersonal, teamwork, and leadership skills.
4. Leverage information technology for improving performance, adding business value, and helping individuals, groups, and organizations achieve their goals in a competitive, global environment.
5. Thrive in a dynamic business and technological environment by improving one's competencies, assisting in the continuous learning of others, and developing pragmatic solutions with innovativeness, agility and speed.
6. Exemplify a responsible, ethical professional, safeguarding information assets, and serving the well-being of one's organization, profession, community, and society.

LEARNING OUTCOMES FOR INFORMATION SYSTEMS MAJORS

The learning outcomes for the Bachelor of Science in Information Systems program, have been adapted from those specified by the Computing Accreditation Criteria, for Accrediting Computing Programs. (See http://www.abet.org). The program enables students to achieve, by the time of graduation:

(a) An ability to apply knowledge of computing and mathematics appropriate to the discipline.
(b) An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.
(c) An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.
(d) An ability to function effectively on teams to accomplish a common goal.
(e) An understanding of professional, ethical, legal security, and social issues and responsibilities.
(f) An ability to communicate effectively with a range of audiences.
(g) An ability to analyze the local and global impact of computing on individuals, organizations, and society..
(h) Recognition of the need for and an ability to engage in continuing professional development.
(i) An ability to use current techniques, skills, and tools necessary for computing practice.
(j) An understanding of processes that support the delivery and management of information systems within a specific application environment.

ACCREDITATION

The Bachelor of Science in Information Systems programs is accredited by the Computing Accreditation Commission of ABET, http://www.

abet.org. For a quick understanding of what accreditation is and why an accredited program should be chosen, go to http://www.abet.org/why-accreditation-matters. For an or in-depth understanding of the accreditation process, go to http://www.abet.org/step-by-step.

REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN INFORMATION SYSTEMS (ISC)

All General Education Courses are marked with the symbol GEd.

Area I - Written Composition and Communications - Twelve (12) credit hours, with a minimum grade of "C" in each course, are required as follows:

GEd	EH 101*	English Composition I	3
GEd	EH 102	English Composition II Or EH 105 Honors Composition	3
	CA 275	Small Group Communications	3
	EH 372	Technical Writing (W)	3
	EH 373	Writing in the Professions (W)	3

Area II - Humanities and Fine Arts - Twelve (12) credit hours are required consisting of:

GEd CA 110 Public Speaking (minimum grade of "C" is required)

GEd one course (3 semester hours) from ARS 101, DRA 110, MUL 101, ARH 100, ARH 103, or ARH 123.

GEd one course from EH 215, EH 216, EH 225, EH 226, EH 235, EH 236.

GEd one additional course (3 semester hours) from Art, Drama, Foreign Languages, Music, Philosophy and Literature,

Two courses must be either a Literature sequence from (EH 215-216, EH 225-226, EH 235-236) OR a History sequence from (HY 101-102, HY 135-136).

Area III -Natural Sciences and Mathematics

A. GEd Natural Sciences Eight (8) credits hours of natural sciences, which must include laboratory experiences, are required.

GEd Approved areas are Physics, Chemistry, Geology, Biology, and Geography 101 and 101L, Geography 102 and 102L. 8

B. GEd Mathematics and Statistics - Nine (9) credit hours, with a minimum grade of "C" in each course, are required as follows:

GEd one course from MA 120, MA 125, or MA 267 3

one course from BUS 245, ST 210 3

one course from BUS 255, ST 310, ST 340 3

Area IV - History, Social and Behavioral Sciences - Twelve (12) credit hours are required consisting of:

GEd one course from HY 101, HY 102, HY 135, or HY 136 3

GEd ECO 215 Principles of Microeconomics 3

GEd two additional courses (6 semester hours) from the following approved areas: Anthropology, Economics, Geography, History, Political Science, Psychology, and Sociology. 6

Two courses must be either a Literature sequence from (EH 215-216, EH 225-226, EH 235-236) OR a History sequence from (HY 101-102, HY 135-136).

INFORMATION SYSTEMS ENVIRONMENT - Fifteen (15) credit hours, with a minimum grade of "C" in each course, are required as follows:

A. Nine (9) credit hours from the following courses:

ACC 211	Accounting Principles	3
ECO 215	Principles of Microeconomics	3
MGT 300	Management Theory & Practice	3

B. Six (6) credit hours of 200 level or higher courses from Accounting, Economics, Finance, Management, or Marketing.

Recommendation: Information Systems majors are encouraged to examine the General Business minor requirements for courses that could be used to satisfy both the Information Systems Environment and the General Business minor requirements.

INFORMATION SYSTEMS CORE COURSES - Thirty-eight (38) credit hours, with a minimum grade of "C" in each course, are required as follows:

ISC 175	Professional Productivity Applications	3
CIS 115	Beginning Programming	4
ISC 245	Info Systems in Organizations	3
ISC 272	Systems Architecture	3
ISC 285	Intermediate Programming	3
CIS 300	Information Technology in Society	1
CIS 321	Data Communications and Networking	3
CIS 324	Database Design, Development, and Management	3
ISC 360	Info Systems Analysis and Design (W)	3
ISC 361	Database for Info Systems	3
ISC 462	Information Systems Strategy and Policy	3
ISC 475	Information Systems Project Management	3
CIS 497	Senior Project (W)	3
CIS 498	Senior Seminar	0

INFORMATION SYSTEMS ELECTIVES - Twelve (12) credit hours of approved electives, with a minimum grade of "C" in each course, are required.

INFORMATION SYSTEMS GENERAL STUDIES ELECTIVES - Hours as needed to meet degree and 120-semester-hour requirements. All General Studies Electives must be approved by the Information Systems Coordinator.

SUGGESTED FRESHMAN COURSES

Information Systems Major

Fall	**Spring**
CIS 175	HY one of (101, 102, 135,136)
EH 101*	ISC 245
EH 101*	MA 120
	Fine Arts/Humanities
	CA 110
	EH 102
	ACC 211

*Students with a sufficient ACT/SAT score in English Composition will not be required to take EH 101.

Transfer students:

1. Alabama community college students who wish to transfer into the Information Systems program should consult http://www.southalabama.edu/admissions/transfer/al/is.html for additional guidance for use of the Information Systems STARS template.
2. All students who wish to transfer into the Information Systems program should consult http://www.southalabama.edu/admissions/transfer/index.html for transfer assistance.

REQUIREMENTS FOR A CERTIFICATION IN HEALTH INFORMATICS

A certificate in health informatics from the School of Computing requires completion of the five courses listed below. All courses must be completed with a minimum grade of "C".

ISC 300	Health Informatics Clinical Environment
ISC 410	Health Informatics
ISC 450	Health Sys Analysis and Design
ISC 455	Health Decision Support Systems
ISC 475	Information Systems Project Management

REQUIREMENTS FOR A MINOR IN INFORMATION SYSTEMS

A student wishing to obtain a minor in Information Systems has two options: complete the eight recommended courses listed below or contact the Information Systems Coordinator at soc_isc@southalabama.edu to prepare a plan compatible with the student's major. All courses must be completed with a minimum grade of "C".

CIS 115	Beginning Programming
ISC 245	Info Systems in Organizations
ISC 272	System Architecture
ISC 285	Intermediate Programming
CIS 321	Data Communications and Networking
CIS 324	Database Design, Development and Management
ISC 360	Info Systems Analysis and Design
ISC 361	Database for Info Systems

***At least 9 hours of courses in the minor, including all 300 level courses, must be completed at the University of South Alabama.**

REQUIREMENTS FOR MASTERS DEGREE WITH AN INFORMATION SYSTEMS (ISC) SPECIALIZATION:

Students must satisfactorily complete all prescribed prerequisite courses, a comprehensive examination, and thirty-six (36) graduate credit hours for the Information Systems specialization in the SoC Master of Science degree. Required prerequisite courses are prescribed by the Information Systems Coordinator after reviewing prior academic work and results from any required School of Computing Foundation Placement Examinations. Information Systems Specialization majors must complete their Information Systems

program with a minimum grade of "B" in core courses, a minimum grade of "C" in CIS 518, and an overall program GPA of 3.0. The thirty-six (36) graduate hours consist of twelve (12) hours of CORE courses, nine (9) hours of REQUIRED courses, and fifteen (15) semester hours of approved elective courses according to the selected concentration option as follows:

1. **CORE COURSES (12 semester hours)**: All core courses must be completed with a minimum grade of "B".
   - ISC 561 Info Systems Database Mgt
   - ISC 565 Info Systems Project and Change Mgt.
   - And select two (2) from the following:
   - ISC 545 Management Information Systems
   - ISC 560 Info Systems Analysis-Design
   - IA CIS 530 Information Assurance and IT Auditing
   - IA CIS 538 Operating Systems Concepts and Security
2. **REQUIRED COURSES (9 semester hours)**:
   - CIS 518 CIS Research Methodologies
   - ISC 559 Applications Design and Implementation
   - And select one (1) from the following:
   - ISC 567 IS Function Integration
   - IA CIS 595 CIS Research Development
3. **CONCENTRATIONS (15 semester hours)**: Two concentrations of study are available to students who select the Information Systems Specialization in the SoC Masters program. These are THESIS and COURSE-ONLY concentrations.

A. THESIS CONCENTRATION

For the Thesis Concentration, fifteen (15) semester hours of required and elective course work are required.

a. Research Development

A minimum of three (3) semester hours credit of CIS 595, Computer and Information Sciences Research Development, are required. A Thesis Concentration student may only enroll in CIS 595 after successfully completing CIS 518 and their core courses. A Thesis Concentration student must be enrolled in CIS 595 in the semester during which they defend their thesis prospectus. A grade of "C" or lower in CIS 595 will result in the dismissal of the student from the Thesis Concentration to the Course-Only Concentration.

b. Thesis

A minimum of three (3) semester hours credit of CIS 599, Computer and Information Sciences Thesis, must be applied towards the degree for the Thesis Concentration. Students may only enroll in CIS 599 after successfully defending their thesis prospectus (minimum grade of "B" in CIS 595). A Thesis Concentration student must be enrolled in CIS 599 in the semester during which they defend and/or submit their thesis.

c. Elective Course Work

Nine (9) semester hours of additional approved electives are required. A maximum of three (3) semester hours of Special Permission courses may be applied to the degree for the Thesis Concentration. A list of Pre-Approved Information Systems courses and a list of Special Permission courses are given at the end of this section.

d. Comprehensive Examination

All students in the Thesis Concentration must pass an oral comprehensive examination administered after the thesis committee accepts the thesis. The School of Computing Comprehensive Examination Policies and Procedures document and the Comprehensive Examination Application form are available at http://www.soc.southalabama.edu.

B. PROJECT CONCENTRATION

For the Course Only Concentration, fifteen (15) semester hours of elective course work are required.

a. Elective Course Work

Fifteen (15) semester hours of approved electives are required. A maximum of six (6) semester hours of Special Permission courses may be applied to the degree for the Course Only Concentration. A list of Pre-Approved Information Systems courses and a list of Special Permission courses are given at the end of this section. ISC 568 may be taken at most two (2) times for the Course Only Concentration.

b. Comprehensive Examination

Students in the Course Only Concentration must pass a written comprehensive examination. Students should take the examination as soon as possible after successfully completing CIS 518 and their Information Systems core courses. Students wishing to sit for the examination must apply online to the Director of SOC Graduate Studies by the Friday of the last week of classes in the semester prior to which the examination is to be taken. The comprehensive examination is offered at least once a year. The School of Computing Comprehensive Examination Policies and Procedures document and the Comprehensive Examination Application form are available at http://www.soc.southalabama.edu.

4. **INFORMATION SYSTEM ELECTIVES**

A list of Pre-Approved Information Systems elective courses and a list of Special Permission courses are given below. All other courses must be approved by the Information Systems Coordinator.

A maximum of six (6) credit hours of non-ISC or non-CIS courses will be allowed.

A. PRE-APPROVED INFORMATION SYSTEMS ELECTIVES

- ISC 510 Health Informatics
- ISC 550 Health Systems Analysis and Design
- ISC 551 Human/Computer Interface Design
- ISC 553 Information Systems Web Site Management
- ISC 555 Health Data Management and Decision Support
- ISC 557 Modeling and Decision Support Systems
- ISC 563 Information Systems Database Administration
- ISC 568 IS Enterprise Integration (may be taken at most two (2) times - may ONLY be taken with the COURSE ONLY CONCENTRATION)
- ISC 572 Advanced Data Management
- CSC 511 Communications and Network Analysis
- CSC 514 Modeling and Simulation
- CSC 527 Software Engineering Principles
- CSC 533 Artificial Intelligence and Heuristic Programming
- CIS 590 Special Topics
- IA CIS 535 Digital Forensic Analysis
- IA CIS 540 Network Security Management
- ISC 590 Special Topics in Information Systems

B. SPECIAL PERMISSION COURSES

Approval of the Information Systems Coordinator and the Director of the SOC Graduate Studies is required for CIS graduate faculty sponsorship of a Special Permission Course. A maximum of nine (9) credit hours of Special Permission courses may be applied to the degree for the Thesis Concentration; a maximum of six (6) credit hours of Special Permission courses may be applied to the degree for the Course Only Concentration.

- CIS 594 Directed Study
- CIS 595 Computer and Information Sciences Research Development
- CIS 599 Computer and Information Sciences Thesis

DESCRIPTIONS OF ALL INFORMATION SYSTEMS COURSES (ISC) BEGIN ON PAGE 241.

INFORMATION TECHNOLOGY

Coordinator: Angela Clark
Associate Professor: Sweeney, Glisson
Assistant Professor: Black
Senior Instructor: Clark

Information Technology web site
http://it.soc.southalabama.edu

School of Computing web site
http://www.soc.southalabama.edu

INFORMATION TECHNOLOGY (ITE):

Information technology professionals utilize state-of-the-art, computer-based tools to deliver today's rapidly evolving computing technology to knowledge workers in widely diverse situations. The information technologist must be prepared to work in the complex network and World-Wide-Web environments to meet the needs of the end users in today's organizations. These tasks require bringing solutions together using the different technologies developed by the computer engineers, computer scientists, and information scientists.

EDUCATIONAL OBJECTIVES FOR INFORMATION TECHNOLOGY MAJORS

The Bachelor of Science in Information Technology produces graduates who:

1. are skilled, competent, and contribute to the work force in their specialty.
2. contribute to an Information Technology work environment.
3. are academically prepared to continue their graduate education.
4. have identified and implemented a plan of improved competency and continuous learning related to their career.
5. can assume leadership roles or positions, including team and project leader, within their organization.
6. display continued high ethical standards within the community and profession.
7. can combine their knowledge and practical, hands-on expertise to support both an organization's technology infrastructure and the people who use it as well as specialized technology.

LEARNING OUTCOMES FOR INFORMATION TECHNOLOGY MAJORS

The learning outcomes for the Bachelor of Science in Information Technology program have been adapted from those specified by the Computing Accreditation Criteria for Accrediting Computing Programs. (See http://www.abet.org). The program enables students to achieve, by the time of graduation:

(a) An ability to apply knowledge of computing and mathematics appropriate to the discipline.
(b) An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.
(c) An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.
(d) An ability to function effectively on teams to accomplish a common goal.
(e) An understanding of professional, ethical, legal, security, and social issues and responsibilities.
(f) An ability to communicate effectively with a range of audiences.
(g) An ability to analyze the local and global impact of computing on individuals, organizations, and society.
(h) Recognition of the need for and an ability to engage in continuing professional development.
(i) An ability to use current techniques, skills, and tools necessary for computing practice.
(j) An ability to use and apply current technical concepts and practices in the core information technologies.
(k) An ability to identify and analyze user needs and take them into account in the selection, creation, evaluation and administration of computer-based systems.
(l) An ability to effectively integrate IT-based solutions into the user environment.
(m) An understanding of best practices and standards and their application.
(n) An ability to assist in the creation of an effective project plan.

ACCREDITATION

The Bachelor of Science in Information Technology program is accredited by the Computing Accreditation Commission of ABET, http://www.abet.org. For a quick understanding of what accreditation is and why an accredited program should be chosen, go to http://www.abet.org/why-accreditation-matters/.

For an in-depth understanding of the accreditation process, go to http://www.abet.org/accreditation-step-by-step/.

REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY (ITE)

All General Education Courses are marked with the symbol GEd.

Area I - Written Composition and Communication - Twelve (12) credit hours, with a minimum grade of "C" in each course, are required as follows:

GEd	EH 101*	English Composition I	3
GEd	EH 102	English Composition II **OR** EH 105 Honors Composition	3
	CA 275	Small Group Communications	3
	EH 372	Technical Writing (W) **OR** EH 373 Writing in the Professions (W)	3

Area II - Humanities and Fine Arts - Twelve (12) credit hours are required consisting of:

GEd	CA 110	Public Speaking (minimum grade of "C" is required)	3
GEd	one course (3 semester hours) from ARS 101, DRA 110, MUL 101, ARH 100, or ARH 103, or ARH 240, or ARH 242.		3
GEd	one course from EH 215, EH 216, EH 225, EH 226, EH 235, EH 236.		3
GEd	one additional course (3 semester hours) from Art, Drama, Foreign Languages, Music, Philosophy and Literature,		3

Two courses must be either a Literature sequence from (EH 215-216, EH 225-226, EH 235-236) OR a History sequence from (HY 101-102, HY 135-136).

Area III -Natural Sciences and Mathematics

A. GEd Natural Sciences - Eight (8) credit hours of natural sciences, which must include laboratory experiences, are required. Approved areas are Physics, Chemistry, Geology, Biology, and Geography 101 and 101L, Geography 102 and 102 L

B. GEd Mathematics and Statistics - Nine (9) credit hours, with a minimum grade of "C" in each course, are required as follows:

one course from MA 120, MA 125, or MA 267	3
one course from BUS 245, ST 210	3
one course from BUS 255, ST 310, ST 340	3

Area IV - History, Social and Behavioral Sciences - Twelve (12) credit hours are required consisting of:

GEd	one course from HY 101, HY 102, HY 135, or HY 136	3
GEd	three additional courses (9 semester hours) from the following approved areas: Anthropology, Economics, Geography, History, Political Sciences, Psychology, and Sociology.	9

Two courses must be either a Literature sequence from (EH 215-216, EH 225-226, EH 235-236) OR a History sequence from (HY 101-102, HY 135-136).

INFORMATION TECHNOLOGY CORE COURSES - Thirty-eight (38) credit hours, with a minimum grade of "C" in each course, are required as follows

CIS 115	Beginning Programming	4
ITE 271	Intro to Information Technology	3
ITE 272	System Architecture	3
ITE 285	Intermediate Programming	3
CIS 300	Information Technology in Society	1
CIS 321	Data Communications and Networking	3
CIS 324	Database Design, Development, and Management	3
ITE 370	Advanced Application Development	3
ITE 474	Human Computer Interface	3
ITE 475	IT Project Management	3
ITE 480	Needs Assessment and Technology Evaluation (W)	3
ITE 485	Senior Demonstration Project	3
CIS 497	Senior Project (W)	3
CIS 498	Senior Seminar	0

INFORMATION TECHNOLOGY ELECTIVES - Twenty-one (21) credit hours, with a minimum grade of "C" in each course, are required. Students complete one of the following Focus Tracks consisting of twelve (12) hours of specified courses and nine (9) hours of approved Information Technology support electives:

A. Web Publishing:
- ITE 375 Publishing for the World Wide Web
- ITE 380 Multimedia Production
- ITE 453 Web Site Management

B. Networking:
- ITE 382 Network Administration
- ITE 384 Network Infrastructure Systems
- ITE 476 Network Security Management
- ITE 484 Advanced Network Management
- ITE 482 Advanced Web Development

C. Digital Forensics
- ITE 372 Advanced Operating Systems
- ITE 373 File Systems for Digital Forensics
- ITE 473 Digital Forensics Analysis
- CJ 205 Introduction to Criminal Justice

Information Technology Support Electives Nine (9) credit hours, with a minimum grade of "C" in each course, are required. Support electives are designed to further refine and develop a set of focused skills. Support electives require approval of advisor/coordinator.

INFORMATION TECHNOLOGY GENERAL STUDIES ELECTIVES - Hours as needed to meet degree and 120 semester-hour-requirements. All General Studies Electives must be approved by the Information Technology Coordinator

SUGGESTED FRESHMAN COURSES

Information Technology Major

Fall	Spring
CIS 115	CA 110
EH 101*	CIS 324
ITE 271	EH 102
MA 120	ITE 285
Social Science	Natural Science

* Students with a sufficient ACT/SAT score in English Composition will not be required to take EH 101.

Transfer students:

1. Alabama community college students who wish to transfer into the Information Technology program should consult http://www.southalabama.edu/admissions/transfer/al/it.html for additional guidance for use of the Information Technology STARS template.
2. All students who wish to transfer into the Information Technology program should consult http://www.southalabama.edu/admissions/transfer/index.html for transfer assistance.

REQUIREMENTS FOR A MINOR IN INFORMATION TECHNOLOGY

A student wishing to obtain a minor in Information Technology must complete each of the following courses with a minimum grade of "C".

IS	115	Beginning Programming	4
ITE	271	Intro to Information Technology	3
ITE	272	System Architecture	3
ITE	285	Intermediate Programming	3
CIS	321	Data Communications and Networking	3
			3
CIS	324	Database Design, Development, and Management	3
ITE	370	Advanced Application Development	3
			3
ITE	382	Network Administration	3

***At least 9 hours of courses in the minor, including all 300 level courses, must be completed at the University of South Alabama**.

DESCRIPTIONS OF ALL INFORMATION TECHNOLOGY COURSES (ITE) BEGIN ON PAGE 244.

SCHOOL OF CONTINUING EDUCATION AND SPECIAL PROGRAMS

Dean: Vaughn S. Millner (251) 460-6283
E-mail: vmillner@southalabama.edu
FAX: (251) 460-7824

School of Continuing Education and Special Programs web site
http://www.southalabama.edu/scesp

Center for Continuing Education and Conference Services
Department of Interdisciplinary Studies
Developmental Studies
English Language Center
Office of International Education
Cooperative Education Program
USA Writing Center
Weekend College

The School of Continuing Education and Special Programs (SCESP) is the primary public service outreach arm for the University. The Mission of the SCESP is to provide and support lifelong educational learning experiences and to serve as an advocate for students along the Greater Gulf Coast as they interact with the global community. This includes providing educational services to individual students as well as to institutional clients. Various formats exist by which the school delivers educational programs to meet its stated mission. Both non-credit and credit programs assist individuals and institutions in meeting their educational objectives.

CONTINUING EDUCATION AND PROFESSIONAL DEVELOPMENT

The Center for Continuing Education and Conference Services provides noncredit courses, conferences and workshops, cultural offerings, lecture series, and special education service projects. Programs are designed to serve the needs of business and industry and enrich the lives of individuals who seek to challenge and stimulate their minds, use leisure time productively, and enhance their citizenship skills.

Non-credit course offerings have included courses in a number of areas: conversational languages, supervision and management, computer literacy and application, art, music, literature, secretarial skills, communication, photography and leisure activities.

Continuing Education Units (CEUs) are awarded to individuals attending non-credit courses and other non-credit activities. One CEU is awarded for each ten hours of class contact. Students may receive a certificate indicating that they have completed the course satisfactorily and may request a transcript which includes the non-credit courses, conferences, institutes and workshops they have satisfactorily completed plus the number of CEUs earned for each non-credit activity.

DEGREE PROGRAMS AND DEGREE COMPLETION PROGRAM

An undergraduate degree can be earned through the Department of Interdisciplinary Studies Adult Degree Program, Interdisciplinary Degree Program, and Hospitality and Tourism Management Program. These programs are designed to give students a variety of options in earning a Bachelor's degree tailored to meet their needs and interests. In addition to offering traditional lecture courses both day and evening, the Department of Interdisciplinary Studies offers an online opportunity for students to complete their online Bachelor's degree in the Interdisciplinary Studies major. These courses are the same as those offered during the day in content, quality, and quantity of work required.

WEEKEND COLLEGE

The University of South Alabama offers courses from its regular curriculum on the weekend. These courses are taught by University faculty and are adapted to the weekend format to provide flexible scheduling options for students. The Weekend College program is coordinated through the Dean's office. The scheduling of classes is done by the appropriate departments and colleges.

INTERNATIONAL EDUCATION AND GLOBAL PERSPECTIVES

In keeping with the stated University of South Alabama mission statement, the School of Continuing Education and Special Programs is committed to broadening students' understanding of different cultures and preparing them for the global community in which we live. One of the most successful ways of achieving this global perspective is to study/research/intern abroad. An international academic experience is an enriching experience in which students can immerse themselves in a different culture, apply what they learned in their USA classes, enhance or begin new language/cross-cultural skills and learn lifelong interpersonal skills required in today's global economic environments. While abroad, students will also develop an understanding as well as an appreciation of the complexity of cultural, political, environmental, and social issues worldwide which builds on the theoretical and practical skills needed to interact effectively in today's global society. Students interested in such opportunities should contact the

USA Office of International Education www.southalabama.edu/international/international/index.html to explore additional options that may be available for all majors and minors.

UNIVERSITY WRITING CENTER

Manager: Frank Ard (251) 461-1693
FranklinArd@southalabama.edu

The University Writing Center, located in Alpha Hall East and the University Library, provides assistance in writing to any member of the University community. The University Writing Center is an instructional facility that focuses on teaching the writer, rather than simply fixing the writing. Students and others may receive help with any type of writing task at any stage of the writing process: from idea generation, development, and revision, to grammatical concerns and editing strategies. Writing Center Consultants are available for in-class presentations on Writing Center services and general writing topics. The consulting schedule varies from semester to semester. More information can be found at the University Writing Center home page: http://www.southalabama.edu/writing, or by calling (251) 460-6480. Online writing assistance is available through Smarthinking.com for students

in online courses or those who are unable to schedule an appointment with the Writing Center during normal hours of operation.

DEPARTMENT OF INTERDISCIPLINARY STUDIES

Interim Chair: Joycelyn Finley-Hervey
(251) 460-6263
Professor: Finley-Hervey
Associate Professor: Millner
Assistant Professors: Javier-Ferrell, Manders
Academic Advisors: Davis, Harvey
Manager, Assessment: Davis

Home Page: www.southalabama.edu/scesp/interdisc
E-mail: ist@southalabama.edu

The Department of Interdisciplinary Studies provides opportunities for students through three flexible, individually designed interdisciplinary degree programs: the Adult Degree Program (ADP) the Interdisciplinary Degree Program (IDP), and the Hospitality and Tourism Management Program.

ADULT DEGREE PROGRAM (ADP)

Adult students frequently have unique goals, along with other primary life responsibilities, that necessitate a more flexible approach to the design of learning experiences, the scheduling of classes, and the formulation of a program of study. To meet these needs, the Adult Degree Program offers a major in Interdisciplinary Studies leading to the Bachelor of Arts or Bachelor of Science degree.

Upon completion of the baccalaureate, ADP graduates will be able to

1. Understand and appreciate the interdisciplinary approach to learning;
2. Have the ability to think critically and express themselves effectively orally and in writing;
3. Understand and apply knowledge of adult development personally and professionally;
4. Appreciate individual and cultural differences and collaborate effectively with colleagues of diverse backgrounds;
5. Identify and articulate important questions and problems related to their interests, education, and career development, and execute research strategies for discovering viable solutions.

Students applying to the Adult Degree Program must satisfy general requirements for admission to the University of South Alabama (see "Admission to the University") and complete an interview with the ADP counselor. In addition, applicants must be at least twenty-five years of age or fulfill the following definition of an adult learner: someone who has assumed major responsibilities and/or commitments of adulthood (work, family, community), who is operating independently in society, and whose principal identity is other than that of a full-time student.

Each adult student's individualized, interdisciplinary program of study is planned in consultation with an academic advisor. Students choose one of the following concentrations of study: Administrative Sciences, Applied Arts, Applied Sciences, Community Services, Human Services, Liberal Studies, or Professional Development. All programs of study must consist of a minimum of 120 credit hours including 25 percent of the credit hours required for the degree earned in residence at USA. Course requirements necessitate that students be enrolled in the program for a minimum of three terms before graduation.

The degree program begins with a required three semester hour foundation course, AIS 101: "Theories and Principles of Adult Learning" for students with fewer than 64 hours of credit. All students are required to take AIS 301: Introduction to Interdisciplinary Studies-ADP and must satisfy the University's general education requirements (See "Academic Policies and Procedures"), as follows:

General Education Requirements (41 Hours)

Area I - Written Composition

2 courses EH 101, EH 102	6 hrs

Area II - Humanities, Fine Arts, Oral Communication

1 course* from EH 215, 216, 225, 226, 235, or 236	3 hrs
1 course from ARH 100, 103, 123; ARS 101; DRA 110; MUL 101	3 hrs
CA 110	3 hrs
1 course from EH 215, 216, 225, 226, 235,or 236; ARH 100, 103, 123; ARS 101; DRA 110; MUL 101; AFR 101; AIS 105; CLA 110; LG 111, 112, 131, 132, 151, 152, 171, 172, 211, 212, 231, 232, 251, 252, 271, 272; LGS 101, 102, 106, 107, 121, 122, 141, 142, 201, 202, 206, 207, 221, 222, 241, 242; PHL 110, 121, 131, 231, 240	3 hrs

Area III - Natural Sciences and Math

2 courses with labs from BLY 101/101L, 102/102L, 121/121L, 122/122L; CH 101/101L, 103/103L, 131/131L, 132/132L; GEO 101/101L, 102/102L; GY 111/111L, 112/112L; PH 101/101L, 104/104L, 114/114L, 115/115L, 201/201L, or 202/202L	8 hrs
1 course from MA 110, 112, 113, 115, 120, 125, 126, 227, 237, or 238	3 hrs

Area IV - History, Social and Behavioral Sciences

1 course* from HY 101, 102, 135, 136	3 hrs
3 courses from AIS 201; AN 100, 101; CA 100, 211; ECO 215, 216; GEO 114, 115; GS 101; IS 101; PSC 130; PSY 120, 250; SY 109, or 112; HY 101, 102, 135, 136	9 hrs

*As part of the General Education Requirements, students must complete a 6-hour sequence in Literature or History.

In addition to the general requirements, each student must complete 15 hours of general competencies, as follows:

General Competencies (15 Hours)

Computer Applications - 1 course from CIS 150, 250; or passing score on CIS Proficiency Exam	3 hrs
Advanced Writing - AIS 350	3 hrs
Research Methods/Statistics - AIS 300	3 hrs
Human Development - 1 course from AIS 201, 401; BLY 207; PSY 250, 350, 456; SY 220, 315, or 418	3 hrs
Cultural Diversity - 1 course from AIS 320; AN 100; GEO 115; HY 374; IS 100; PHL 339; or SY 445	3 hrs

Each student must also complete an individualized 54-hour concentration with at least 30 hours from upper-division courses. The concentration, designed in consultation with an academic advisor, must include at least three disciplines, each of which must be represented by a minimum of 12 credit hours of appropriate course work (6 of which must be upper-division), relevant supporting courses, and a two-semester senior capstone experience (senior research thesis: AIS 380 and 430; or internship: IST 496 and 498). The concentration forms part of the graduation plan, which all majors must submit to the Department of Interdisciplinary Studies for approval during AIS 301.

A maximum of 25 credit hours of elective courses, including a maximum of 6 hours coming from P.E. activity courses, may be included in the degree.

A minimum grade-point average of 2.00 in all course work undertaken at the University of South Alabama and a minimum grade-point average of 2.00 in the concentration are required for graduation.

Qualified ADP students may participate in the University Honors Program (see "Honors Program"). Students with a 3.5 USA GPA and a 3.5 GPA in their concentration are encouraged to apply for IST departmental honors at the beginning of their senior year. To receive department honors, an honors senior research thesis capstone experience must be completed. Contact the IST department for specific honors requirements.

INTERDISCIPLINARY DEGREE PROGRAM (IDP)

The Interdisciplinary Degree Program (IDP) is designed for students who have educational and career goals that cannot be met through traditional academic majors. In the Interdisciplinary Degree Program students can choose from seven concentrations: Administrative Sciences, Applied Arts, Applied Sciences, Community Services, Human Services, Liberal Studies, or Professional Development, leading to a Bachelor of Arts or Bachelor of Science degree with a major in Interdisciplinary Studies. All programs of study must consist of a minimum of 120 credit hours including 25 percent of the credit hours required for the degree in upper-division credit hours earned in residence at USA. Upon completion of the degree, IDP graduates will be able to

1. Understand and appreciate the interdisciplinary approach to learning;
2. Have the ability to think critically and express themselves effectively orally and in writing;
3. Understand and apply knowledge of human development personally and professionally;
4. Appreciate individual and cultural differences and collaborate effectively with others;
5. Demonstrate competence in various disciplines that are tailored to their educational and career goals.

Students applying to the Interdisciplinary Degree Program must satisfy general requirements for admission to the University of South Alabama (see "Admission to the University") and must complete an interview with the program coordinator. The student's individualized program of study is planned in consultation with the program coordinator or advisor and must be approved by the Department of Interdisciplinary Studies during IST 302.

Each student enrolled in the Interdisciplinary Degree Program must satisfy the University's general education requirements, (see "Academic Policies and Procedures"), as follows:

General Education Requirements (41 Hours)

Area I - Written Composition
2 courses EH 101, EH 102 — 6 hrs

Area II - Humanities, Fine Arts, Oral Communication
1 course* from EH 215, 216, 225, 226, 235, or 236 — 3 hrs
1 course from ARH 100, 103, 123; ARS 101; DRA 110; MUL 101 — 3 hrs
CA 110 — 3 hrs
1 course from EH 215, 216, 225, 226, 235, or 236; AIS 105, ARH 100, 103, 123; ARS 101; DRA 110; MUL 101; AFR 101; CLA 110; LG 111, 112, 131, 132, 151, 152, 171, 172, 211, 212, 231, 232, 251, 252, 271, 272; LGS 101, 102, 106, 107, 121, 122, 141, 142, 201, 202, 206, 207, 221, 222, 241, 242; PHL 110, 121, 131, 231, 240 — 3 hrs

Area III - Natural Sciences and Math
2 courses with labs from BLY 101/101L, 102/102L, 121/121L, 122/122L; CH 101/101L, 103/103L, 131/131L, 132/132L; GEO 101/101L, 102/102L; GY 111/111L, 112/112L; PH 101/101L, 104/104L, 114/114L, 115/115L, 201/201L, or 202/202L — 8 hrs
1 course from MA 110, 112, 113, 115, 120, 125, 126, 227, 237, or 238 — 3 hrs

Area IV - History, Social and Behavioral Sciences
1 course* from HY 101, 102, 135, 136 — 3 hrs
3 courses from AIS 201; AN 100, 101; CA 100, 211; ECO 215, 216; GEO 114, 115; GS 101; IS 100; PSC 130; PSY 120, 250; SY 109, or 112; HY 101, 102, 135, 136 — 9 hrs

*As part of the General Education Requirements, students must complete a 6-hour sequence in Literature or History.

In addition to the general requirements, each student must complete 15 hours of general competencies, as follows:

General Competencies (15 Hours)
Computer Applications - 1 course from CIS 150, 250; or passing score on CIS Proficiency Exam — 3 hrs
Advanced Writing - AIS 350; — 3 hrs
Research Methods/Statistics - AIS 300 — 3 hrs
Human Development - 1 course from AIS 201, 401; BLY 207; PSY 250, 350, 456; SY 220, 315, or 418 — 3 hrs
Cultural Diversity - 1 course from AIS 320; AN 100; GEO 115; HY 374; IS 100; PHL 339; or SY 445 — 3 hrs

Each student must also complete IST 302, a 3 credit hour foundation course taken during the junior year, as well as an individualized 54-hour concentration with at least 30 hours from upper-division courses. The concentration, designed in consultation with an academic advisor, must include at least three disciplines, each of which must be represented by a minimum of 12 credit hours of appropriate course work (6 of which must be upper-division), relevant supporting courses, and a two-semester senior capstone experience (internship: IST 496 and 498; or senior research thesis: AIS 380 and 430).

A maximum of 25 credit hours of elective courses, including a maximum of 6 hours coming from P.E. activity courses, may be included in the degree.

A minimum grade-point average of 2.00 in all coursework undertaken at the University of South Alabama and a minimum grade-point average of 2.00 in the concentration are required for graduation.

DESCRIPTIONS OF INTERDISCIPLINARY STUDIES TRADITIONAL (IST) COURSES BEGIN ON PAGE 244.

DESCRIPTIONS OF ADULT INTERDISCIPLINARY STUDIES (AIS) COURSES BEGIN ON PAGE 170.

HOSPITALITY AND TOURISM MANAGEMENT PROGRAM (HTM)

The Hospitality and Tourism Management degree is envisioned to improve the well-being of people along the Gulf coast by producing socially, environmentally responsible and professionally competent and productive entrepreneurs, managers and workers in the hospitality, tourism, and ecotourism industries through education and training, job placement, and partnerships. The mission of the degree is to advance the people of Alabama, the Gulf Coast, and the global community through the creation and dissemination of knowledge and experience anchored in sustainable tourism practices in the hospitality and tourism fields.

The primary goal of the curriculum is to prepare students for global hospitality and tourism industries from an interdisciplinary perspective. The program will pull curriculum from multiple colleges at the University and include faculty with business and education backgrounds, among others. A secondary goal is to design the curriculum to provide students with applied learning opportunities in the Gulf Coast region, a premier travel destination. A third goal is to infuse sustainable ecotourism principles and practices into the tourism and hospitality sectors.

HOSPITALITY AND TOURISM MANAGEMENT

Hospitality and Tourism Management (HTM) courses are offered under the aegis of the Department of Interdisciplinary Studies. The Hospitality and Tourism Management courses are open to all students for credit. There are no prerequisites for HTM 215, HTM 315, or HTM 350.

DESCRIPTIONS OF HOSPITALITY AND TOURISM MANAGEMENT (HTM) COURSES BEGIN ON PAGE 235.

B.S. in Hospitality and Tourism

Management Course of Study
Program Completion Requirements
- Credit hours required in major: 51
- Credit hours required in minor (if applicable): N/A
- Credit hours in institutional general education or core curriculum: 41
- Credit hours in required or free electives: 13-16 with a maximum of 6 PE credit hours and a maximum of 24 business credit hours
- Total credit hours required for completion: 120

Core Curriculum Requirements
Area I. Written Composition (6 hours)
Area II: Humanities, Fine Arts, Oral Communication (12 hours)
Area III: Natural Sciences and Mathematics (11 hours)
Area IV: History, Social and Behavioral Sciences (12 hours)

Foundation and Competency Requirements
General Competencies (12 to 15)
- CIS 150 Introduction to Computer Applications or CIS 010 Computer Proficiency Exam (must pass exam-no credit hours)
- AIS 350 Critical Expression (W)
- AIS 300 Foundations of AIS 300 Interdisciplinary Research
- Cultural Diversity (select from list)
- Human Development (select from list) AIS 125 Professional Conduct
- IST 310 Global Leadership for the 21st Century or IST 495 Professional Leadership Development
- HTM 350 Introduction to Hospitality Management
- HTM 215 Ecotourism
- LS 300 Global Tourism
- HTM 315 Hospitality and Tourism Marketing
- HTM 200 Introduction to Hospitality and Tourism Industry
- HTM 440 Lodging Management
- HTM 210 Food and Beverage Services Management
- HTM 200 Legal Issues in Hospitality and Tourism
- LS 292 Outdoor Recreation and Adventure
- HTM 410 Sustainable Ecotourism
- ACC 211 Principles of Accounting I
- ECO 215 Principles of Microeconomics
- MGT 305 Organizational Communication (W)

Choice of the following Capstone Experience Sequences
- HTM 496 Internship in HTM I and HTM 498 Internship in HTM II-Capstone Experience (W) or:
- HTM 380 Research in HTM I (W) and HTM 430 Research in HTM II (W)

Electives*
*A maximum of 6 PE activity credit hours and 24 business credit hours may be applied toward the degree. 13 to 16
TOTAL HOURS 120

Students will be required to complete a capstone sequence - internship or senior research thesis to complete the program.

- HTM 496 Internship in HTM I and HTM 498 Internship in HTM II - Capstone Experience (W) or
- HTM 380 Research in Hospitality and Tourism Management I and HTM 430 Research in Hospitality and Tourism Management II (W)

Study Abroad. Students will have opportunities to complete an international internship. We currently are in conversation with university officials at the University of West Hungary, Fuzhouz University Zhicheng College, China, and East University, Puerto Rico.

CENTER FOR CONTINUING EDUCATION AND CONFERENCE SERVICES

Interim Director: Patrica Miles (251) 405-9930
Continuing Education Specialists:
Laurent Cadden, Shelley Stephens
Accountant: Patricia Miles

Home Page: ATP://www.usacontinuinged.com

Serving as a community outreach arm of the University of South Alabama's School of Continuing Education and Special Programs, the Center for Continuing Education and Conference Services provides a wide range of noncredit educational opportunities designed to meet the needs of both specialized organizations and individuals. Conveniently located at the Springhill Avenue campus, this Center reaches numerous groups, including business and industry, health care providers, governmental agencies, and individuals seeking personal enrichment or career enhancement.

PROFESSIONAL DEVELOPMENT SEMINARS, WORKSHOPS, AND CONFERENCES

Programs emphasize education and training for the working professional in the form of seminars, workshops, conferences, and in-house programs. University faculty as well as local and national experts from many fields actively participate in the development and instruction of these programs. Additionally, conferences focusing on specific topics of interest, such as alcohol and drug abuse, are offered annually.

Seminars and workshops are offered on an open-enrollment and an in-house (contract) basis. Open-enrollment programs are designed to meet the training and development needs of a variety of organizations. Program participants are drawn from throughout the region and the nation. In-house (contract) training programs are designed to meet the education and training needs of a specific organization. Services include needs assessment, course development and delivery of training. USA instructional resources travel throughout the country to deliver these programs at sites selected by the contracting organization. Topics include supervision, communication, management, computer software applications, business and technical writing.

HAZARDOUS OPERATIONS, SAFETY AND ENVIRONMENTAL PROGRAM

The Emergency Response Training Program serves industry, government and other agencies with state-of-the-art instruction in the handling of hazardous materials and emergency spills, technical rescue and incident command. Much of the training is mandated by federal and state laws and the program follows the guidelines set forth by the Occupational Safety and Health Administration, the Environmental Protection Agency and the Department of Transportation, among others. In working directly with industry and other emergency response groups, training is offered on both an open-enrollment and contract basis that can be tailored to a client's site-specific needs. The program's staff is continuously expanding course offerings to keep clients safe and ahead of emerging regulations.

SPECIAL COURSES

Special Courses are noncredit, short courses designed with the concept of lifelong learning in mind. Personal enrichment, career development, and general educational enhancement for individuals throughout the community are offered during spring, summer, fall, and winter terms each year. Most courses are held during evening or weekend hours once or twice a week for a period of four to eight weeks.

Topics offered include music, dance, health and fitness, languages, photography, and other fields concerned with improving the quality of life. Several certificate programs are also offered for individuals seeking vocational development in areas such as paralegal, medical coding, and photography, Academic examination review classes are also offered.

PROGRAMS FOR MATURE LEARNERS

Road Scholar is a national residential program designed primarily for individuals of retirement age. Participants stay is one week during which they take a variety of classes similar to those offered through Special Courses. Educational content is diverse and utilizes both USA faculty and local experts. USA hosts approximately 30 Road Scholar programs annually.

Odyssey USA is a self-managed study program for mature learners in the local community. An Executive Board of elected members provides leadership for issues relating to curriculum development and the operation of the organization.

CONFERENCES, YOUTH PROGRAMS AND SPECIAL EVENTS

The Center provides conference management and facilitation services to client organizations for delivery at the venue of choice. Various levels of planning, marketing, registration management, onsite facilitation, financial processing, and post-conference certifications are available. A unique proposal is provided based on the client's needs.

Youth of different ages are offered quality educational opportunities through a variety of courses and programs. During the academic year, students may prepare for the ACT exam in review classes for Math, Science, Reading, and English. Over the summer months, courses and camps pertaining to both academic and extra-curricular areas of interest to young people are available.

The Center for Continuing Education and Conference Services is the administrative unit responsible for administering the University of South Alabama Camp, Conference and Special Event Policy. In this capacity, the Center serves multiple roles: to provide guidance to assure that University sanctioned events operate within the parameters of University policies and procedures; to facilitate the use of University facilities and services for events sponsored by non-University entities; to schedule University space and related services for events; and to serve as the liaison with the various campus entities which support camps, conferences and special events.

OTHER OPPORTUNITIES

The Center for Continuing Education and Conference Services facility has a computer laboratory for workshops and short courses sponsored by the University. It is also available, on a rental basis, to organizations conducting their own training.

DEPARTMENT OF DEVELOPMENTAL STUDIES

Math Coordinator, Interim Co-Chair:
Leslie Whiston
Reading Coordinator, Interim Co-Chair:
Jeremy Daughtry
Assistant Professor: Matthews
Instructors: Case, Darby, Daughtry, Whiston, Williams
Academic Advisor: LaDora Howard

Web Page: http://www.southalabama.edu/developmentalstudiesprogram

The Mission of the Department of Developmental Studies is to produce courses and instructional support services of excellence that address the needs of students in their preparation for collegiate study and students in transition to the University. The courses and services offered provide students with opportunities to strengthen the basic skills necessary for academic success; to explore career options and preparation; to access campus activities, programs, and services; and to become active participants in the University community.

Credits earned in courses with a DS prefix do not meet degree requirements within the University. The credits earned do carry institutional, non-degree credit and allow students to qualify for financial aid. Grades earned are computed into the overall GPA in most colleges and hours are counted toward classification (sophomore, etc.). Credits earned in courses with a CP, LAS, MTH, or RDG prefix count as free electives.

DESCRIPTIONS OF DEVELOPMENTAL STUDIES (DS) COURSES BEGIN ON PAGE 208.

DESCRIPTIONS OF LANGUAGE ARTS AND SKILLS (LAS) COURSE BEGIN ON PAGE 245.

DESCRIPTION OF MATHEMATICS FOR COLLEGE (MTH) COURSE BEGIN ON PAGE 270.

CAREER PLANNING AND DEVELOPMENT

Career Planning and Development is a university-wide program offered under the aegis of the School of Continuing Education and Special Programs. The career courses are open to all students for credit. There are no prerequisites for CP 250 and 450.

The Career Program is designed to achieve four objectives: (1) to help students begin their academic careers with the skills necessary for college success; (2) to provide occupational exposure to students who plan to enter medicine, dentistry, optometry, or veterinary medicine; (3) to assist students who are uncertain as to a career or a major; and (4) to help students, launch their careers by obtaining suitable employment upon graduation, or to help students plan and develop their graduate or professional education.

CP 101, Freshman Seminar, is a course for first-time students that assists with maximizing the student's potential to achieve academic success and to adjust responsibly to the individual and interpersonal challenges presented by college life. Taught in small groups, the course provides an introduction to the nature of higher education and a general orientation to the functions and resources of the University. Extensive reading and writing assignments relevant to the student's first year experience are required.

CP 200, Clinical Observation, is designed to help students achieve the second objective by providing them with actual experience in these health care fields so that they may determine whether or not they are suited for the careers they have chosen.

CP 250, Career Planning and Development, is designed to help students achieve the third objective. Through the use of psychological testing and systematic self evaluation, as well as the study of occupations and occupational trends, students are aided in selecting a suitable career.

CP 450, The Job Campaign, is designed to help students achieve the fourth objective. In this course, emphasis is placed on developing strategies for obtaining suitable positions and making career choices based on career choice theories.

DESCRIPTIONS OF CAREER PLANNING (CP) COURSES BEGIN ON PAGE 203.

DESCRIPTIONS OF COLLEGE READING (RDG) COURSES BEGIN ON PAGE 301.

INTERNATIONAL EDUCATION

Director: Holly Hudson (251) 460-7053
FAX: (251) 460-6228
E-mail: intledu@southalabama.edu
Immigration Coordinator: Donna Pigg
(251) 460-7104
English Language Center Director:
Sylvia Koestner (251) 460-7185

Home Page: www.southalabama.edu/international

The Office of International Education (OIE) is responsible for the coordination, facilitation and oversight of all USA international activity, e.g., education (study) abroad programs and related projects beyond U.S. territorial limits involving University faculty, students or staff. OIE provides leadership and advocacy on behalf of the students, faculty, university, and college objectives and goals for international education and exchanges. All existing or proposed international programs, exchanges, contracts and grants are reviewed and registered with the Office of International Education. The director chairs the University Council on International Education and Scholarship (USACIES), whose members are appointed by the President of the University and charged with disseminating information, developing as well as guiding policy and planning for USA in the international arena. In addition, the Director of International Education works in collaboration with University deans, division heads and directors responsible for curriculum and faculty development. The Office of International Education administers all USA Education Abroad Programs, international cooperation agreements/contracts and advises on university business international travel. The Office of International Education is available for collaboration with local governmental, business and community organizations that foster international cooperation, exchange and understanding.

All USA students who plan to participate in a study, research, internship or work abroad opportunity must contact the Office of International Education for information on program advising and approval procedures.

The Office of International Education is also responsible for the development and implementation of policies and procedures associated with U.S. immigration compliance functions for foreign nationals associated with current and potential faculty/staff employment, J exchange scholars (including postdoctoral trainees, degree and non-degree students, professors and research scholars), academic/co-curricular exchange program participants and international guests.

DEPARTMENT OF ENGLISH AS A SECOND LANGUAGE

(English Language Center)
Director: Sylvia Koestner
(251) 460-7185; FAX: (251) 460-7201
Instructors: Basque, Gecewicz, Koestner,
Taylor, Hidle

Home Page: http://www.southalabama.edu/esl

The English Language Center provides intensive English-language instruction to individuals whose native language is not English. Matriculation in these courses is limited to international students of the University, to students of the English Language Center and to any resident internationals who wish to take one or more courses as students through the Continuing Education division of the University.

The English Language Center (ELC) is administered by the Office of International Education. The ELC offers intensive English language instruction and cultural orientation to international students who are preparing to study at a U.S. University or who wish to improve their English.

A variety of courses are offered each semester. ESL courses MAY NOT be substituted for EH 101 or 102 requirements. All required ESL composition courses must be completed **BEFORE** the student may register for EH 101 or 102. Credits earned in the English Language Center will not be acceptable toward meeting degree requirements within the University. However, ESL courses may be counted as part of the 12-hour course load required of F-1 students and may be taken as electives by students wishing to improve their proficiency in English.

DESCRIPTIONS OF ALL ENGLISH AS A SECOND LANGUAGE (ESL) COURSES BEGIN ON PAGE 227.

COOPERATIVE EDUCATION AND INTERNSHIP PROGRAM

Director, Career Services: Bevley W. Green
(251) 460-6188

E-mail: careerservices@southalabama.edu

The Cooperative Education and Internship Program enables students to combine classroom studies and paid work experience related to their major field of study. **Undergraduate students** may apply at Career Services to enter the Cooperative Education Program when they have completed 12 credit hours, attained a cumulative grade-point average of 2.3 or above, and are classified as a full-time student upon commencement of participation in the program. Prior to the first work experience, **engineering students** must complete two or three semesters of study for a total of 24 credit hours toward the engineering degree and complete courses MA 125 and MA 126. The internship option requires completion of 12 credit hours, a 2.0 GPA or above and sufficient time remaining before graduation to complete the internship.

Graduate students may apply after they are accepted into a graduate program.

Option 1: Alternating Cooperative Education: Students rotate multiple semester of full-time work with semesters of full-time school until graduation..

Option 2: Internship: Students work for various lengths of time depending upon the unique needs of the organization providing the experience. The option of receiving academic credit for this experience is approved through the academic department.

Option 3. Engineering Cooperative Education - The Five Year Plan: This program allows engineering students to gain one year of valuable engineering experience as they pursue their degree. The freshman year is spent as a full-time student at the university. During the sophomore and junior years, the student alternates semesters of full-time work with semesters of full-time school. The student returns to campus full-time for the senior year. Students are paid an excellent pre-professional salary during the work semesters. This program offers many advantages; interested students should consult with Career Services.

To remain in the Cooperative Education program students must maintain good academic standing; a cumulative grade-point average of 2.3 or above and comply with the policies and procedures of the employer and the Cooperative Education and Internship Program.

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COURSES

ACCOUNTING (ACC)

ACC 211 Principles of Accounting I 3 cr
The course provides an understanding of ways in which accounting information supports business decision-making. Topics include financial accounting and reporting for assets and liabilities. ACC 211 and ACC 212 must be taken in sequence.

ACC 212 Principles of Accounting II 3 cr
The course provides an understanding of ways in which accounting information supports business decision-making. Topics include financial accounting and reporting for ownership interests, and managerial accounting concepts relevant to planning, control and analysis. Pre-requisite: ACC 211 with a minimum grade of "C".

ACC 321 Accounting for Entrepreneurial Businesses 3 cr
A study of the analysis and use of accounting information by entrepreneurial businesses. Among the topics covered are typical financing sources of entrepreneurial businesses and valuation of closely held businesses. In addition, the course includes coverage of how financial statements can be used to: manage a business, monitor an entity's performance, determine credit decisions, manage cash flow, and prepare forecasted financial statements. Pre-requisite: ACC 212.

ACC 331 Taxation of Individuals 3 cr
Basic federal income tax law and tax planning considerations relating to individuals. Pre-requisite: ACC 212.

ACC 341 Accounting Information Systems 3 cr
The study of Accounting as a comprehensive information system which provides for planning and control, special reports, and preparation of external financial statements. Pre-requisites: ACC 212 and CIS 250.

ACC 371 Financial Accounting I 3 cr
Accounting theory as related to income measurement; preparation of balance sheets and income statements; recognition, measurement, and reporting of assets. (A minimum grade of "C" must be earned in ACC 371 before ACC 372 can be taken.) Pre-requisite: ACC 212 with a minimum grade of "C", MA 112 with minimum grade of "C".

ACC 372 Financial Accounting II 3 cr
Includes measurement, recognition and reporting of liabilities, equities, investments, and deferred taxes; EPS; and the preparation of cash flow statements. Coverage of selected professional pronouncements. (A minimum grade of "C" must be earned in ACC 372 before ACC 451 may be taken.) Pre-requisite: ACC 371 with a minimum grade of "C".

ACC 381 Cost Accounting 3 cr
Includes cost-accounting theory and practice involving such topics as job-order and process-cost systems, cost-volume-profit relationships, budgets, standard costs, variance analysis, direct costing, and cost allocation. Pre-requisite: ACC 212.

ACC 416 International and Advanced Accounting 3 cr
Study of accounting in a global context including standards and issues and the roles and responsibilities of accountants. Additional topics include: business combinations, partnership accounting, interim and segmented reporting. Pre-requisite: ACC 372 with a minimum grade of "C".

ACC 432 Taxation of Partnerships and Corporations 3 cr
An examination of the federal tax treatment of partnerships and corporations. Topics include: tax aspects of the formation of the entity, elements of gross income, treatment of property dispositions, allowable deductions and credits, determination of entity and investor basis, and liquidation of the entity. Pre-requisites: ACC 331, ACC 372 with a minimum grade of "C".

ACC 451 Auditing (W) 3 cr
Theory and application of the attest function, ethical issues, and written communication for accountants. Includes standards, objectives, review of internal control structures, tests of controls, substantive testing and reporting. Ethical issues and the preparation of written letters and formal reports are covered. Pre-requisite: ACC 372 with a minimum grade of "C".

ACC 452 Advanced Auditing 3 cr
Advance study of the application of Auditing Standards; internal control evaluations; applications of statistics; audits of EDP systems; internal and operational auditing, ethical, legal and reporting obligations. Pre-requisite: ACC 451 with a minimum grade of "C", MGT 305.

ACC 461 Accounting of Governmental and NFPE 3 cr
A study of the concepts and procedures underlying fund accounting, budgetary control, and financial reporting requirements for governmental and not-for-profit entities. Pre-requisite: ACC 372 with a minimum grade of "C".

ACC 490 Special Topics 3 cr
Designed to provide senior students an opportunity to study selected topics of particular interest. Pre-requisite: Permission of the department chair. (A student may count no more than three hours of Special Topics in the Concentration.)

ACC 494 Directed Study in Accounting 3 cr
Primarily designed to give superior students an opportunity to study some phase of accounting of particular interest. Conferences, a bibliography, and a formal research report are required. Pre-requisites: Junior or senior standing, a cumulative GPA of 2.5 or better, and approval of the department chair following the evaluation of a written proposal.

ACC 496 Accounting Internship 3 cr
The internship program is designed to give students practical experience in their field of study. Students complete directed projects under the supervision of Department Chair. No more than three hours of internship credit may be counted toward a degree in the Mitchell College of Business. Pre-requisites: Junior or Senior standing, declared major in accounting, overall GPA of at least 2.5, and Internship Agreement signed by Department Chair.

ACC 501 Survey of Financial Accounting 3 cr
A study of the basic concepts in accounting with an emphasis on analysis and use of financial accounting information for decision-making by management.

ACC 502 Managerial Accounting 3 cr
An introduction to the interpretation and evaluation of accounting information as a basis for planning and controlling by management. Pre-requisite: ACC 501.

ACC 511 Financial Accounting Theory 3 cr
The evolution of general accounting theory leading up to and including the conceptual framework will be discussed as well as the specific theory underlying certain accounting topics of current interest.

ACC 521 Advanced Managerial Accounting 3 cr
Advanced managerial and cost accounting topics. Tools for planning and control, development of cost information for decision making, cost allocations, inventory management systems, capital budgeting, performance measurements, transfer pricing and multi-national considerations.

ACC 531 Tax Planning and Research 3 cr
An examination of tax research tools, their utilizations, and various tax planning considerations. Students are require to conduct research and tax planning upon assigned topics, and write a report on their findings.

ACC 532 Taxation of Partnerships and Corporations 3 cr
An examination of the federal tax treatment of partnerships and corporations. Topics include: tax aspects of the formation of the entity, elements of gross income, treatment of property dispositions, allowable deductions and credits, determination of entity and investor basis, and liquidation of the entity.

ACC 534 Taxation of Gifts, Trusts and Estates 3 cr
An examination of the federal tax treatment of gratuitous transfers made during life and at death.

ACC 541 Advanced Accounting Systems 3 cr
Analysis of accounting information system case studies in order to expose students to real-world system problems and applications. Course work includes hands-on work with a variety of computer-based accounting application packages.

ACC 552 Advanced Auditing 3 cr
Advanced study of the application of auditing standards; internal control evaluations; applications of statistics; audits of EDP systems; internal and operational auditing, ethical, legal and reporting obligations.

ACC 561 Accounting for Governmental and NFPE 3 cr

A study of the concepts and procedures underlying fund accounting, budgetary control, and financial reporting requirements for governmental and not-for-profit entities.

ACC 571 Professional Accounting 3 cr

A capstone course study of contemporary issues and responsibilities relevant to the accounting profession, including ethical, legal and international considerations.

ACC 590 Special Topics 3 cr

Designed to provide graduate students an opportunity to study selected topics. Permission of department chair. (A student may count no more than three hours of Special Topics in the graduate program).

ACC 594 Independent Study in Accounting 3 cr

Readings and research on selected topics. Conferences and formal research report required. Pre-requisites: Approval of department chair.

ART EDUCATION (AED)

AED 301 Art for Young Children 3 cr

Exploration of knowledge and skills in the arts appropriate for young children. Art techniques and media are explored.

AED 440 Arts for Learning 3 cr

Using the arts to promote physical, social, emotional, and cognitive development.

AED 501 Trends and Practices in Teaching Art in the Elementary School 3 cr

Orients the student toward the artistic interests and creative abilities of children in the elementary school, and developing attitudes of respect for individuality and creativity. Included are laboratory experiences with art materials and research into appropriate techniques of teaching art.

AED 502 Trends and Practices in Teaching Art in Secondary School 3 cr

Current trends and practices in curriculum, instruction, selection of materials, and derivation of procedures for guiding learning in art in the secondary school.

AED 540 Art in the P-12 Program 3 cr

Art and the intellectual, creative, and emotional growth of children. The role of art in the instructional program, examination of objectives in an art program, and the study of appropriate techniques and materials for teaching art and crafts at the elementary level. Restricted to N-12 art majors. Pre-requisites: SED 555, SED 559, EPY 525.

AED 560 Graduate Research Seminar 3 cr

Research in problems confronting American education. Selected topics are explored by students which provide the basis for seminar discussions. A seminar paper is presented by each student. This course also includes a field-based practicum. Pre-requisite: Permission of department chair.

AED 590 Special Topics 3 cr

Current topics of special concern to secondary educators. A different topic will be used each time the course is offered. No more than six semester hours can be applied toward a graduate degree. Pre-requisite: Permission of department chair.

AED 594 Directed Study and Research 3 cr 1,

Students explore through directed study problems and issues of special interest or significance in Art Education. Not more than three semester hours of any departmental 594 courses can be accepted toward a degree program. Pre-requisite: Permission of the department chair.

AED 595 Internship 3-6 cr

The internship is a supervised learning experience in a work setting similar to that in which the educator will eventually be employed. The internship provides the students with an opportunity to apply the theories and concepts learned during the graduate program of study.

AFRICAN-AMERICAN STUDIES (AFR)

AFR 101 Introduction to African-American Studies 3 cr

An interdisciplinary investigation of the origins, experiences, conditions, accomplishments and contributions of people of African ancestry in the United States. Core Course.

ADULT HEALTH NURSING (AHN)

AHN 447 Adult-Gerontological Nursing 4 cr

Synthesize theories, concepts, research, issues and trends in caring for an adult-geron population with complex multisystem health care needs. Emphasis is on the role of the professional nurse in health promotion and maintenance, illness care, and rehabilitation of an adult-geron population in a variety of acute and community settings. Pre-requisites: CMN 350, CMN 351, MCN 347, MCN 348. Co-requisite: AHN 448.

AHN 448 Adult-Gerontological Nursing Clinical 4 cr

The focus of this course is the application of theories, concepts, evidence, issues and trends in caring for an adult-geron population experiencing complex multisystem health care needs. Emphasis is on the role of the professional nurse and on the use of the nursing process with an adult-geron population experiencing complex multisystem health care needs and their families. Pre-requisites: CMN 350, CMN 351, MCN 347, MCN 348. Co-requisite: AHN 447.

AHN 525 Adult-Gerontological Clinical Nurse Specialist Practicum 4 cr

The purpose of this precepted practicum course is to provide students an immersion experience in the CNS role with adult and geriatric populations in a selected area of nursing practice. The focus of the course is to develop the CNS's ability to assimilate and apply evidence-based information in the design, implementation and evaluation of nursing care activities, nursing practice standards and norms, and influencing organizations to support the delivery of nursing care and achievement of optimal health outcomes for a specified population. The emphasis of the course is on the patient and nurses and nursing practice spheres. The student should participate in activities that include direct interactions with patients and families to promote health and well-being, consultation and with disciplines, coaching of patient, families, and nurses, development of evidence based policies, guidelines, or protocols; guiding the education of other nursing personnel to improve patient outcomes; and implementing practices that improve quality and promote cost-effective outcomes. Co-requisite: NU 524.

AHN 526 Adult Gerontological Clinical Nurse Specialist Practicum II 4 cr

The purpose of this precepted capstone course is to provide students an immersion experience in the CNS role with adult and geriatric populations in a selected area of nursing practice. The focus of the course is to develop the CNS's ability to assimilate and apply evidence based information in the design, implementation and evaluation of nursing care activities, nursing practice standards and norms, and influencing organizations to support the delivery of nursing care and achievement of optimal health outcomes for a specified population. The emphasis of course is on the nurses and nursing practice sphere and the organization/system sphere. The student should participate in activities that include the development of evidenced based policies, guidelines, or protocols; guiding the education of other nursing personnel to improve patient outcomes; and implementing practices that improve quality and promote cost-effective outcomes. Co-requisite: NU 520.

AHN 530 Foundations of Palliative Care and the Advanced Role 2 cr

This didactic course prepares the Adult-Geron with Palliative Care Specialty student a forum for the evaluation of issues and trends encountered by the DNP in palliative care. Students learn to coordinate and develop primary and palliative health care programs for individuals and populations across the adult lifespan. Emphasis is on critical analysis and management of issues by the DNP in an interdisciplinary health care delivery system. Pre-requisites: NU 607, NU 545, NU 608, NU 578, NU 610, NU 611. Co-requisites: NU 518, NU 613.

AHN 531 Advanced Palliative Care and End of Life 2 cr

This course provides students an in-depth study of health care management for patients seeking palliative and end of life care. Emphasis is on the interaction among health care providers and psychosocial/spiritual care of the patient and family. Pre-requisites: NU 607, NU 545, NU 608, NU 578, NU 610, NU 611, NU 518, NU 613, AHN 530. Co-requisites: AHN 581, AHN 588.

AHN 532 Advanced Chronic Illness Care 2 cr

This course provides a study of the illness trajectories of chronic diseases that are among the leading cause of death in our society. Assessment and management of the illnesses as well as associated pain and symptoms will be examined. The focus is assisting patients, families, and other health professionals anticipate/prevent/reduce adverse symptoms from life threatening illnesses to maximize quality of life. Pre-requisites: NU 607, NU 545, NU 608, NU 578, NU 610, NU 611, NU 518, NU 613, AHN 530, AHN 531. Co-requisites: AHN 591, AHN 592, NU 612.

AHN 533 Advanced Palliative Care Practicum 3 cr

This course provides preceptor and faculty experience in which students have the opportunity to become proficient at providing comprehensive care to patients with life threatening, progressive illness by engaging in holistic assessment of pain and quality of life in a variety of settings. Advanced knowledge of palliative/end of life care will be integrated into assessing and managing the complex psychological, ethical, social, spiritual issues, and grief reactions while working as a member of a palliative care team. Pre-requisites: NU 607, NU 545, NU 608, NU 578, NU 610, NU 611, NU 612, NU 518, NU 613, AHN 591, AHN 592, AHN 530, AHN 531, AHN 532. Co-requisites: AHN 595, AHN 596, NU 617.

AHN 538 Health Promotion/ Disease Prevention for Emergency Nursing 2 cr

This didactic course prepares the Advanced Emergency Nursing (Family NP/Adult-Gerontological Acute Care Dual Role) student to identify and implement appropriate and culturally sensitive health promotion and disease prevention strategies across the lifespan for clients in emergency, urgent, and ambulatory care settings. Emphasis is placed on health promotion/disease prevention with strategic planning at the primary, secondary, and tertiary levels. Prevention, early diagnosis, prompt treatment, and in-depth patient education will be emphasized. Effective strategies for life-style behavioral changes will also be evaluated. Pre-requisite: AHN 550. Co-requisites: AHN 536, AHN 537.

AHN 548 Advanced Family Primary Care Nursing I 4 cr

The purpose of this didactic course is to prepare Advanced Emergency Nursing (Family NP/Adult-Gerontological Acute Care Dual Role) students to assess, diagnose, and manage selected health care needs of women and childbirth, infants, children, and families in a caring, competent manner. This course prepares students to identify and implement appropriate and culturally competent health promotion and disease prevention strategies across the lifespan. The focus is on the advanced practice nursing of individuals and families in primary health care settings. Pre-requisites or Co-requisites: NU 518, NU 545, NU 607. Co-requisite: AHN 549.

AHN 549 Advanced Family Primary Care Nursing I Practicum 4 cr

The purpose of this practicum course is to provide opportunities for Advanced Emergency Nursing (Family NP/Adult-Gerontological Acute Care Dual Role) students to apply concepts from AHN 548 in selected clinical settings. The emphasis is on culturally competent delivery of health care, diagnostic reasoning, and decision making/critical thinking through communication and collaboration. The focus is continued refinement of cognitive and clinical skills needed to provide comprehensive health assessments, diagnoses, and management of selected health care needs of women and childbirth, infants, children, and families in primary health care settings. Co-requisite: AHN 548.

AHN 550 Advanced Family Primary Care Nursing II 4 cr

The purpose of this didactic course is to prepare Advanced Emergency Nursing (Family NP/Adult-Gerontological Acute Care Dual Role) students to assess, diagnose, and manage selected health care needs of women and childbirth, infants, children, and families in a caring, competent manner. This course prepares students to identify and implement appropriate and culturally competent health promotion and disease prevention strategies across the lifespan. The focus is on the advanced practice nursing of individuals and families in primary health care settings. Pre-requisite/Co-requisite: NU 578. Pre-requisite: AHN 548. Co-requisite: AHN 551.

AHN 551 Advanced Family Primary Care Nursing II Practicum 5 cr

The purpose of this course is to provide a preceptor and faculty facilitated experience for Advanced Emergency Nursing (Family NP/Adult-Gerontological Acute Care Dual Role) students to practice within an advanced nursing framework. The focus is on the role of the Family Nurse Practitioner in the health care management of children, adults, and families in primary health care settings with the application and synthesis of knowledge and skills acquired from AHN 550 and previous courses. Emphasis is on leadership, professionalism, and collaboration with other health care providers in a culturally diverse environment. Co-requisite: AHN 550.

AHN 552 Advanced Adult-Gerontological Acute Care Nursing I 4 cr

The purpose of this course is to prepare Advanced Emergency Nursing (Family NP/Adult-Gerontological Dual Role) students to assess, diagnose, and manage selected health care needs of young adults, adults, and older adults across the wellness-illness continuum in a caring, competent manner. Emphasis is on (1) synthesis of theoretical, scientific, and contemporary clinical knowledge used to develop differential diagnoses as a basis for health promotion, disease prevention, and management; (2) wellness and the pathophysiology and epidemiology underlying complex acute, critical and chronic illness, disability and/or injury; and (3) collaboration using appropriate processes for patient-centered, quality care in a culturally diverse system. The focus is on advanced practice nursing with the entire adult-older adult age spectrum and families in emergency, urgent, and ambulatory settings. Pre-requisite: AHN 438; Co-requisite: AHN 553.

AHN 553 Advanced Adult-Gerontological Acute Care Nursing I Practicum 4 cr

The purpose of this practicum course is to provide opportunities for Advanced Emergency Nursing (Family NP/Adult-Gerontological Acute Care Dual Role) students to apply concepts from AHN 552 in selected clinical settings. Emphasis is on critical thinking, diagnostic reasoning, differential diagnosis, communication, and collaboration in a culturally diverse system. The focus is refinement of cognitive and clinical skills needed to provide competent, patient-centered care to young adults, adults, and older adults across the wellness-illness continuum with acute, critical and chronic illness, disability, and/or injury in emergency, urgent, and ambulatory care settings. Co-requisite: AHN 552.

AHN 554 Advanced Adult-Gerontological Acute Care Nursing II 4 cr

The purpose of this didactic course is to (1) provide the Advance Emergency Nursing (Family NP/Adult-Gerontological Acute Care Dual Role) student with an in-depth study of the health care management of young adults, adults, and older adults across the wellness-illness continuum and to (2) provide a forum for the critical analysis and evaluation of issues and trends encountered by the Adult-Gerontology Acute Care Nurse Practitioner in an interdisciplinary health care delivery system. emphasis is on leadership and professionalism in a culturally diverse system. The focus is on ensuring quality, patient-centered care of the adult-older adult population with selected complex acute, critical and chronic illness, disability, and/or injury to improve health outcomes in emergency, urgent, and ambulatory settings. Pre-requisite: AHN 552. Co-requisite: AHN 555. Pre-requisites or Co-requisites: NU 608, NU 619, NU 613.

AHN 555 Advanced Adult-Gerontological Acute Care Nursing II Practicum 5 cr

The purpose of this practicum course is to provide a preceptor and faculty facilitated experience for Advanced Emergency Nursing (Family NP/Adult-Gernontological Acute Care) Dual Role students to practice within an advanced nursing framework by synthesizing and applying the knowledge and skills acquired in AH 554 and previous courses. Emphasis is on leadership, professionalism, and collaboration in a culturally diverse system. The focus is on implementing the role of the Adult-Gerontology Acute Care Nurse Practitioner in the health care management of young adults, adults, and older adults across the wellness-illness continuum with acute, critical and chronic illness, disability, and/or injury in emergency, urgent, and ambulatory health care settings. Co-requisite: AHN 554.

AHN 568 Advanced Adult-Gerontological Acute Nursing I 3 cr

The purpose of this first didactic course is to prepare Adult Gerontological Acute Care Nurse Practitioner students to assess, diagnose, and manage selected health care needs of adults and children. Emphasis is placed on synthesis and application of nursing and related theories and scientific knowledge to the development

of differential/nursing diagnoses as a basis for health promotion and management. Co-requisites: AHN 569, AHN 571. Pre-requisites: NU 545, NU 518, NU 607.

AHN 569 Advanced Adult-Gerontological Acute Nursing Practicum I 1 cr

The purpose of this first practicum course is to provide opportunities for Adult Gerontological Acute Care Nurse Practitioner students to apply concepts from Advanced Adult Gerontological Acute Care Health Nursing I in selected clinical settings. The focus is continued refinement of cognitive and clinical skills needed to provided comprehensive health assessments of adults and to apply diagnostic reasoning. Co-requisite: AHN 568.

AHN 571 Health Promotion/Disease Prevention Adult-Gerontological Acute Care Nursing 2 cr

The purpose of this didactic course is to prepare the Adult Gerontological Acute Care Nurse Practitioner students to identify and implement appropriate health promotion and disease prevention strategies across the lifespan. The focus is on the advanced practice nursing of individuals and families in primary care settings. Emphasis is placed on health promotion/disease prevention with strategic planning at the primary, secondary and tertiary levels of prevention. Various issues are explored pertinent to the advanced practice role. Pre-requisite: NU 518. Co-requisite: AHN 568.

AHN 572 Advanced Adult-Gerontological Acute Care Nursing II 3 cr

The purpose of this didactic course is to prepare Adult Gerontological Acute Care Nurse Practitioner students to assess, diagnose, and manage selected health care needs of adults. The focus is on advanced practice nursing with adults and families in primary and acute care settings. Emphasis is placed on the wellness and the pathophysiology and epidemiology underlying acute and chronic health problems. Pre-requisite: AHN 568. Pre-requisite or Co-requisite: NU 578. Co-requisite: AHN 573.

AHN 573 Advanced Adult-Gerontological Acute Care Nursing Practicum II 3 cr

The purpose of this practicum course is to provide opportunities for Adult Gerontological Acute Care Nurse Practitioner students to apply concepts from Advanced Adult Gerontological Acute Care Nursing I in selected clinical settings. Focus is on adults and families in primary and acute care settings. The emphasis is on diagnostic reasoning and decision making/critical thinking. Co-requisite: AHN 572.

AHN 574 Advanced Adult-Gerontological Acute Care Nursing III 3 cr

The purpose of this course is to provide an in-depth study of the health care management of the Adult Gerontological Acute Care patient. Emphasis is on the interaction among health care providers in a culturally diverse environment. Pre-requisite: AHN 572. Co-requisite: AHN 575.

AHN 575 Advanced Adult-Gerontological Acute Care Nursing Practicum III 3 cr

The purpose of this course is to provide an opportunity for the Adult Gerontological Acute Care Nurse Practitioner students to practice within an advanced nursing framework. The focus is on the role of the advanced practice nurse in the health care management of adults. Emphasis is on collaboration with other health care providers in a culturally diverse environment. Co-requisite: AHN 574.

AHN 576 Advanced Adult-Gerontological Acute Care Nursing Internship 3 cr

The purpose of this culminating course is to provide a preceptor and faculty facilitated experience in the Adult Gerontological Acute Care Nurse Practitioner role. The focus is on the application and synthesis of knowledge and skills acquired in all previous courses. Pre-requisite: AHN 574. Co-requisite: AHN 577. Pre-requisites or Co-requisites: NU 608, NU 613.

AHN 577 Advanced Adult-Gerontological Acute Nursing IV 3 cr

The purpose of this course is to provide a forum for the evaluation of issues and trends encountered in advanced adult gerontological acute care nursing. Emphasis is on a critical analysis and management of issues by the Adult Gerontological Acute Care Nurse Practitioner in an interdisciplinary health care delivery system. Co-requisite: AHN 576.

AHN 581 Health Promotion/Disease Prevention Adult-Gerontological Nursing 2 cr

The purpose of this didactic course is to prepare the Adult-Gerontological Nurse Practitioner student with a knowledge basis for identifying and implementing appropriate health promotion and disease prevention strategies with older adults. The focus is on the advanced practice nursing of older adults in multiple health care settings. Emphasis is placed on health promotion/disease prevention and related health issues with strategic planning at the primary, secondary, and tertiary levels of prevention. Various issues are explored which are pertinent to the advanced practice role. Co-requisite: AHN 588.

AHN 588 Adult-Gerontological Nursing I 3 cr

The purpose of this course is to expand the Adult-Gerontological Nurse Practitioner student's knowledge and skills for obtaining, recording, and analyzing a systemic health assessment of the adult and older adult. Emphasis is placed on synthesis and application of nursing and related theories and scientific knowledge to the development of differential/nursing diagnoses as a basis for health promotion and management. Co-requisites: AHN 581, AHN 589. Pre-requisites or Co-requisites: NU 545, NU 518, NU 607.

AHN 589 Adult-Gerontological Practicum I 1 cr

The purpose of this clinical course is to provide an environment in which Adult-Gerontological Nurse Practitioner students have the opportunity to become proficient at obtaining, recording, and analyzing a systematic health history and advanced physical examination of adults and geriatric patients from diverse cultural backgrounds. The focus is refinement of cognitive and clinical skills needed to provide comprehensive health assessments focusing on the needs of adults and well and frail elders. Co-requisite: AHN 588.

AHN 591 Adult-Gerontological Nursing II 3 cr

This didactic course prepares the Adult-Gerontological Nurse Practitioner students to assess, diagnose, and manage selected health care needs of culturally diverse adult and well and frail geriatric populations. The focus is on the advanced practice nursing of adults and their families in a variety of health care settings. Emphasis is placed on wellness, the pathophysiology and epidemiology underlying acute and chronic health problems with a focus on the unique health care needs of elders. Pre-requisite: AHN 588. Co-requisite: AHN 592.

AHN 592 Advanced Adult-Gerontological Nursing Practicum II 3 cr

The purpose of this practicum course is to provide opportunities for Adult-Gerontological Nurse Practitioner students to apply concepts from AHN 591 Advanced Adult-Gerontological Nursing II in primary and acute care settings with adults and families experiencing health concerns. This clinical course will offer clinical hours for targeting adult health and gerontological health issues. Students will divide clinical hours between young adults, middle aged adults, and elders. Co-requisite: AHN 591.

AHN 593 Adult-Gerontological Nursing III 3 cr

The purpose of this course is to provide the Adult-Gerontological Nurse Practitioner students an in-depth study of health care management of adults, well and frail elders, and their families within the framework of advanced nursing. The focus is on selected acute and chronic complex health care problems. Emphasis is on the interaction among health care providers in a culturally diverse environment. Pre-requisite: AHN 591. Co-requisite: AHN 594.

AHN 594 Adult-Gerontological Nursing Practicum III 3 cr

The purpose of this course is to provide opportunity for the Adult-Gerontological Nurse Practitioner students to practice within an advanced nursing framework. The focus is on the role of the advanced practice nurse in the health care management of adult and geriatric patients with physical and psychiatric-mental health concerns. Emphasis is on collaboration with other health care providers in a culturally diverse environment. This clinical course will offer experience with diverse populations including young and middle aged adults and elders in a variety of settings. Co-requisite: AHN 593.

AHN 595 Adult-Gerontological Nursing IV 3 cr

The purpose of this course is to provide a forum for the evaluation of issues and trends encountered in adult and gerontological nursing care. Emphasis is on critical analysis and management of issues by the Adult-Gerontological Nurse Practitioner in an interdisciplinary health care delivery system. Pre-requisite: AHN 593.

Co-requisite: AHN 596. Pre-requisites or Co-requisites: NU 608, NU 610, NU 613.

AHN 596 Adult-Gerontological Internship 3 cr

The purpose of this culminating course is to provide a preceptor and faculty facilitated experience in the Adult-Gerontological Nurse Practitioner role. The focus is the application and synthesis of knowledge and skills acquired in all previous courses. Students will have clinical experiences with all ages of adults and elders in a variety of settings. Co-requisite: AHN 595.

AHN 604 Adult-Geron Acute Project Planning and Development 3 cr

This course assists the Adult-Gerontological Acute Care Nurse Practitioner DNP student to learn the processes embedded in developing a doctoral synthesis project. The course will address all aspects of project planning and development as a preliminary step to the Adult-Gerontological Acute Care Nurse Practitioner students' selection of a topic or phenomenon of interest for the project and will incorporate well-built questions, search strategies and outcomes, identification of resources needed, plan for evaluation and dissemination.

AHN 617 Adult-Geron Acute Residency I 3 cr

Theories of leadership, motivation, power, and change are used to influence change in health care organizations. This course will implement evidence-based clinical models and evaluate their effectiveness in health outcomes. The Adult-Gerontological Acute Care Nurse Practitioner student will synthesize, critique, and apply evidence to support quality clinical or organizational practices.

In this mentored and supervised experience, the Adult-Gerontological Acute Care Nurse Practitioner student will work with the primary faculty advisor to complete projects and advance their selected practice area. The Adult-Gerontological Acute Care Nurse Practitioner student will have access to and authority for expanded scope of practice to master the DNP competencies. Residency sites will depend upon the Adult-Gerontological Acute Care Nurse Practitioner student's career trajectory and approval by collaborating faculty. During the residency semester, student must participate in scheduled scholarly seminars online. A total of 180 clinical hours of direct practice/management is required.

AHN 618 Adult-Geron Acute Residency II 3 cr

Provides Adult-Gerontological Acute Care Nurse Practitioner students the opportunity to fully express all DNP competencies. The Adult-Gerontological Acute Care Nurse Practitioner student, guided by the faculty facilitator, will implement the scholarly doctoral system's change project.

AHN 619 Adult-Geron Acute Residency III 3 cr

Final course in residency series as Adult-Gerontological Acute Care Nurse Practitioner student continues to implement and evaluate project plan. Provides Adult-Gerontological Acute Care Nurse Practitioner student the opportunity to fully express all DNP competencies. The Adult-Gerontological Acute Care Nurse Practitioner student, guided by the core faculty and advisor completes quality improvement evidence system's change project.

AHN 630 Dysrhythmias and the Heart 2 cr

In this first of four specialization courses, the student focuses on approaches to the diagnosis, prevention of common rhythm disorders and management of patients with cardiac dysrhythmias. Emphasis is on developing a step-by-step method for diagnosing dysrhythmias, making clinical correlations and employing evidence-based treatment decisions.

AHN 631 Foundations of Cardiac Care for the Advanced Practice Nurse 2 cr

This second of four cardiovascular specialization courses, focuses on approaches to the diagnosis, prevention of common rhythm disorders and management of patients with cardiac dysrhythmias. This course provides a forum for the evaluation of issues and trends encountered by the AACNPCVs. Emphasis is on critical analysis and management of issues by the AACNPCVs in an interdisciplinary health care delivery system.

AHN 632 Diagnosis and Management of Acute Cardiovascular Disorders 2 cr

This third of four cardiovascular specialization courses provides an in-depth study of the health care management of the acute cardiac patient. Emphasis is on patient diagnosis and management to include assessment, diagnostic procedures, treatment and pharmacological management to individuals with acute cardiovascular disorders. Particular attention will be given to the impact of cultural diversity and population based healthcare on cardiovascular health disparities in a culturally diverse environment. Pre-requisite: AHN 631.

AHN 633 Diagnosis and Management of Complex Cardiovascular Disorders 2 cr

The fourth cardiovascular specialization course provides an in-depth study of the health care management of the patient with complex cardiovascular disorders. Emphasis is patient diagnosis and management to include assessment, diagnostic procedures, treatment and pharmacological management to individuals with complex cardiovascular disorders. Particular attention will be given to the impact of cultural diversity and population based healthcare on cardiovascular health disparities in a culturally diverse environment. Pre-requisite: AHN 632.

AHN 634 Adult-Geron CNS Project Planning and Development 3 cr

This course assists the Adult-Gerontological Clinical Nurse Specialist DNP student to learn the processes embedded in developing a doctoral synthesis project. The course will address all aspects of project planning and development as preliminary step to the Adult-Gerontological Clinical Nurse Specialist student's selection of a topic or phenomenon of interest for the project and will incorporate well-built questions, search strategies and outcomes, identification of resources needed, plan for evaluation and dissemination.

AHN 635 Adult-Geron CNS Residency I 3 cr

Theories of leadership, motivation, power, and change are used to influence change in health care organizations. This course will implement evidence-based clinical models and evaluate their effectiveness in health outcomes. The Adult-Gerontological Clinical Nurse Specialist student will synthesize, critique, and apply evidence to support quality clinical or organizational practices.

In this mentored and supervised experience, the Adult-Gerontological Clinical Nurse Specialist student will work with the primary faculty advisor to complete projects and advance their selected practice area. The Adult-Gerontological Clinical Nurse Specialist student will have access to and authority for expanded scope of practice to master the DNP competencies. Residency sites will depend upon the Adult-Gerontological Clinical Nurse Specialist student's career trajectory and approval by collaborating faculty. During the residency semester, student must participate in scheduled scholarly seminars online. A total of 180 clinical hours of direct practice/management is required.

AHN 636 Adult-Reron CNS Residency II 3 cr

Provides Adult-Gerontological Clinical Nurse Specialist students the opportunity to fully express all DNP competencies. The Adult-Gerontological Clinical Nurse Specialist student, guided by the faculty facilitator, will implement the scholarly doctoral system's change project.

AHN 637 Adult-Geron CNS Residency III 3 cr

Final course in residency series as Adult-Gerontological Clinical Nurse Specialist student continues to implement and evaluate project plan. Provides Adult-Gerontological Clinical Nurse Specialist student the opportunity to fully express all DNP competencies. The Adult-Gerontological Clinical Nurse Specialist student, guided by the core faculty and advisor completes quality improvement evidence-based system's change project.

AHN 638 Diagnosis and Management in Emergency Care for APN 2 cr

This course provides an in-depth study of the health care management for patients seeking emergency care. Emphasis is on the interaction among health care providers in a culturally diverse environment.

AHN 692 AHN DNP Project Progression 3 cr

Students will register for this course to complete residency course work under supervision of faculty. Students must remain continuously enrolled until all residency requirements are completed. Pre-requisite: AHN 618; Co-requisite: AHN 619.

AHN 693 Adult-Geron Primary Care Planning and Development 3 cr

This course assists the Adult-Gerontological Clinical Nurse Specialist DNP student to learn the processes embedded in developing a doctoral synthesis project. The course will address all aspects of project planning and development as a preliminary step to the Adult-Gerontological

Clinical Nurse Specialist student's selection of a topic or phenomenon of interest for the project and will incorporate well-built questions, search strategies and outcomes, identification of resources needed, plan for evaluation and dissemination.

AHN 694 Adult-Geron Primary Care Residency I 3 cr

Theories of leadership, motivation, power, and change are used to influence change in health care organizations. This course will implement evidence-based clinical models and evaluate their effectiveness in health outcomes. The Adult-Gerontological Clinical Nurse Specialist student will synthesize, critique, and apply evidence to support quality clinical or organizational practices.

In this mentored and supervised experience, the Adult-Gerontological Clinical Nurse Specialist student will work with the primary faculty advisor to complete projects and advance their selected practice area. The Adult-Gerontological Clinical Nurse Specialist student will have access to and authority for expanded scope of practice to master the DNP competencies. Residency sites will depend upon the Adult-Gerontological Clinical Nurse Specialist student's career trajectory and approval by collaborating faculty. During the residency semester, student must participate in scheduled scholarly seminars online. A total of 180 clinical hours of direct practice/management is required.

AHN 695 Adult-Geron Primary Care Residency II 3 cr

Provides Adult-Gerontological Clinical Nurse Specialist students the opportunity to fully express all DNP competencies. The Adult-Gerontological Clinical Nurse Specialist student, guided by the faculty facilitator, will implement the scholarly doctoral system's change project.

AHN 696 Adult-Geron Primary Care Residency III 3 cr

Final course in residency series as Adult-Gerontological Clinical Nurse Specialist student continues to implement and evaluate project plan. Provides Adult-Gerontological Clinical Nurse Specialist student the opportunity to fully express all DNP competencies. The Adult-Gerontological Clinical Nurse Specialist student, guided by the core faculty and advisor completes quality improvement evidence-based system's change project.

ALLIED HEALTH PROFESSIONS (AHP)

AHP 101 Freshman Seminar in Allied Health 2 cr

A course for first-time students that assists with maximizing the students' potential to achieve academic success and to adjust responsibly to the individual and interpersonal challenges presented by college life. Taught in small groups, the course provides an introduction to the nature of higher education and a general orientation to the functions and resources of the University. Extensive reading and writing assignments relevant to the student's first year experience are required.

ADULT INTERDISCIPLINARY STUDIES (AIS)

AIS 101 Theories and Principles of Adult Learning 3 cr

Designed for students who enter the Adult Degree Program with less than 64 hours of credit, AIS 101 introduces students to basic theories and principles of adult education and development with emphasis on liberal education. Assists students in defining competencies needed for success in academic study and professional leadership, in setting educational goals, and in planning a learning experience to achieve them. Should be taken the first semester of enrollment in the Adult Degree Program.

AIS 105 Encounter with the Humanities 3 cr

Introduction to the various disciplines within the humanities with emphasis on the role each plays in a liberal arts education. Identical with CLA 105. Credit cannot be received for both CLA 105 and AIS 105. **Core Course**.

AIS 120 Encounter with the Fine and Performing Arts 3 cr

Introduction to the various disciplines within the fine arts with emphasis on the role each plays in a liberal arts education.

AIS 125 Professional Conduct 3 cr

Introduces students to primary sources in ethical theory and includes readings and discussions of theories of human nature to provide a basis for understanding one's rationale for personal moral decisions and to offer a foundation for the application of ethics to the workplace.

AIS 201 Seasons of Life 3 cr

An interdisciplinary, media-assisted course in which students study human development from the biosocial, cognitive, and psychosocial perspectives with special emphasis on the adult years. Through readings, audio, written exercises, and class discussions, students explore the theories and research findings of life span development which enable them to reflect on their own lives as well as the lives of others. Core Course.

AIS 290 Special Topics 1-6 cr

A variable topics course treating special themes. May be repeated for a maximum of 6 credit hours when course content varies.

AIS 294 Directed Studies 1-3 cr

Directed study of a topic consistent with the student's individualized program under the supervision of a member of the University faculty. Pre-requisite: Permission of the department chair.

AIS 300 Foundations of Interdisciplinary Research 3 cr

Designed for students in the Interdisciplinary Studies major, this course examines principles of qualitative and quantitative research methods and their application to interdisciplinary studies. Emphasis is on the development of functional literacy for information expressed quantitatively and the thoughtful integration of such information into academic and practical research projects.

AIS 301 Introduction to Interdisciplinary Studies - ADP 3 cr

This course introduces students to the field of interdisciplinary studies. The course challenges students to connect education with personal development, the workplace and the community. AIS 301 is required of all ADP students and must be taken before AIS 380 or IST 496. Pre-requisite: AIS 101 for students with less than 64 credit hours, and junior or senior standing.

AIS 305 Issues in Human Services 3 cr

An interdisciplinary course for students who plan to work in the helping professions (counseling, social work, nursing etc.). Guest speakers from various disciplines present information about their fields. Discussion topics include: similarities and differences in the helping professions, the helping relationship, empathic communication, multicultural and legal issues, and stress and burnout management.

AIS 315 Women's Issues in the Workplace and Community 3 cr

This course examines contemporary issues faced by women in the workplace and the community from an interdisciplinary perspective. Some of the topics to be covered are gender, communication issues, developing a leadership plan, playing the game, power talk, conflict management from a woman's point of view, international development, and women, sexuality and labor.

AIS 320 Cultural Diversity 3 cr

An interdisciplinary exploration of issues related to interactions between diverse groups in teams, communities, and organizations. Reviews research from a variety of disciplines, introduces the historical and legal foundations of equal opportunity in the U.S., and examines the costs and benefits of diversity. Topics include prejudice, stereotyping, affirmative action, barriers to mobility, discrimination, marginalization, mentoring, cooperative teamwork, and international issues.

AIS 350 Writing for Interdisciplinary Research (W) 3 cr

Builds on the foundation laid in freshman composition, stressing critical thinking, analysis, and research. It aims to prepare students for AIS 380, IST 498, and other courses requiring extensive research.

AIS 380 Research Methods and Thesis Development: Capstone I Experience (W) 3 cr

This course prepares the student to conduct an extensive AIS 430 research project. Focuses on topic selection, research methods, proposal writing and project presentation. AIS 380 is required of all students wishing to complete a senior research thesis and must be taken before AIS 430: Senior Thesis and after satisfactory completion of the writing competency requirement. Pre-requisites: AIS 300, AIS 301, AIS 350 and an approved graduation plan.

AIS 401 Adults in Society 3 cr

Adults in Society is a media-assisted course that uses print material, videos, written assignments, and class discussions to explore issues which relate to adult development. Using an interdisciplinary approach, students will examine

the relationship of adults to their families, work and communities.

AIS 420 Community Development and Leadership 3 cr

Presents the conceptual foundations of community development and leadership, including basic concepts, methods and literature. Students will study theories of social capital, investigate public relationships, examine community decision-making and responsible civic action. The course lays foundations for further study and practice in the field.

AIS 425 Adult Education and Training 3 cr

Explores the field of adult and continuing education, focusing on its history, philosophy, grounding in adult learning theory, its current applications in educational institutions and business, and its future as an international and technology-enhanced enterprise.

AIS 430 Senior Research Thesis: Capstone II Experience (W) 3 cr

An in-depth research project in the student's concentration. Provides an opportunity for the student to design a comprehensive research project, analyze and synthesize research data, and develop expertise in a particular subject. AIS 430 is required of all students wishing to complete a Senior Research Thesis. Pre-requisite: AIS 380.

AIS 490 Special Topics 1-6 cr

A variable topics course treating special themes. May be repeated for a maximum of 6 credit hours when course content varies.

AIS 494 Directed Studies 1-3 cr

Directed study of a topic consistent with the student's individualized program under the supervision of a member of the University faculty. Pre-requisite: Permission of the department chair.

AIS 499 Honors Senior Research Thesis: Capstone II Experience (H, W) 3 cr

A substantial research project in the student's concentration that reflects a commitment to genuine scholarship. Provides an opportunity for the student to design a comprehensive research project, analyze and synthesize research data, and develop expertise in a particular subject. Fulfills the senior research thesis requirement for departmental or university honors programs for qualified students. Pre-requisites: AIS 380, 3.5 cumulative USA GPA, and permission of the AIS 380 instructor.

ANTHROPOLOGY (AN)

AN 100 Introduction to Cultural Anthropology 3 cr

Introduces culture as a set of integrated behaviors and meanings learned in a social environment. Explores the diversity of human cultural practices in terms of kinship, gender, religion, subsistence, and politics. Language is emphasized as the means by which culture is transmitted from one generation to the next. **Core Course**.

AN 101 Introduction to Archaeology and Physical Anthropology 3 cr

The place of people in nature; the origin, development, and differentiation of people as biological organisms; archaeological evidence of early human cultures; basic concepts and principles for understanding human cultures. Introduces students to the topics of evolution, genetics, and primates and integrates cultural aspects associated with early human development. The fundamental orientation and methods of archaeology are introduced and an overview of world prehistory presented. **Core Course**.

AN 190 Special Topics 3 cr

Different topics of anthropological importance will be studied as announced. This course may be taken twice for credit when content varies, but not for more than six credits.

AN 200 Language and Culture 3 cr

Brief introduction to descriptive and structural linguistics, language universals, classification and processes of change in language, language and thought, social cultural factors as expressed in language, origin of language, child language, and non-verbal communication. Pre-requisite: AN 100 or AN 101.

AN 210 Physical Anthropology 4 cr

Course focuses on humans as biological and cultural begins and includes a laboratory. Covers variation in modern human populations, as well as evolutionary trends as seen in fossil remains. Also studies nonhuman primates, such as apes and monkeys. Fulfills a College of Arts and Sciences General Education Core Requirement for the Natural Sciences. Fee. Co-requisite: AN 210L.

AN 210 L Physical Anthropology Lab 0 cr

Course focuses on humans as biological and cultural begins. Covers variations in modern human populations, as well as evolutionary trends as seen in fossil remains. Also studies nonhuman primates, such as apes and monkeys, Lab. Co-requisite: AN 210.

AN 220 Archaeology Around the World 3 cr

Archaeology is unique in its ability to demonstrate the shared heritage of humankind and the local variations of cultural evolution through time. This course covers the great span of prehistory from human origins through ancient civilizations, and includes the origin of food production. Ancient civilizations from all over the world are discussed from the viewpoint of archaeology with a focus on how archaeology allows us to understand the lives of the people who lived in simple societies as well as great civilizations.

AN 250 Forensic Anthropology 3 cr

This course will introduce students to the field of forensic anthropology. Specifically, it will survey the basic methods employed by forensic anthropologists to recover and analyze human skeletal remains, including the construction of a biological profile and the analysis of skeletal trauma.

AN 290 Special Topics 1-3 cr

Different topics of anthropological importance will be studied as announced. This course may be taken twice for credit when content varies, but not for more than six credits. Pre-requisite: AN 100 or AN 101 or permission of instructor.

AN 305 Archaeological Method and Theory 3 cr

The theoretical basis of archaeology, and the various methods used to discover and interpret the human past from material evidence. Pre-requisite: AN 100 or AN 101.

AN 313 New World Archaeology 3 cr

The evolution of Native American cultures, from the first arrival of humans across the Bering Straits land bridge to the European settlement of the New World. Pre-requisite: AN 100 or AN 101.

AN 335 Field Work in Archaeology 4 cr

Archaeological field and laboratory techniques include excavation, site survey, artifact processing and analysis. Fee. Pre-requisites: AN 101 or permission of instructor.

AN 340 Native American Cultures (W) 3 cr

An ethnographic and ethnohistorical survey of native cultures of North America, including historical and modern groups, with an emphasis on Indians of the Southeast. Pre-requisites: AN 100 or AN 101.

AN 342 Applied Anthropology 3 cr

Issues surrounding theory and method of applied anthropology. Presentation and analysis of case studies concerning problems in areas such as development, both domestic and in foreign settings, community health, homelessness, drug and alcohol abuse, and other. Pre-requisite: AN 100 or by permission of instructor.

AN 344 SE Asian Cultures and Society 3 cr

This course provides an anthropological assessment of the historical and political development of Southeast Asian societies, and an ethnographic survey of cultures in the region. Pre-requisite: AN 100 or permission of instructor.

AN 345 Research Methods in Anthropology 3 cr

A survey course designed for students majoring in Anthropology and other social science disciplines. The course explores the logic of scientific inquiry with special emphasis on the measurement of theoretical concepts, data analysis, and data collection techniques. Qualitative and quantitative approaches to understanding are presented as both are essential elements of Anthropology's holistic approach to understanding human diversity. Pre-requisite: AN 100.

AN 347 Latin American Cultures and Societies 3 cr

A survey of Latin American society and culture from the precontact period to the present. Precolumbian antecedents, colonial use of land and labor, patterns of race and ethnicity, and problems of development are examined. Pre-requisite: AN 100 or permission of instructor.

AN 354 Psychological Anthropology 3 cr

This course provides an introduction to anthropological perspectives of the relationship between culture/society and psychological

processes. The course will survey the history of anthropological interest in cross-cultural psychology, and will address current topics of interest of anthropologists in studies of the mind, emotion, and mental illness in a wide range of cultures. Pre-requisite: AN 100 or permission of instructor. PSY 120 is recommended.

AN 355 Gender and Anthropology 3 cr
This course provides an introduction to anthropological themes and debates in gender theory, including an ethnographic survey of women and men in a variety of cultures. Pre-requisite: AN 100 or permission of instructor.

AN 356 Kinship and Social Organization 3 cr
Study of the range of variation in family and extended family relations. Marriage, sexuality, and household organization are viewed in comparative perspective. Pre-requisite: AN 100.

AN 357 Political Anthropology 3 cr
Authority, power, and conflict are examined cross-culturally and in evolutionary perspective. Particular emphasis is placed on the origins of stratification and the state. Pre-requisite: AN 100.

AN 358 Economic Anthropology 3 cr
An evolutionary survey of production and exchange in diverse societies. Considers the applicability of western economic theory to non-market economies, as well as their transformation by global capitalism. Pre-requisite: AN 100.

AN 365 Human Osteology 3 cr
This hands-on course focuses on the identification of the bones of the human skeleton and its application to specialities within biological anthropology, including bioarchaeology and forensic anthropology. Topics to be covered include human skeletal and dental anatomy, skeletal growth and development, skeletal pathology and anomalies, and the biological profile.

AN 394 Directed Studies 1-3 cr
Supervised readings or projects. No more than a total of six hours may be taken for credit. Pre-requisites: AN 100 or AN 101; prior approval of instructor.

AN 435 Museum Methods in Archaeology 3 cr
Archaeology as practiced in museums, including the registration and curation of archaeological collections; artifact conservation; public interpretation of the past; and exhibit design, composition, construction, and evaluation. Pre-requisite: AN 100 or 101.

AN 440 Advanced Archaeological Field Methods 4 cr
This course involves participant instruction in archaeological field and laboratory techniques, including advanced excavation and survey methods, soils analysis, site mapping with electronic instruments, sampling strategy, and site interpretation. Pre-requisite: permission of instructor.

AN 442 Cultural Resource Management 3 cr
This course examines the interaction between archaeologists, architectural historians, historic preservationists, state and federal governments, and the public with regard to cultural resources. The focus of the course is identification, evaluation, and mitigation of cultural resources. Related topics discussed include public perceptions of the past, ethics, and being a professional in historical preservation.

AN 454 Anthropological Theory (W) 3 cr
An advanced historical survey of anthropological ideas, with primary emphasis on contemporary theoretical orientations and debates. Examines anthropology's often contested status as a science or humanity. Pre-requisite: AN 100.

AN 456 Health and Culture (W) 3 cr
This course provides an overview of a broad range of subjects in the fields of medical anthropology and medical sociology. It analyzes the ways in which health, illness, and healing are embedded in their cultural and social contexts. And it investigates healing practices and meanings attributed to health and illness in a variety of cultures and social settings. Pre-requisite: AN 100 or permission of instructor.

AN 490 Special Topics 3 cr
Different topics of anthropological importance will be studied as announced. This three hour course may be repeated for credit as long as the content varies, up to a maximum of 6 credit hours. Pre-requisites: AN 100, junior or senior standing: minimum of six hours of Anthropology above 300 level; or permission of instructor.

AN 492 Senior Seminar 3 cr
Course specifically designed for majors in their senior year. Some topical aspect of the discipline will be analyzed. Pre-requisite: AN 100 or AN 101.

AN 496 Anthropology Internship 3-6 cr
Provides an opportunity to combine academic principles with practical experiences in an agency dealing with human relationships, cultural resources, or primate research. Specifics of the assignment result from a mutual agreement among student, course director and agency. Course may be repeated for a maximum of six hours of credit. Pre-requisites: Advanced standing in Anthropology major and permission of course instructor.

AN 498 Senior Thesis 3 cr
With the guidance and advice of a faculty mentor, students will identify and carry out an in-depth, year-long, field research project in anthropology. The Senior Thesis will be judged and graded by a committee of three faculty, chaired by the faculty mentor. This course will be repeated to continue the thesis during a second semester. This is a three hour course that is expected to be repeated once for a total of six hours. Pre-requisites: Anthropology major; senior status; permission of a faculty mentor through an AN 394 Directed Studies course taken during the junior year.

AN 499 Honors Senior Thesis (H) 3 cr
With the guidance and advice of a faculty mentor, honors students will identify and carry out an in-depth, year-long field research project in anthropology. The Honors Senior Thesis will be judged and graded by a committee of three faculty, chaired by the faculty mentor. This is a three hour course that can be repeated once for a total of six hours. Pre-requisites: Anthropology major; senior status; permission of a faculty mentor· grade-point average of 3.5; and completion of a thesis prospectus, prepared in consultation with the faculty mentor through an AN 394 Directed Studies course taken during the junior year.

AN 535 Museum Methods in Archaeology 3 cr
Archaeology as practiced in museums, including the registration and curation of archaeological collections; artifact conservation; public interpretation of the past; and exhibit design, composition, construction, and evaluation.

AN 542 Advanced Cultural Resource Management 3 cr
This course examines the interaction between archaeologists, architectural historians, historic preservationists, state and federal governments, and the public with regard to cultural resources. The focus of the course is identification, evaluation, and mitigation of cultural resources. Related topics discussed include public perceptions of the past, ethics, and being a professional in historical preservation.

AN 594 Directed Studies 1-3 cr
Field or library projects through which special interest of the student may be pursued on a tutorial basis with a graduate faculty member. Arrangements must be made prior to registration. Permission of the Department Chair is required.

ART HISTORY (ARH)

ARH 100 Survey of Art 3 cr
A survey of major periods of artistic development from prehistoric times to the present. Note: this course cannot be counted toward fulfilling degree requirements for B.F.A. or B.A. concentrations in Studio Art or Art History. Fee. **Core Course**.

ARH 103 Art History I 3 cr
A survey of art and architecture from prehistoric times to Medieval times. Fee. **Core Course**.

ARH 123 Art History II 3 cr
A survey of art and architecture from the 15th through the middle of the 20th century. Fee. **Core Course**.

ARH 245 History of Graphic Design 3 cr
A survey of graphic design from the ancient Sumerians to the present day. Pre-requisite: ARH 123. Fee.

ARH 248 History of Photography 3 cr
A comprehensive study of the medium of photography. The course traces chronologically and thematically the evolution of an independent art form. The focus of the course is the growth of this contribution to the visual arts, through the inseparable aspects of science and art. Fee.

ARH 250 African Art 3 cr
This course is designed as a basic orientation to the arts of Africa and the interpretation of experience as witnessed in various African visual art forms. The course will focus on the major civilizations and/or nations south of the Sahara Desert and their stylistic developments. Emphasis will be placed on the aesthetic

approach of African artists and the influence of their art on western culture. Fee.

ARH 290 Special Topics 3-9 cr
Different subjects or themes in art or architectural history as announced. This course may be repeated twice when content varies, for a maximum of nine credit hours. Pre-requisite: To be announced. Fee.

ARH 304 Ancient Greek Art and Architecture 3 cr
Architecture, sculpture, and painting in ancient Greece and the expansion and influence of Greek culture in the Ancient World. Pre-requisite: ARH 103. Fee.

ARH 306 Roman Art 3 cr
Architecture, painting, and sculpture in Ancient Rome and its empire. Pre-requisite: ARH 103. Fee.

ARH 312 Medieval Art and Architecture 3 cr
This course is a survey of the art and architecture of the Medieval world from the legalization of Christianity in AD 313 to the end of the Gothic Period. Pre-requisite: ARH 103. Fee.

ARH 320 Renaissance Art and Architecture 3 cr
A study of the art and architecture of Italy, Flanders, Germany, and France in the 14th, 15th, and 16th centuries. Pre-requisite: ARH 123. Fee.

ARH 332 Baroque and Rococo Art and Architecture 3 cr
This course is a survey of the art and architecture of the Seventeenth and Eighteenth Centuries. Pre-requisite: ARH 123. Fee.

ARH 340 Early Modern Art 3 cr
A study of the art developments in the 19th and early 20th centuries. Pre-requisite: ARH 123. Fee.

ARH 343 African-American Art 3 cr
Investigation of the art of African-Americans and the historical and social contexts in which the works were produced. Major periods of concentration include slavery, post-slavery, and the 20th century. Fee.

ARH 344 Contemporary Art 3 cr
A study of art developments since 1960. Fee.

ARH 345 American Arts: 1600-1940 3 cr
American painting, graphics and sculpture from the Colonial period to 1940. Fee.

ARH 346 American Architecture: 1600-1940 (W) 3 cr
American architecture from the colonial period to 1940. Pre-requisite: EH 102. Fee.

ARH 360 Traineeship in Museum Work 3-6 cr
This course is evaluated experience in museum work at an accredited institution of art. This course may be repeated once if the experience differs. Pre-requisites: Fifteen hours of Art History with a grade of "C" or above and permission of the course director.

ARH 362 Internship in Architectural Preservation 3 cr
Evaluated experience in architectural preservation at the Mobile Historic Development Commission. Cannot be used to fulfill requirements for the Art History primary concentration or minor. This course cannot be repeated. Pre-requisites: ARH 304, ARH 346, ARH 406, ARH 415, and permission of instructor. Fee.

ARH 390 Special Topics 3-9 cr
Different subjects or themes in art or architectural history as announced. This course may be repeated twice when content varies, for a maximum of nine credit hours. Pre-requisite: To be announced. Fee.

ARH 415 Gothic Architecture 3 cr
A study of architecture and architectural sculpture during the Gothic Age, with special emphasis on France, Germany, England, Italy, and Scandinavia. Pre-requisite: ARH 103. Fee.

ARH 422 Northern Renaissance Art 3 cr
Art of Flanders, Germany, and France in the 14th, 15th, and 16th centuries. Fee.

ARH 424 Italian Early Renaissance Art 3 cr
Art of 14th- and 15th-century Italy. Pre-requisite: ARH 123. Fee.

ARH 426 Sixteenth Century Italian Art 3 cr
Art of the Italian High Renaissance and Mannerist periods. Pre-requisite: ARH 123. Fee.

ARH 430 Baroque Art of Southern Europe 3 cr
A study of painting, sculpture, and architecture in Italy, France, and Spain during the 17th and early 18th centuries. Pre-requisite: ARH 123. Fee.

ARH 480 Women in Art 3 cr
A study of women throughout art history as both the subjects and creators of art. Pre-requisite: 9 hours of art history above the 200 level. Fee.

ARH 492 Seminar (W) 3-9 cr
This seminar will treat variable subjects. This course may be repeated twice when the content varies, for a maximum of nine credit hours. Pre-requisites: Nine hours of Art History numbered 300 or higher and permission of the instructor. Fee.

ARH 493 Methodology of Art History (W) 3 cr
An investigation of methodologies used by art historians in their examination of artistic production. Pre-requisite: nine hours of ARH courses above the 200 level. Fee.

ARH 494 Directed Studies/Research 3 cr
Research in a selected topic in art or architectural history under the direction of a faculty member, resulting in a scholarly paper. Pre-requisites: Nine hours in Art History courses numbered 300 or higher and permission of the instructor. Fee. This course may be repeated twice for a total of nine credit hours.

ARH 499 Honors Senior Thesis 3 cr
Honors students will identify and carry out independent scholarly research on an art history topic over two semesters with the guidance of a faculty member. At the end of the first semester, the project will be concluded with a formal oral presentation to the Visual Arts faculty. At the end of the second semester, the student will submit the senior thesis. The work from both semesters will be graded by a three-member faculty committee, chaired by the mentor. This course is to be taken as two sequential, three-credit course units.

ARH 590 Special Topics 3 cr
Different subjects or themes in art or architectural history as announced. This course may be repeated twice when content varies, for a maximum of nine credit hours. Pre-requisites: ARH 103, ARH 123, and nine hours in upper-level Art History courses.

STUDIO ART (ARS)

ARS 101 Art Appreciation 3 cr
A broad introduction to the nature, vocabulary, and media of the visual arts of drawing, painting, prints, the camera arts, graphic design, sculpture, crafts, and architecture. Fee. **Core Course**.

ARS 121 Perceptual Drawing I 3 cr
An introductory course with emphasis on the development of drawing skills to realistically represent natural and man-made forms using dry drawing media. Fee.

ARS 122 Perceptual Drawing II 3 cr
A continuation of ARS 121 using wet and mixed drawing media. Pre-requisite: ARS 121. Fee.

ARS 123 Two-Dimensional Design 3 cr
The study and application of art elements and principles of perception, for the purpose of increasing the student's skill in communicating visually with paints and other two-dimensional media. Fee.

ARS 124 Three-Dimensional Design 3 cr
A study and application of art principles to three-dimensional problems. Fee.

ARS 222 Figure Drawing I 3 cr
A study of the human figure using various drawing (dry) media. Pre-requisites: ARS 122, ARS 123. Fee.

ARS 225 Conceptual Drawing I 3 cr
An introduction to the developmental process of drawing as an art form using various subject matter and drawing media. Pre-requisites: ARS 122, ARS 123. Fee.

ARS 231 Painting I 3 cr
An introduction to the techniques and concepts of oil painting using various subject matter. Pre-requisites: ARS 122, ARS 123. Fee.

ARS 232 Painting II 3 cr
A continuation of ARS 231 with an emphasis on color, composition and technical facility in oil paint. Pre-requisite: ARS 231. Fee.

ARS 241 Introduction to Ceramics 3 cr
Introduction to the exploration of basic hand building and wheel techniques of working with clay. Included will be basic design considerations for traditional pottery forms as well as simple sculptural forms. There will be exposure to techniques in glazing and basic firing. Fee.

ARS 250 Lithography 3 cr
An introduction to lithography. Technical skills related to processing and printing an edition will be studied. The course will consist of studio practice, lectures, quizzes, and critiques. Pre-requisites: ARS 121 and ARS 123.

ARS 251 Intaglio/Etching 3 cr
An introduction to intaglio printing techniques. Technical skills related to drawing, processing, and printing the metal plates will be studied. The class will consist of studio problems in plate making an printing along with lectures, quizzes, and critiques. Pre-requisites: ARS 121 and ARS 123.

ARS 252 Woodcut/Relief 3 cr
A study of relief printmaking. Techniques may include and are not limited to relief, linoleum curt, and wood engraving. The course will consist of studio practice, lectures, quizzes, and critiques. Emphasis will be given to the skills involved in the use of hand tools to cut the image and skills used in printing and editioning the block. Pre-requisites: ARS 121 and ARS 123.

ARS 253 Silkscreen/Serigraphy 3 cr
An introduction to silkscreen printing as a fine art form. The class will explore various techniques used in waterbased screen printing, from simple stencils of hand drawn and cut paper designs to advanced photo processes. The course will consist of studio practice, lectures, quizzes, and critiques. Technical methods involved in color use, processing, and printing will be studied. Pre-requisites: ARS 121 and ARS 123.

ARS 261 Sculpture I 3 cr
A basic course with additive sculpture materials dealing with problems of mass, volume, and form. Pre-requisites: ARS 122 and ARS 124. Fee.

ARS 262 Sculpture II 3 cr
An introduction to basic metal fabrication, including cutting, brazing, and welding both ferrous and non-ferrous materials. Pre-requisite: ARS 261. Fee.

ARS 271 Introduction to Graphic Design 3 cr
An introduction to skills and techniques used in graphic design, problems in visual priorities, and use of selected materials. "Restricted to Majors". Pre-requisites: ARS 122, ARS 123. Fee.

ARS 272 Typography 3 cr
This class will examine typography as a visual communications tool. Students will explore issues within type and image. "Restricted to Majors"Pre-requisite: Must have a "C" or above in ARS 271. Fee.

ARS 273 Graphic Design Applications 3 cr
An introductory course on the fundamentals of using the Macintosh interface and basic instruction with desktop-publishing software for graphic design applications. "Restricted to Majors". Pre-requisite: Must have a "C" or above in ARS 271. Fee.

ARS 281 Intro to Photography 3 cr
An introduction to the technical and aesthetic aspects of photography. Investigation of picture making problems and control of photographic media. Involves the use of color transparency materials and an introduction to black and white processing and enlarging. Students must have 35 mm single lens reflex cameras capable of being operated in the manual exposure mode. Fee.

ARS 290 Special Topics 3-6 cr
A lower level studio, lecture, or seminar course treating a special medium, subject, or theme, as announced. This course may be repeated when the topic varies, for a maximum of six credit hours. Pre-requisite: As announced. Fee

ARS 311 Kiln Formed Glass 3-15 cr
The exploration of various non-blowing techniques of glass construction and manipulation. Students will use kilns to explore fusing, slumping, pate de verre, and casting. Pre-requisite: ARS 123. Fee.

ARS 312 Glassblowing 3 cr
The manipulation, formulation, construction and experimentation with glass as a sculptural medium. Emphasis will be on glassblowing. Other techniques may include furnace casting and kiln working. Fee.

ARS 322 Figure Drawing II 3 cr
Further study of the human figure using various drawing (wet and dry) media. Pre-requisite: ARS 222. Fee.

ARS 325 Conceptual Drawing II 3 cr
A continuation of ARS 225 with emphasis on concept driven work. Pre-requisite: ARS 225. Fee.

ARS 326 Color Theory 3 cr
A studio course in the nature, theory and application of color in an aesthetic context. Pre-requisites: ARS 222 or ARS 225.

ARS 331 Painting III 3-12 cr
A continuation of ARS 232 with emphasis on conceptual exploration in oil and/or water media paint. May be repeated for a maximum of 12 hours. Pre-requisite: ARS 232. Fee.

ARS 341 Intermediate Ceramics 3-9 cr
A continuation of ARS 241 with emphasis on hand-building or wheel techniques. May be repeated for a total of nine semester hours credit. Pre-requisites: ARS 122, ARS 124, ARS 241. Fee.

ARS 351 Intermediate Printmaking 3-9 cr
Further working in printmaking. Students may work in one or more of the following print media: Intaglio, lithography, relief screen printing. Students must have taken the 200 level of the appropriate print media to move to intermediate level of that same media. The course may be repeated for a maximum of nine semester hours. Pre-requisites: ARS 250, ARS 251, ARS 252, or ARS 253.

ARS 361 Sculpture III 3-6 cr
An introduction to direct carving processes with wood and stone. This course may be repeated for a total of six semester hours credit. Pre-requisite: ARS 262. Fee

ARS 362 Intermediate Sculpture IV 3-6 cr
Advanced mold making techniques. This course may be repeated for a total of six semester hours credit. Pre-requisite: ARS 361. Fee.

ARS 372 Graphic Design Production 3 cr
Design, typography, page layout, paper selection, prepress techniques and the preparation of art for reproduction using both traditional and digital means. Pre-requisites: Must have a "C" or above in ARS 272, ARS 273. Fee.

ARS 373 Graphic Design Identity Systems 3 cr
An intermediate course developing design skills used in the production of printed materials for visual communications with an emphasis on logos, letterheads, brochures, and posters. Pre-requisites: Must have a "C" or above in ARS 272, ARS 273. Fee.

ARS 374 Publication Design 3 cr
An intermediate course developing design skills used in the production of printed materials for visual communications with an emphasis on newsletters, magazines, and newspaper graphics. Pre-requisites: Must have a "C" or above in ARS 372. Fee.

ARS 375 Digital Graphic Design 3 cr
An advanced level course utilizing computers to produce graphic design work for printed and digital media. Pre-requisite: Must have a "C" or above in ARS 372 and ARS 373 or concurrent enrollment in ARS 373. Fee.

ARS 376 Illustration 3 cr
Conceptual approaches, materials and techniques used to solve problems in illustration, emphasizing developing rendering skills. Pre-requisites: Must have a "C" or above in ARS 372, ARS 373, or ARS 374, and a 200-level drawing course. Fee.

ARS 381 Intermediate Photo I 3 cr
This course is designed to allow you to begin to communicate your own vision and artistic voice. This course is intended to take your technical skills to the next level, by reading, writing and thinking about photography.
Pre-requisite: ARS 281. Fee.

ARS 382 Intermediate Photo II 3 cr
The three main objectives of this course are to further your knowledge of fine art photography, learn how to conceptualize ideas through the medium of photography, and to treat photography primarily as a creative medium for discussing personal, political, and social concerns. Since photography is tied to many technical processes, these concerns will also be acknowledged in this class. Pre-requisite: ARS 381. Fee.

ARS 387 Digital Silver Photography 3 cr
This studio course examines the intersecting theories and practices of photography with digital cameras and computer imaging. Pre-requisite: ARS 382. Fee.

ARS 396 Professional Practices for the Artist (W) 3 cr
A workshop to prepare the student for employment, graduate school, or a professional career in the visual arts. Pre-requisite: EH 102 and Junior standing. Fee.

ARS 412 Advanced Glassblowing 3-15 cr
Continued development of ARS 312 with emphasis on advanced technique, manipulation and form development. Course assignments will emphasize personal creativity and exploration. Fee.

ARS 422 Figure Drawing III 3-9 cr
Individual problems with the human figure as subject, emphasizing concept, composition and media. Pre-requisite: ARS 322. Fee.

ARS 425 Conceptual Drawing III 3 cr
A continuation of ARS 325 with emphasis on exploration of personal concepts. Pre-requisite: ARS 325. Fee.

ARS 431 Painting IV 3-6 cr
A continuation of ARS 331 with emphasis on personal development of conceptual approaches in oil and/or water media paintings. Students with Primary Concentrations in Painting will use this course to prepare for thesis. This course may be repeated for a total of six semester hours credit. Pre-requisites: Six hours of ARS 331. Fee.

ARS 441 Advanced Ceramics 3-12 cr
A continuation of ARS 341 with emphasis on hand-building or wheel processes. May be repeated for a total of 12 semester hours credit. Pre-requisites: 9 hours of ARS 341. Fee.

ARS 451 Advanced Printmaking 3-6 cr
A continuation of ARS 351 with emphasis on each student's developing and refining an individual approach to creative work. For students with a Primary Concentration in Printmaking, this course is preparation for Thesis. Pre-requisite: ARS 351. Fee.

ARS 461 Sculpture V 3-6 cr
Experimental work with synthetic materials. This course may be repeated for a total of six semester hours credit. Pre-requisites: ARS 362, a declared Primary Concentration in Sculpture, and permission of the instructor. Fee.

ARS 472 Senior Graphic Design 3 cr
An advanced workshop that addresses issues of visual communication using graphic design as a problem-solving tool. Emphasis on creating a body of work of professional quality. Students will also present a portfolio to be evaluated by a faculty member. Pre-requisites: Must have a "C" or above in ARS 373, ARS 374. Fee.

ARS 473 Web Design for Graphic Designers 3 cr
An introduction to interactive applications. This course provides instruction in innovative, artistic design and development of visual communication skills related to interactive applications. Pre-requisites: Must have a "C" or above in ARS 372, ARS 373, and ARS 374.

ARS 479 Business Practices for Graphic Design 3 cr
A study of the business principles of Graphic Design. Projects encourage both collaborative and independent study. Students explore design as a commercial art and develop the skills to coordinate projects through all phases of a professional, business relationship. Pre-requisites: Must have a "C" or above in ARS 373, ARS 374. Fee.

ARS 481 Advanced Photography 3-6 cr
This course will strive to help further develop each student's artistic strength in their use of the photographic medium. Each student will be required to write a statement explaining the body of work that they will create and what particular processes they might be interested in exploring. Pre-requisite: ARS 382. Fee.

ARS 483 Color Photography 3-6 cr
This is an introduction to color photography. The goals are to become familiar with all aspects of color photography including, film selection, procession, printing, theory, and criticism. Pre-requisite: ARS 382. Fee.

ARS 485 Alternative Photographic Processes 3-6 cr
This is an advanced studio art course designed for students with a background in photography (primary B&W) who want to expand their image making vocabulary through the use of early photographic techniques. Pre-requisite: ARS 481. Fee.

ARS 487 Photo Bookmaking 3-6 cr
This class will focus on the design and construction of artist books. We will be exploring structure and form and how they support and influence the content of a book. Pre-requisite: ARS 382. Fee.

ARS 488 Graphic Design Thesis 3 cr
A self-directed creative project in the area of graphic design with the guidance of a faculty member. Evaluation of the project is completed by a faculty committee and committee approval is needed to pass the course. The thesis must be exhibited publicly as a class. The student is required to work at least 12 hours per week on the project. Pre-requisites: Must have a "C" or above in ARS 472 and completion of the Graphic Design concentration and acceptance in the BFA program. Fee.

ARS 490 Special Topics 3-6 cr
An advanced studio, lecture, or seminar course treating a special medium, subject, or theme, as announced. This course may be repeated when the topic varies, for a maximum of six credit hours. Pre-requisites: Senior standing and permission of the instructor.

ARS 494 Directed Studies 3-6 cr
Independent work in approved studio medium or topic under the direction of a studio faculty member. May be repeated for a maximum of six credits. Pre-requisites: As announced, senior standing, and permission of the instructor. Fee.

ARS 496 Professional Studies: Internship 3 cr
Students intern in specialized area of interest. Written report required. Pre-requisite: Junior or senior standing.

ARS 498 Senior Thesis 6 cr
An independent project of creative work in the area of the Primary Concentration or one or more Secondary Concentrations, with the guidance of one to three faculty advisors. The student is required to work at least 18 hours a week in the studio. The thesis must be publicly exhibited.

ARS 499 Honors Senior Thesis 3 cr
Honors student, the first semester, will identify and carry out independent scholarly research on a topic with the guidance of a faculty member. The second semester, the student will produce a body of work that incorporates and exemplifies the ideas explored in the research paper. The paper will be concluded with a formal presentation to the Visual Arts faculty. The Honors project will be graded by a three-member faculty committee, chaired by the mentor. This course is to be taken as two sequential, three-credit course units.

ARS 520 Graduate Drawing 3-9 cr
Intensive course in drawing as both a set of skills and as a creative medium of expression. May be repeated for a total of nine credit hours. Pre-requisites: ARS 422 or 425 or bachelor's degree in art or art education. Fee.

ARS 530 Graduate Painting 3-9 cr
Intensive course in painting with traditional or contemporary media, subjects, and concepts. May be repeated for a total of nine credit hours. Pre-requisite: ARS 431 or bachelor's degree in art or art education. Fee.

ARS 540 Graduate Ceramics 3-9 cr
A study of clay as a creative medium of expression. Problems of form, volume, space, texture, decoration, and function will be investigated in their relation to selected ceramic processes and building techniques. May be repeated for total of nine credit hours. Pre-requisite: ARS 441 or bachelor's degree in art or art education. Fee.

ARS 550 Graduate Printmaking 3-9 cr
Intensive investigation of visual, expressive, or technical problems in one or more printmaking media. May be repeated for a total of nine credit hours. Pre-requisite: ARS 451 or bachelor's degree in art or art education. Fee.

ARS 560 Graduate Sculpture 3-9 cr
Intensive investigation of problems of mass, volume, form and space using one or more sculptural media. May be repeated for a total of nine credit hours. Pre-requisite: ARS 461 or bachelor's degree in art or art education. Fee.

ARS 590 Special Topics 3-9 cr
A graduate course treating a special medium, subject, or theme, as announced. May be repeated twice when content varies, for a maximum of nine credit hours. Pre-requisites: Thirty-two hours in Studio Art or a bachelor's degree in art or art education. Fee.

AIR FORCE STUDIES (AS)

AS 101 The Foundations of the United States Air Force I 1 cr
A survey course designed to introduce students to the United States Air Force and encourage participation in Air Force Reserve Officer Training Corps. Featured topics include: overview of ROTC, special programs offered through ROTC, mission and organization of the Air Force, brief history of the Air Force, introduction to leadership and leadership related issues, Air Force Core Values, Air Force officer opportunities, and an introduction to communication studies. Leadership Laboratory is mandatory for AFROTC cadets and complements this course by providing cadets with followership experiences.

AS 101L Foundation of the U.S. Air Force I Lab 0 cr
Provides an introduction to the military profession, including applications in leadership, drill and ceremony, customs and courtesies and communication service. Co-requisite: AS 101.

AS 102 The Foundations of the United States Air Force II 1 cr

A survey course designed to introduce students to the United States Air Force and encourage participation in Air Force Reserve Officer Training Corps. Featured topics include: overview of ROTC, special programs offered through ROTC, mission and organization of the Air Force, brief history of the Air Force, introduction to leadership and leadership related issues, Air Force Core Values, Air Force officer opportunities, and an introduction to communication studies. Leadership Laboratory is mandatory for AFROTC cadets and complements this course by providing cadets with followership experiences.

AS 102L Foundation of the U.S. Air Force II Lab 0 cr

Provides an introduction to the military profession, including applications in leadership, drill and ceremony, customs and courtesies and community service. Co-requisite: AS 102.

AS 201 The Evolution of USAF Air and Space Power I 1 cr

Designed to examine general aspects of air and space power through a historical perspective. Utilizing this perspective, the course covers a time period from the first balloons/ dirigibles to the Korean Conflict. Historical examples are provided to extrapolate the development of Air Force distinctive capabilities (core competencies), and missions (functions) to demonstrate the evolution of what has become today's USAF air and space power. Furthermore, the course examines several fundamental truths associated with war in the third dimension: e.g., Principles of War and Tenets of Air and Space Power. The students will also complete several writing and briefing assignments to meet Air Force communication skills requirements.

AS 201L The Evolution of U.S. Air Force I Lab 0 cr

Provides an introduction to the military profession, including applications in leadership, drill and ceremony, customs and courtesies and community service. Co-requisite: AS 201.

AS 202 The Evolution of USAF Air and Space Power II 1 cr

Designed to examine general aspects of air and space power through a historical perspective, covering a time period from the Korean Conflict to the space-age systems of the Global War on Terror. Historical examples are provided to extrapolate the development of Air Force distinctive capabilities (core competencies), and missions (functions) to demonstrate the evolution of what has become today's USAF air and space power. Furthermore, the course examines several fundamental truths associated with war in the third dimension: e.g., Principles of War and Tenets of Air and Space Power. The students will also complete several writing and briefing assignments to meet Air Force communication skills requirement.

AS 202L The Evolution of U.S. Air Force II Lab 0 cr

Provides an introduction to the military profession, including applications in leadership, drill and ceremony, customs and courtesies and community service. Co-requisite: AS 202.

AS 301 The United States Air Force Leadership Studies I 3 cr

A study of leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, leadership ethics, and communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. A mandatory Leadership Laboratory complements this course by providing advanced leadership experiences in officer-type activities, giving students the opportunity to apply leadership and management principles of this course.

AS 301L Air Force Leadership Studies I Lab 0 cr

Provides an introduction to the military profession, including applications in leadership, drill and ceremony, customs and courtesies and community service. Co-requisite: AS 301.

AS 302 The United States Air Force Leadership Studies II 3 cr

A study of leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, leadership ethics, and communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. A mandatory Leadership Laboratory complements this course by providing advanced leadership experiences in officer-type activities, giving students the opportunity to apply leadership and management principles of this course.

AS 302L Air Force Leadership Studies II Lab 0 cr

Provides an introduction to the military profession, including applications in leadership, drill and ceremony, customs and courtesies and community service. Co-requisite: AS 302.

AS 401 National Security Affairs/ Preparation for Active Duty I 3 cr

Examines the national security process, regional studies, advanced leadership ethics, and Air Force doctrine. Special topics of interest focus on the military as a profession, officership, military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Within this structure, continued emphasis is given to refining communication skills.

AS 401L National Security Affairs and Preparation for Active Duty I Lab 0 cr

Provides an introduction to the military profession, including applications in leadership, drill and ceremony, customs and courtesies and community service. Co-requisite: AS 401.

AS 402 National Security Affairs/ Preparation for Active Duty II 3 cr

Examines the national security process, regional studies, advanced leadership ethics, and Air Force doctrine. Special topics of interest focus on the military as a profession, officership, military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Within this structure, continued emphasis is given to refining communication skills.

AS 402L National Security Affairs and Preparation for Active Duty II Lab 0 cr

Provides an introduction to the military profession, including applications in leadership, drill and ceremony, customs and courtesies and community service. Co-requisite: AS 402.

AS 494 Directed Study 1-3 cr

Students will receive individual instructor guidance and may prepare a formal report/research paper on some aspect of Air Force Studies or other assignments as determined by instructor.

DOCTOR OF AUDIOLOGY (AUD)

AUD 612 Anatomy and Physiology of the Hearing Mechanism 4 cr

Study of the anatomy and physiology of the nervous system, the anatomy and physiology of the outer, middle, inner ear, including the vestibular system, and the central auditory nervous system.

AUD 613 Psychoacoustics 3 cr

Study of the principles, procedures and research involved in the field of psychoacoustics and of the relationships between the physical dimensions of auditory stimuli and the resultant perceptual experience; as well as the relationships among psychoacoustic testing and both auditory physiology and the audiologic evaluation process. Participation in laboratory assignments will be required.

AUD 614 Instrumentation and Acoustics 3 cr

Study of basic electricity, acoustics and measurement of sound properties, wave analysis, transducers, measuring and calibration systems, speech processing systems, and system interaction and integration.

AUD 616 Research Design and Statistics for the Hearing Sciences 3 cr

Research designs utilized in the hearing sciences; elements of research proposals and studies; how to critique a research study; how to conduct a literature review; APA format; students will be required to write précis of research articles and write a research proposal. Elements of modern statistics including sets and functions, probability theory, hypothesis testing, analysis of variance models, correlation, regression, distribution-free statistics, SPSS, multivariate statistical techniques including multiple regression, multivariate analysis of variance, discrimination, canonical and factor analysis.

AUD 621 Professional Issues 2 cr

This course will address a variety of professional issues such as organizations, societies, and their histories; codes of ethics; scopes of practice; credentialing and licensure; the development of the Au.D.; guidelines and position statements generated by ASHA, AAA, ADA, and AVI; standards, and best practices; methods and models of service delivery; and infection control.

AUD 622 Medical Audiology 3 cr

This course will address acquired and congenital diseases and disorders of the outer, middle, and inner ear, and the central auditory

nervous system, occurring across the lifespan; imaging techniques and non-audiologic medical and surgical interventions for these conditions; and cerumen management techniques.

AUD 623 Pharmacology in Audiology 3 cr
This course will provide the basic science background necessary to understand the effects of medications on the auditory and balance systems. This course will also address drug treatment strategies for hearing loss and balance disorders. Topics will include mechanisms of drug actions, side effects, how age and disease affect these mechanisms, and specific effects of certain drugs on the hearing and balance system.

AUD 630 Electroacoustic Characteristics of Amplification Systems 3 cr
This class will address styles and types of ear molds, hearing aids, and assistive listening devices; 1)components common to all amplification systems as well as optional features (such as directional microphones, volume controls, telecoils, etc) and their electroacoustic properties and functioning; use of ANSI standards; 2) physical, acoustic, and electroacoustic modifications of ear molds and amplification systems.

AUD 631 Selection, Fitting, and Verification of Amplification Systems 3 cr
This class will address the principles of selection, fitting, and verification of amplification systems, including hearing aids and assistive listening devices; subjective and objective audiologic assessments used to determine need for, select, and fit appropriate amplification systems for patients of all ages; and techniques used to select and fit amplification systems. The course will also address subjective and objective verification procedures, specifically addressing the importance of including Real-Ear Measures and subjective self-assessment measures in the amplification process. Special Fee.

AUD 632 Hearing Aid Laboratory 2 cr
This class will address the principles of verification and validation; tools used to verify appropriate fitting of amplification systems (such as real-ear probe-mic equipment) and techniques used to validate fitting (such as software packages, and subjective and objective audiologic measures); cochlear implant re-mapping.

AUD 633 Advanced Sensory Aids 3 cr
This course will address advanced technologies for individuals with hearing-impairment such as cochlear and brainstem implants, vibrotactile aids, and implantable devices, as well as the selection and fitting of these technologies.

AUD 640 Basic Audiologic Assessment 3 cr
This course will address the principles of cross-check, the test battery approach, differential diagnosis, relevant test equipment, instruments, and transducers, administration and interpretation of the pure-tone testing, clinical masking, case history, otoscopy, and tuning-fork tests, speech audiometry; tests for pseudo-hypoacusis, ototoxicity, site-of-lesion testing and historical assessments; and informal assessment procedures.

AUD 641 Immittance and Otoacoustic Emission Measures 3 cr
This course will address administration and interpretation of acoustic immittance and otoacoustic emission measures across the life span. Topics will address standard and multifrequency tympanometry, acoustic reflex testing, and eustachian tube function testing; spontaneous, transient, and distortion product OAE measurement; and the influence of intrinsic and extrinsic variables, including cochlear and retro-cochlear pathology on outcomes and differential diagnosis.

AUD 642 Pediatric Audiology 3 cr
The course will address issues associated with providing audiologic services to pediatric and developmentally delayed populations. Issues will include gestational development, test administration and interpretation; genetic transmission of hearing loss, risk factors for hearing loss; principles of screening and the development and construction of a screening program; universal newborn hearing screening and early hearing detection and intervention programs.

AUD 643 Audiology and Aging 3 cr
This course will address the issues associated with providing audiologic services to older adults. Issues will include effects of aging on anatomy, physiology, and function, and test administration and interpretation issues specific to older adults.

AUD 645 Evoked Potential Measures 3 cr
This course will address anatomic generators, instrumentation, stimulus and acquisition parameters, measurement protocols, analysis and interpretation, and applications of electrophysiological measures including ECoG, ABR, ASSR, and AMLR, across the lifespan; sedation protocols; and effect of intrinsic and extrinsic variables.

AUD 647 Adult Audiologic Rehabilitation 3 cr
This course will address the implications of hearing loss in adulthood including the educational, vocational, social, and legislative concerns of adults with hearing loss; assessment tools and intervention techniques used to maximize communication skills, including communication strategy training, speech reading, and group therapy approaches.

AUD 648 Counseling the Hearing Impaired and Their Families 3 cr
This class will address various theories, principles and techniques associated with the social and psychological aspects of disability as well as issues specific to and techniques used when counseling patients with hearing loss and their families.

AUD 649 Pediatric Audiologic Habilitation and Educational Audiology 3 cr
This course will address the speech, language, and communication of children with hearing impairment. Manual and oral modes of communication will be discussed, including American Sign Language, SEE1 and SEE2, cued speech, total communication and auditory-verbal therapy. Other issues to be addressed will include the development, management, and utilization of hearing and middle ear system screening programs, classroom acoustics, selection and fitting of classroom-based amplification and Federal Law associated with children with special needs.

AUD 651 Assessment and Treatment of Auditory Processing Disorders 3 cr
This course will address the development, assessment and interpretation of an auditory processing screening protocol and test battery across the lifespan, as well as intervention approaches.

AUD 653 Industrial and Forensic Audiology 3 cr
This class will address OSHA regulations and documentation, synergistic effects of noise exposure, sound measurement in the field, use of dosimeters, development and implementation of a hearing conservation program, hearing protection options, their fitting and evaluation, and forensic audiology.

AUD 654 Tinnitus and Hyperacusis 2 cr
This class will address assessment and intervention approaches used in the management of tinnitus and hyperacusis.

AUD 655 Speech-Language Pathology for Audiologists 3 cr
This class will address specific topics in speech-language pathology relevant for audiology majors.

AUD 656 Vestibular Assessment 4 cr
This course will include a discussion of the peripheraland central anatomy and physiology of the balance system and the test measures used to assess the function of this complex system. Topics will include case history and screening measures, as well as test protocols and analysis of results onelectronystagmography/videonystagmography, rotational testing, posturography, and vestibular evoked myogenic potentials.

AUD 657 Management of Vestibular Disorders 2 cr
This course will focus on peripheral and central disorders of the vestibular system and the interpretation of results on diagnostic tests in disordered patients. Pharmacological and surgical treatments of dizziness will be discussed, as well as rehabilitative techniques to manage the vestibular pathology.

AUD 658 Advanced Neuro-Physiological Measures 3 cr
This course will address advanced electrophysiological techniques, including ENOG, ALR, ERPs (i.e. P300, etc), and neuroimaging techniques (fMRI and PET) with an emphasis on auditory and cognitive processing, across the lifespan; source localization techniques; instrumentation, stimulus and acquisition parameters; measurement procedures; analysis and interpretation.

AUD 661 Development and Management of Audiology Practices 3 cr
This course will address issues associated with audiology practice management including techniques involved in developing a mission statement and a business plan; working with an accountant; determining type, location, and name of practice; regulation, licensure, and hiring a legal advisor; equipment and service delivery decisions; establishing accounts with suppliers, paying bills and budgeting; third-party reimbursement, Medicaid, and Medicare; hiring

and supervision; demographics and marketing; use of outcome data; and professional writing.

AUD 670 Clinical Practicum I 1 or 2 cr
Students will observe clinical activities as well as obtain experience with basic audiologic techniques on non-clinic populations in the USA Speech and Hearing Center while under direct supervision. Special Fee.

AUD 671 Clinical Practicum II 3 cr
Students will obtain experience administering a number of audiologic assessment and intervention techniques to clinic populations in the USA Speech and Hearing Center and external practicum sites while under direct supervision. Special Fee.

AUD 672 Clinical Practicum III 1 cr
Students will obtain experience administering a number of audiologic assessment and intervention techniques to clinic populations in the USA Speech and Hearing Center and external practicum sites while under direct supervision. Special Fee.

AUD 675 Special Topics in Audiology 1 cr
Students will identify cases or service delivery issues of clinical or professional interest and present these cases or issues to fellow students, clinical supervisors, and faculty via a chat room in a grand rounds format.

AUD 676 Externship 6 cr
Off-campus opportunity to obtain clinical experience in a full-time setting.

BIOCHEMISTRY (BCH)

BCH 526 Literature Reports 1 cr
Students and faculty participate in a supervised reading of the current literature and meet periodically (usually once a week) to interact in a discussion of the selected article or topic. The goal of this course is to maintain the faculty's and students' level of information at a "state of the art" in both methods and theory in the discipline and to develop critical skills in reviewing the literature.

BCH 527 Directed Studies 1-6 cr
Students participate in research under the direction of a graduate faculty member. The student may pursue independent research or participate in a literature project.

BCH 590 Special Topics 1-3 cr
This course provides in-depth tutorial exposure to specific areas in the discipline. Student and/or faculty presentations followed by group discussions (usually in the Socratic mode), examine the subject matter in an area of current interest either to one student or to a group of students. Credits and titles are arranged with an individual faculty member.

BCH 626 Research Seminar 1 cr
Students and faculty present a research topic for discussion before members of the department. The presentations are usually scheduled on a rotational basis. The student may present research data for critique by the faculty.

BCH 799 Research/Dissertation 1-6 cr
Independent research by the student under the sponsorship of the graduate faculty in individual departments in the Basic Medical Sciences. Pre-requisite: Approved formal research proposal.

BIOLOGY (BLY)

Pre-requisites for all courses may be waived with permission of the instructor.

BLY 101* Life Science I 3 cr
The first of a two-semester sequence designed for the non-major. The basic principles of biological phenomena are emphasized by examples relating to the human. Cell structure and function, energy, and organ systems are studied. **Core Course**.

BLY 101L Life Science I Laboratory 1 cr
Laboratory exercises associated with BLY 101. BLY 101 must be taken concurrently or as a Pre-requisite. Together, BLY 101 and BLY 101L count as one laboratory science course, partially fulfilling general education requirements. Fee.

BLY 102* Life Science II 3 cr
A continuation of BLY 101. Organ systems, cell reproduction, plant and animal development, heredity, evolution, and ecology are studied. Pre-requisite: BLY 101. Core Course.

BLY 102L Life Science II Laboratory 1 cr
Laboratory exercises associated with BLY 102. BLY 102 must be taken concurrently or as a Pre-requisite. Together, BLY 102 and BLY 102L count as one laboratory science course, partially fulfilling general education requirements. Fee.

BLY 121 General Biology I 3 cr
A study of molecular composition of cells, cell structure, metabolism, genetics, microevolution, Monera, Protista, and Fungi. Students with an ACT composite score of less than 21 should first successfully complete BLY 101 or CH 100 or CH 131 before enrolling in BLY 121. BLY 101 credit may be applied as elective credit toward a degree but cannot be included in the 28 hours required for a biology major. **Core Course**.

BLY 121L General Biology I Laboratory 1 cr
Laboratory exercises associated with BLY 121. BLY 121 must be taken concurrently or as a Pre-requisite. Together, BLY 121 and BLY 121L count as one laboratory science course, partially fulfilling general education requirements. Fee.

BLY 122 General Biology II 3 cr
A study of plants, major invertebrate phyla, vertebrate morphology, plant and animal physiology, animal behavior, macroevolution, and ecology. Pre-requisite: BLY 121. **Core Course**.

BLY 122L General Biology II Laboratory 1 cr
Laboratory exercises associated with BLY 122. BLY 122 must be taken concurrently or as a Pre-requisite. Together, BLY 122 and BLY 122L count as one laboratory science course, partially fulfilling general education requirements. Fee.

NOTE: A "C" or better in BLY 121 and BLY 122, or the equivalents, are Pre-requisites to all courses numbered 300 or above except by permission of the Chair of the Department of the Biological Sciences. A year of college chemistry, or advanced high school preparation in biology and chemistry is highly recommended for these two introductory courses.

Credit will not be allowed for both the non-major sequence (BLY 101, BLY 101L and BLY 102, BLY 102L) and the major/minor sequence (BLY 121, BLY 121L, BLY 122, BLY 122L.)

BLY 134 Ocean Science 3 cr
An introduction to physical, chemical, and biological oceanography. Pre-requisite: BLY 101 (usually taught in the spring semester).

BLY 134L Ocean Science Laboratory 1 cr
Laboratory experiences associated with BLY 134. Pre-requisite: BLY 134 or concurrent enrollment. Fee.

BLY 205 Introduction to Environmental Science 3 cr
Environmental science, including the fundamentals required to understand how ecosystems work, how environmental modifications affect ecosystems and living things, and how living things affect their environment. Topics to be emphasized include the effects of pollution, habitat modification, and other environmental changes, on ecosystems, plants, wildlife, man, outdoor recreation, and the future. Public health and medical effects will also be considered. Many topics covered are of special significance to this region: wetlands, the effects of dredging and filling, artificial lake construction, development, agricultural and forestry practices on ecosystems, plants, and animals. Pre-requisite: college biology, or permission of instructor.

BLY 207* Biology of Aging 3 cr
A descriptive review of processes of aging. Emphasis is placed on studying structural and functional changes that could occur with increase in chronological age. Pre-requisite: BLY 101, equivalent course, or permission of instructor (usually taught in the fall, spring, and summer semesters).

BLY 213* Microbiology 3 cr
A survey of bacteria, fungi, protozoa, and viruses with emphasis on host-microbe interactions, immune responses, and control mechanisms. Pre-requisite: BLY 101.

BLY 214* Laboratory Studies in Microbiology 1 cr
A series of laboratory experiments designed to provide practical experiments in basic microbial techniques. Pre-requisite: BLY 213 or concurrent enrollment. Fee.

BLY 215* Human Genetics 3 cr
For students who desire knowledge of human genetics either to further their career goals or to enhance their liberal-arts education. Pre-requisite: BLY 101 or permission of chair.

NOTE: A "C" or better is required in BLY 301, BLY 302, and BLY 303 before any other BLY 300-400 level classes can be taken.

BLY 301 Cell Biology 3 cr
A course designed to integrate cell structure and function: the study of the ultrastructure, organization, physiology, genetics, and other functions of the cell. Pre-requisites: CH 131. **Core Course**.

BLY 302 Genetics 3 cr
An introduction to both classical and modern genetic concepts and theory, with an emphasis on problem-solving. Topics covered include Mendelian genetics, molecular genetics, and evolutionary genetics. Pre-requisite: CH 131. **Core Course**.

BLY 303 Ecology and Evolution 3 cr
Introduction to the fundamental concepts of ecology and evolution, with emphasis on their status as interrelated, central organizing principles of biology. Major topics will include community structure, biotic and abiotic interactions, mechanisms of evolution, adaption, and phylogenetics. Theoretical and practical issues will be addressed. **Core Course**.

BLY 314 Molecular Microbiology (W) 4 cr
Study of prokaryotic and eukaryotic microorganisms and their relationship to their environment. Molecular, genetic, and biochemical aspects of each will be emphasized.

BLY 332 Biology of Algae 4 cr
A survey of non-vascular plants; algae, fungi, liverworts, and mosses, with emphasis on morphology and taxonomy.

BLY 342 Experimental Cell Biology (W) 2 cr
Laboratory experience with instrumentation and techniques utilized in modern cell biology research including organellar isolation, protein analysis, and microscopic techniques.

BLY 352 Biology of Terrestrial Vertebrates (W) 4 cr
Evolution, characteristics, classification, life history, ecology, and behavior of amphibians, reptiles, birds, and mammals. Laboratory and field work emphasize local species. Usually taught in alternate spring semester.

BLY 354 General Entomology 4 cr
Classification and habits of insects, including collection, preservation, and identification of those occurring in South Alabama. Taught in the fall semester.

BLY 360 The Invertebrates 4 cr
Detailed study of the invertebrate phyla: taxonomy, ecology, and phylogenetic relationship. Terrestrial, freshwater, and marine forms are studied.

BLY 363 Vertebrate Embryology 4 cr
Avian and amphibian histogenesis and organogenesis from fertilization to time of histological maturity.

BLY 365 Comparative Vertebrate Anatomy 5 cr
Anatomy and evolution of the organ systems of the major vertebrate groups. Laboratory includes dissections of dogfish sharks and cats. Usually taught in the fall semester.

BLY 367 Marine Biology 4 cr**
Local marine environments and the classification, morphology, and ecology of the locally occurring flora and fauna. Usually taught in the summer semester.

BLY 368 Dolphins And Whales 2 cr**
Classification, anatomy, and ecology of cetaceans and manatees. Usually taught in summer semester.

BLY 369 Biology and Conservation of Marine Turtles 2 cr
Topics to be covered include the identification, distribution, nesting behavior, migratory behavior, feeding ecology, population biology, genetics, developmental habitats, temperature-dependent sex determination, paleontology, and conservation of marine turtles. The course will culminate with a multi-day field trip to sea turtle nesting beaches, foraging grounds, and sea turtle research/rehabilitation facilities in the southeastern U.S. Usually taught in the summer semester.

BLY 370 Marine Aquaculture 2 cr**
Techniques and issues involved with the commercial culture of marine organisms including nutrition, reproductive biology, production, water quality, processing, marketing, and economics. Usually taught in summer semester.

BLY 371 Shark and Ray Biology 2 cr
Special emphasis will be placed upon regional and local shark identification and field techniques such as longline and gillnet sampling. Lecture topics will include chondrichthyan origin, systematics, sensory biology, locomotion, food consumption, osmoregulation, reproductive biology, life history, ecology, fisheries and conservation. Usually taught in the summer semester.

BLY 372 Coastal Birds of Alabama 2 cr
This is a field-based course with emphasis on nesting sites, nesting behavior, identification, population dynamics, behavior, functional ecology, migration, mechanics of flight, and breeding biology of birds typically found in Alabama's coastal regions. Usually taught every other summer semester.

BLY 425 Chemical Ecology (W) 3 cr
This class focuses on chemically mediated interactions between, among, and within organisms in both the aquatic and terrestrial environments. The topics covered include: chemoreception, chemical defense, chemical attraction, and the impact of chemical ecology on humans. This course includes a writing component. Students will gain experience in critical analysis, research development, grant writing and computer based presentation.

BLY 426 Freshwater Ecology 3 cr
This course examines four aspects of freshwater ecology; physical and chemical properties of water, biotic communities, links among freshwater systems, and human influence on freshwater ecosystems. Students will be required to submit a collection of local freshwater invertebrates. Taught every second fall semester.

BLY 430 Marine Botany 4 cr**
A general survey of marine algae and vascular and non-vascular plants associated with the marine environment. Distribution, identification, structure, ecology, and reproduction will be considered. Course offered only through Marine Environmental Science Consortium. Usually taught in the summer semester.

BLY 431 Plant Physiology (W) 4 cr
A critical study of higher plant function. This course includes a study of water relations, plant biochemistry, and plant development. U(usually taught in the spring semester. Fee. Pre-requisite: CH 132.

BLY 433 Evolution of Vascular Plants 4 cr
A survey of the systematics, taxonomy, and structure of the major groups of vascular plants. Fossil plants (paleobotany) will also be covered where relevant. Many labs are outdoors and focus on plant structure and identification utilizing the rich local flora.

BLY 435 Biology of Fungi 4 cr
Identification and morphology of fungi with some emphasis on their relation to human affairs. Collection required. Usually taught in the spring semester.

BLY 436 Animal Physiology (W) 4 cr
This class will take a comparative approach to animal physiology. Comparisons of structural and functional relationships in the body systems of invertebrates and vertebrates, including humans, will be made. A basic foundation in chemistry and cell biology is required for this course. This course incorporates writing and computer components. Students will gain experience in critical analysis, research development and analysis, word processing, computer based statistical and graphical analysis, and in computer based presentation programs. Usually taught in the spring semester. Fee.

BLY 440 Biochemistry I 3 cr
Principles of carbohydrate, protein, lipid, and nucleotide chemistry; membrane phenomena; enzyme kinetics and bioenergetics. Pre-requisite: CH 201. Also cross-listed as CH 440. Usually taught in the fall semester.

BLY 441 Biochemistry II 3 cr
Course is sequential to Biochemistry I and focuses on reactions and regulation of intermediary metabolism; molecular genetics, hormonal action, and nutrition. Pre-requisite: BLY 440. Requires special permission. Also cross-listed as CH 441. Usually taught in the spring semester.

BLY 443 Laboratory Studies in Biochemistry 3 cr
Course familiarizes the student with basic laboratory techniques commonly employed in biochemical research. Pre-requisite: BLY 440 or concurrent enrollment in BLY 441. Requires special permission. Also cross-listed as CH 443. Fee.

BLY 450 Animal Behavior 4 cr
Introductory animal behavior from a biological viewpoint, emphasizing behavioral adaptation of animals to their environment. Orientation, migration, rhythms, communication,

territoriality, experimental techniques, and ecological and evolutionary aspects of behavior will be considered. Usually taught in the spring semester.

BLY 451 Marine Vertebrate Zoology 4 cr**

A study of marine vertebrates, with emphasis on fishes; their systematics, zoogeography, and ecology. Usually taught in the summer semester.

BLY 455 Ornithology (W) 4 cr

Principles of classification, structure, distribution, migration natural history, and adaptions of birds within an ecological context. Field and laboratory identification of birds by habitat, size, form, color, and sound. Some field activities may occur at times other than regularly scheduled laboratory hours. Usually taught in alternate spring semester.

BLY 459 General Parasitology 4 cr

Principles of parasitology and a survey of all major parasitic groups. Usually taught in the fall semester.

BLY 463 Vertebrate Histology 4 cr

Microscopic anatomy of organ systems, with emphasis on human tissues.

BLY 466 Introduction to Neurobiology 3 cr**

Neuroanatomy and neurophysiology of marine invertebrates and vertebrates. Topics include resting and action potentials, synaptic transmission, neurotransmitters, sensory transduction, muscle innervation, sensorimotor transformations, and the neurophysiological basis of behavior. Usually taught in summer semester.

BLY 468 Coral Reef Ecology 4 cr**

Ecology and evolution of coral reef, seagrass, and mangrove communities. An additional assessment will cover transportation, meals, and lodging for a one-week field trip to Andros Island, Bahamas. Updated information at http://www.disl.org. Pre-requisite: Ecology. Usually taught in summer semester.

BLY 470 Herpetology 4 cr

A field course that emphasizes the ecology, evolution, natural history, characteristics, structure, function, geographic distribution, behavior, and systematics of amphibians and reptiles. Course includes structured writing assignments and focuses on good writing skills and forms. Laboratory and field work emphasize identification of specimens by name, habit, and characteristics. Some field activities will occur at time other than the scheduled laboratory hours.

BLY 471 Marine Invertebrate Zoology 4 cr**

A study of the natural history, systematics, and morphology of marine invertebrates. Usually taught in the summer semester.

BLY 472 Marine Behavioral Ecology 4 cr**

The ecological and evolutionary significance of animal behaviors in the marine environment. Exercises will include analysis of data collected from laboratory and field experiments. Statistics recommended. Usually taught in summer semester.

BLY 474 Introduction to Oceanography 4 cr**

A general introduction to the oceans, with emphasis on chemical, physical, and geological processes, and their relation to biological systems.

BLY 475 Marine Ecology 4 cr**

The relationship of marine organisms to their environment. Usually taught in the summer semester.

BLY 483 Field Marine Science 1-4 cr**

The Field Marine Science course consists of a 10-day field exercise in the tropical southeastern Gulf of Mexico (Florida Keys) and the temperate north Atlantic. Sites alternate annually. Faculty members with diverse interests accompany the students, participate in pretrip readings and discussion sessions and evaluate the product developed by each student. Prerequisites: Senior or graduate standing in a major related to marine sciences and permission of the instructor.

BLY 484 Conservation Biology 3 cr

The study of preserving biodiversity and sustaining ecosystems using a multidisciplinary approach. Primary emphasis will focus on the development of strategies for preservation and management using scientific principles and theory.

BLY 485 Evolutionary Biology 3 cr

The study of mechanisms and historical patterns of evolutionary change in biological systems ranging from genes to phylogeny.

BLY 490 Special Topics 1-4 cr

Small, interested groups of students will study specialized topics not generally listed in the course offerings. Faculty and visiting professors will offer courses in their areas of specialization. Pre-requisite: Permission of the department.

BLY 494 Directed Studies 1-4 cr

This course is designed to enable the capable student to pursue independent research under the direction of a member of the faculty. Pre-requisite: Permission of the department chair.

BLY 499 Honors Research in Biology (W) 1-6 cr

Experience in planning, conducting, and reporting a research project under the direction of the faculty. Pre-requisites: BLY 121/BLY 122, CH131/CH 132, overall GPA 3.0, biology GPA 3.5, and permission of the department chair.

BLY 511 Developmental Biology 3 cr

The genetic and biochemical interactions present in the early embryonic development of higher organisms. Emphasis on animal development. Pre-requisites: BLY 301, BLY 363.

BLY 515 Ecotoxicology 4 cr

The impact of chemicals as toxic agents on ecosystems. Students will understand types, sources, and effects of environmental toxicants, methods of testing and interpretation, and regulation of environmental toxicants. This material will be presented in the context of ecosystem health rather than human health. This is a core course for M.S. degree students in the Environmental Toxicology program.

BLY 520 Biometry 4 cr

The application of statistical methodology, both univariate and multivariate techniques, to the solution of biological problems. This course is not designed as a substitute for instruction in statistics, but rather to complement previous course work. The laboratory will involve the use of PC computers to perform procedures on biological data and subsequent interpretation of the results. Pre-requisites: ST 210, BLY 121, BLY 122, ONE 300 level course. Pre-requisites can be waived at the discretion of the instructor.

BLY 525 Chemical Ecology 3 cr

Chemical Ecology focuses on chemically mediated interactions within organisms in both aquatic and terrestrial environments. The topics covered include: chemoreception, chemical defense, chemical attraction, and the impact of chemical ecology on humans. This course includes a writing component. Students will gain experience in critical analysis, research development, grant writing and computer based presentation. Pre-requisites: BLY 301, BLY 303, or CH 201.

BLY 526 Freshwater Ecology 3 cr

This course examines four aspects of freshwater ecology; physical and chemical properties of water, biotic communities, links among freshwater systems, and human influence on freshwater ecosystems. Students will be required to submit a collection of local freshwater invertebrates. Pre-requisite: Ecology. This Pre-requisite may be waived at the discretion of the instructor. Taught every second fall semester.

BLY 530 Marine Microbial Ecology 3 cr**

A general survey of the types of microorganisms found in the marine environment. Emphasis will be on the interaction of microorganisms with each other and with their environment. In particular, the role of microorganisms in carbon cycling and biogeochemical processes will be stressed. Readings from current literature will expose students to the latest techniques and research. Cross listed with Marine Sciences.

BLY 533 Topics in Parasitology 3 cr

Theoretical aspects of parasite ecology, evolution, and physiology, with emphasis on topics appearing in the current literature.

BLY 534 Plant Physiological Ecology 3 cr

This course explores how plants function in their environment, and encompasses plant physiology, plant-animal interactions, as well as principles of plant ecology and evolution.

BLY 535/435 Biology of Fungi (Mycology) 4 cr

Identification and morphology of fungi with some emphasis on their relation to human affairs. Collection required. Credit for both BLY 535 and BLY 435 is not allowed.

BLY 540/440 Biochemistry I 3 cr

Principles of carbohydrate, protein, lipid, and nucleotide chemistry; membrane phenomena; enzyme kinetics and bioenergetics. Pre-requisite:

one year of organic chemistry. Credit for both BLY 540 and BLY 440 is not allowed.

BLY 541/441 Biochemistry II 3 cr
Sequential to Biochemistry I and focuses on reactions and regulation of intermediary metabolism; molecular genetics, hormonal action, and nutrition. Pre-requisite: BLY 540 or BLY 440. Credit for both BLY 541 and BLY 441 is not allowed.

BLY 543/443 Laboratory Studies in Biochemistry 3 cr
Familiarizes the student with basic laboratory techniques commonly employed in biochemical research. Pre-requisite: BLY 541. Credit for both BLY 543 and BLY 443 is not allowed.

BLY 550 Animal Behavior 4 cr
This course will examine animal behavior from a biological and empirical viewpoint, with an emphasis on behavioral adaptations of animals to their environment. Orientation, migration, rhythms, communication, territoriality, social and courtship behaviors will be considered within the context of ecology and evolution. Credit for both BLY 450 and BLY 550 is not allowed.

BLY 554 Advanced Entomology 4 cr
This course emphasizes form, function, classification, behavior, taxonomy and evolution of insects. In addition, the student is required to make an insect collection of adult and immature insects. Taught every second semester.

BLY 570/470 Herpetology 4 cr
A field course that emphasizes the ecology, evolution, natural history, characteristics, structure, function, geographic distribution, behavior, and systematics of amphibians and reptiles. Course includes structured writing assignments and focuses on good writing skills and forms. Laboratory and field work emphasize identification of specimens by name, habit, and characteristics. Some field activities will occur at time other than the scheduled laboratory hours. Oral classroom presentations required.

BLY 583/483 Field Marine Science 1-4 cr**
An 8-12 day field exercise in representative coastal sites. The field exercise is conducted in the break prior to the semester of registration for the course. Faculty members with diverse interests will accompany the students, participate in pretrip discussions and evaluate the product developed by each student. Designed to familiarize students with habitats and research conditions different from those they experience on the Northern Gulf Coast. Field trip locations selected on the basis of faculty/student interest, economics, and availability of logistical support. Students pay their room and board costs for the field exercise. Primarily for graduate students, but advanced undergraduates may enroll with consent of instructor. BLY 483/BLY 583 may be taken for credit when taught in a different environment.

BLY 585 Evolutionary Biology 3 cr
The study of mechanisms and historical patterns of evolutionary change in biological systems ranging from genes to phylogeny.

BLY 590 Special Topics 1-4 cr
Specialized topics not generally listed in the course offerings.

BLY 592 Seminar 1 cr
Recent research in areas of special academic interest to students and faculty.

BLY 594 Directed Studies 1-4 cr
Independent research under the direction of a member of the graduate faculty. Primarily intended for non-thesis graduate students. A maximum of six credits may be granted for this course. Special permission must be granted.

BLY 599 Thesis 1-4 cr
Pre-requisite: Approval of research prospectus by student's graduate committee.

***Course not counted toward a major in biology.**
****Course is usually offered at Sea Lab, Dauphin Island.**

BIOMEDICAL SCIENCES (BMD)

BMD 114 Human Anatomy and Physiology I 4 cr
This is the first of a two-course sequence that covers an introduction to basic human anatomy and physiology, including the study of the structure and function of various body systems. Included is a study of basic principles of organism homeostasis, biochemical makeup, a study of cells and tissues, cellular metabolism, joints, the integumentary, and skeletal systems, muscular and nervous systems, and the senses. Laboratory experiences are provided through demonstration and interactive (virtual) laboratories.

BMD 115 Human Anatomy and Physiology II 4 cr
A continuation of BMD 114. Topics include nervous, cardiovascular, lymphatic, immune, respiratory, digestive and urinary systems. Additional topics may include blood, metabolism, immunology and reproduction. Laboratory experience is provided through demonstration and interactive (virtual) laboratories. Pre-requisite: BMD 114.

BMD 301 Seminars in Biomedical Sciences 1 cr
The course introduces students to the scientific method and biomedical research. Students will perform literature searches utilizing the facilities at the Biomedical Sciences Library and participate in discussions on current science news issues.

BMD 210 Infectious Disease in Health Care Environments 3 cr
This course introduces the fundamental concepts of host-parasite relationships involved in infectious diseases. Included are virulence characteristics of microbes and mechanisms of host defenses. Principles of microbial physiology, genetics and antimicrobial therapy are provided as background. Specific infectious diseases of various anatomical systems are emphasized. Pre-requisites: BLY 101 or BLY 121 or BMD 114.

BMD 290 Special Topics (H) 1-8 cr
Topics of current health interest. Open to honors students or those with special permission.

BMD 311 Human Anatomy 3 cr
A course in human gross and microscopic anatomy. The structures of the different systems in the human body are studied with reference to their functions. Pre-requisites: BLY 121, BLY 122.

BMD 321 Biochemistry I: Molecular Biology 3 cr
The course covers different aspects of molecular biology, including protein structure and function, DNA replication, transcription and translation and applications to medical problems (i.e., forensic medicine, diagnosis of genetic disease, etc.) Pre-requisite: CH 201.

BMD 322 Biochemistry II: Energetics and Metabolism 3 cr
The course discusses the chemical basis of metabolism including the conversion of nutrients after digestion to either molecules of biological relevance or to energy. Genetic diseases affecting these pathways are described and discussed. Pre-requisites: CH 202 and BMD 321.

BMD 323 Biochemistry Laboratory 1 cr
This laboratory is designed to provide hands-on experience in several biochemical techniques including cell fractionation, chromatography, gene cloning, DNA isolation, electrophoresis, determination of enzyme activity, etc. Pre-requisite: BMD 321. Taught spring semester. Special fee.

BMD 334 Human Physiology I 3 cr
Study of human physiology with emphasis on cellular physiology and communication through the nervous and endocrine system. This course is the first of a 2 course sequence. Pre-requisites: BLY 121 & BLY 122; CH 131 and CH 132.

BMD 335 Human Physiology II 3 cr
Study of human physiology with emphasis on the basic principles of organ system physiology. The course emphasizes muscle, cardiovascular, renal, respiratory, digestive, and reproductive physiology and an introduction to immunology. This is the second course in a 2 course sequence. Pre-requisite: BMD 334.

BMD 336 Physiology Laboratory - (W) 1 cr
This laboratory is designed to afford students hands-on laboratory experience in physiology, with emphasis on musculoskeletal, cardiovascular, respiratory and nervous systems. Limited to BMD majors unless by special permission. Pre-requisites: EH 102, BMD 334 and BMD 335 (or BMD 335 concurrently or BMD 434). Special fee.

BMD 350 Molecular Basis of Genomics 3 cr
The course is designed to introduce students to the fundamental concepts of molecular genetics and genomics. The concepts that will be covered in this course include nucleic acid structure and function, mechanisms of replication, transcription, translation, gene expression and regulation. In addition, the course aims to familiarize students with modes of analysis used in comparative genomic research. Pre-requisites: BLY 121, CH 131.

BMD 390 Special Topics 1-8 cr
Topics of current health interest.

BMD 401 Immunology 3 cr

This course presents the basic concepts of immunochemistry, immunobiology and host immune responses to disease. Antigens, antibodies, cells and structures of the immune system will be discussed as well as their roles in the process of immunity, allergies, transplantation and diseases. Pre-requisites: BMD 321 or (CH 201 and BMD 114 and BMD 210).

BMD 402 Medical Microbiology 5 cr

This course presents the concepts of pathogenicity and virulence as they relate to disease causing bacteria, viruses, and fungi. Mechanisms of pathogenicity, interrelationships and interactions that occur between the host, the parasite and their environments will be emphasized in molecular terms. General concepts of microbial physiology, genetics and antimicrobial therapy are also presented. The laboratory portion of the course will provide hands-on experience in the handling and identification of bacteria. Pre-requisite: BMD 401. Special fee.

BMD 410 Pathophysiology 3 cr

A systematic study of disease processes involving relationships between pathophysiological changes and clinical manifestations. Pre-requisites: BMD 401 or acceptable microbiology course; BMD 334 and BMD 335.

BMD 420 Pharmacology 3 cr

An introduction to pharmacological concepts and effects and uses of major drug classes. Drug design, pharmacodynamics (receptors, mechanisms, dose-response) and pharmacokinetics (time-action) are discussed in general (principles), and in particular, for selected classes of drugs. Pre-requisites: BMD 321, BMD 322, BMD 334, and BMD 335.

BMD 430 Neurosciences 4 cr

A study of neuroscience which integrates neurochemistry, neuroanatomy, and neurophysiology, emphasizing cellular neurobiology, neural systems, and the neurobiology of behavior. Course includes laboratory experience. Pre-requisites: BMD 311, BMD 334, and BMD 335.

BMD 450 Introduction to Research 2 cr

Basic concepts of research will be presented to provide a fundamental understanding of the application of the scientific method as a means to advance knowledge in the biomedical sciences. Pre-requisites: BMD 311, BMD 321, BMD 322, BMD 334, BMD 335 and BMD 336.

BMD 490 Special Topics 1-8 cr

Topics of current health interest.

BMD 493 Issues in Biomedical Sciences - (W) 3 cr

This course will provide an open forum for discussion of current controversial issues in biomedical sciences. The topics will include research integrity, discussion on the impact of medical advances in society, as well as issues of historical relevance. Pre-requisites: EH 102, BMD 321 (or BMD 350), and BMD 334.

BMD 494 Directed Research Studies 3 cr

The student will perform a biomedical research project under the direction of a faculty mentor. This will include literature searches and presenting the project in a written format. Permission of mentor and Department Chair required.

BMD 499 Honors Research Thesis - (H, W) 2-3 cr

Literature survey and laboratory research experience under the direction of the faculty. Pre-requisites: BMD 311, BMD 321, BMD 322, BMD 323, BMD 334, BMD 335, BMD 336 and permission of the faculty admissions committee. Contact Dr. Michael Spector for application procedures. Special fee.

BMD 501 Immunology 3 cr

This course presents the basic concepts of immunochemistry, immunobiology and host immune responses to disease. Antigens, antibodies, cells and structures of the immune system will be discussed as well as their roles in the process of immunity, allergies, transplantation and diseases. A term paper is required. Requires special permission.

BMD 502 Medical Microbiology 5 cr

The course presents the concept of pathogenicity and virulence as they relate to disease causing bacteria, viruses, and fungi. Mechanisms of pathogenicity, interrelationships, and interactions that occur between the host, the parasite and their environments will be emphasized in molecular terms. General concepts of microbial physiology, genetics, and antimicrobial therapy are also presented. The laboratory portion of the course will provide hands-on experience in the handling the identification of bacterial. A term paper is required. Requires special permission.

BUSINESS (BUS)

BUS 150 Introduction to Business and Management 3 cr

A survey of the field of business, including profit-seeking firms, not-for-profit organizations, and new businesses created by entrepreneurs. Emphasis on the business environment, organization and management, current economic and international issues, and career opportunities. Societal and ethical issues are also examined. The course is required of all incoming freshmen and any entering transfer student with less that 15 hours.

BUS 245 Applied Business Statistics I 3 cr

An examination of statistical techniques that are used to support managerial decision-making and problem solving. Topics include measures of central tendency and dispersion, probability theory, discrete and continuous sampling distributions, methods of estimation, and test of hypotheses. Pre-requisite: MA 112, or ACT/MMT placement.

BUS 255 Applied Business Statistics II 3 cr

This course covers statistical techniques that are used to support business decision making and problem solving. Topics covered include Chi-Square Tests, Experimental Design and Analysis of Variance, Simple Linear Regression and Correlation Analysis, Multiple Regression and Model Building, Time Series Forecasting, and Decision Theory. Computer based data analysis is emphasized in this course. Pre-requisite: BUS 245 or ST 210 and MA 112 (or ACT/MMT placement).

BUS 265 Legal Environment of Business I 3 cr

A study of the global legal environment in which contemporary American business functions, including a review of legal thought and ethical considerations and the foundations and impacts of governmental regulation in areas such as labor and employment, environmental concerns, consumer protection, and antitrust. Contemporary issues, domestic and international concepts and institutions, and social forces that shape the legal environment are emphasized. Pre-requisite: sophomore standing.

BUS 305 Information Systems and Technology 3 cr

The analysis, design, and implementation of information systems. Analysis of the functional area of business and integration of computer tools to satisfy information requirements. Current developments in business computer systems, including surveys of current systems and the Internet. Computer classrooms are utilized to provide students with "hands on" experience. Pre-requisite: CIS 250.

BUS 490 Special Topics 3 cr

Designed to provide senior students an opportunity to study selected topics of particular interest. Permission of Department Chair. A student may count no more than three hours of Special Topics in the major.

BUS 496 MCOB Honors Senior Project I

Applied business project and paper prepared under the direction of a project advisor plus two other persons elected by the advisor in consultation with the student. The student must have developed a proposal for the project and paper in consultation with the advisor and received permission from the committee to proceed. In addition, the student must be entering his or her senior year and be a major in the Mitchell College of Business. The project proposal must be formulated no later than the end of the first semester of the student's senior year and the project must be completed by the student's graduation date. The student must have maintained his or her standing in the university honors program to be eligible to enroll in this course. The student will formally enroll in the course in his or her last full semester in school. The course may be counted in one of two ways: 1) as an additional course not counting towards the business degree, or 2) in special cases, as a major or business elective, to be decided by the committee. Pre-requisites: Completion of HON 301 and the business core with the exception of MGT 485.

BUS 497 MCOB Honors Senior Project II

Applied business project and paper prepared under the direction of a project advisor plus two other persons selected by the advisor in consultation with the student. The student must have developed a proposal for the project and paper in consultation with the advisor and received permission from the committee to proceed. In addition, the student must be entering his or her senior year and be a major in the Mitchell College of Business. The student's senior year and the project must be completed by the student's graduation date. The student must have maintained his or her standing in

the university honors program to be eligible to enroll in this course. The student will formally enroll in the course in his or her last full semester in school. The course may be counted in one or two ways: 1) as an additional course not counting towards the business degree, or 2) in special cases, as a major or business elective, to be decided by the committee. Pre-requisites: Completion of BUS 496, and the business core with the exception of MGT 485.

BUS 498 Mitchell Scholars Senior Project
Applied business project and presentation prepared under the direction of the instructor in consultation with the student. This course will have irregular meetings scheduled by the instructor and will have both a classroom component and a project component. The student must have maintained his or her standing in the Mitchell Scholars program and be a senior to be eligible to enroll in this course. This class will be counted in one of three ways: 1) as a business elective, 2) as an additional course not counting towards the business degree, or 3) in special cases, as a major elective to be decided by the major department's faculty. Pre-requisite: Completion of the business core with the exception of MGT 485.

BUS 604 Applied Statistical Analysis 3 cr
An examination of statistical concepts used for business research. Topics include: fundamentals of probability, sampling, statistical estimation, tests of hypothesis, analysis of variance, chi square analysis, and regression analysis. Emphasis is placed on the use of statistical techniques for business research applications.

BUS 609 Research Methodology 3 cr
This course focuses on the general concepts related to conducting academic research and the various research methods commonly used in business research quantitative and qualitative analysis.

BUS 614 Seminar in International Business 3 cr
This course provides students with exposure to management concepts and theories that form the basis of literature separate from other seminars in the doctoral program. Given that cultural, law and politics shape the different business environments around the world, it is unsurprising that different management concepts and theories are found in other places as well. This seminar introduces doctoral students to those elements of the international business environment that have an impact on management theory and practice on other business environments.

BUS 628 Regression Analysis 3 cr
A study of applications of regression analysis used in business research. Topics include: a review of basic regression concepts and applications, multiple regression, residual analysis, model building, regression limitations and assumptions, time series modeling and forecasting, and case studies using regression techniques.

BUS 630 Structural Equation Modeling 3 cr
The course provides students with a functional understanding of the path analysis theory and procedures of structural equation modeling. Students will learn to specify, estimate, and evaluate models using AMOS software.

BUS 699 Dissertation Research 3 cr
Independent research by the student under the sponsorship of the graduate faculty.

BUS 799 Dissertation Research 6 cr
Independent research by the student under the sponsorship of the graduate faculty. Pre-requisite: BUS 699 with grade of S.

COMMUNICATION (CA)

CA 100 Introduction to Communication 3 cr
Course examines various approaches people take to communicating. Focuses on developing an awareness of how and why we communicate and why we do not always communicate effectively. Includes consideration of variables related to interpersonal, group, public, and mass-communication contexts. Fee.

CA 101 Introduction to Communication Media 3 cr
Course examines the functioning of communication media in contemporary society, including the political, economic, and social environment. The structure and functions of newspaper, magazine, film, radio, television and public relations industries are examined. The impact of the media on individuals and institutions is explored. Fee.

CA 110 Public Speaking 3 cr
A beginning study of the principles of speech communication as they relate to speaker- audience communication. The student is provided an opportunity to develop the art of audience and subject analysis, research, critical thinking, organization, language, and delivery of speeches. This course includes a video-component. Fee. **Core Course**.

CA 200 Survey of Communication Theory 3 cr
Introductory survey of theoretical orientations in the field of human communication. Focuses on alternative explanations regarding elements of the communication process, models of communication, the communication act, and the communication relationship. Pre-requisites: EH 101, EH 102. Fee.

CA 210 Argumentation 3 cr
Examines the role of argumentation in a democratic society and aims to develop critical thinking and reasoned advocacy. Course makes functional a knowledge of tests of evidence and the modes of logical reasoning. Students participate in various forms of argumentation and debating. Fee.

CA 211 Interpersonal Communication 3 cr
A study of communication behavior in the interpersonal setting. Focuses on development of knowledge, trust, understanding, supportiveness, etc., in a relationship, and their collective impact on the communication exchange. Fee.

CA 220 Introduction to Writing and Reporting for the Media (W) 3 cr
Intensive study of writing for various media and audiences. Specific attention is given to improvement of writing skills, including grammar, punctuation, spelling, word use, sentence composition, Associated Press style, and organization of material, as well as the different formats for the different media. Media styles studied include print, broadcast, and online journalism and public relations, which also includes study of evaluating, documenting, and prioritizing facts in the writing of news stories and media releases for public relations. Attention to advertising copy writing and other styles also is included. Pre-requisites: EH 101, EH 102; 30 wpm typing ability. Computer Fee.

CA 221 Advertising Principles 3 cr
Students learn the principles and techniques of advertising. The course focuses on how advertising blends with public relations and marketing tactics to create strategic brand communication messages and to maximize consumer engagement and return on investment (ROI). Pre-requisites: EH 101, EH 102 and CA 101. Fee.

CA 222 Rhetoric, Culture, and Society 3 cr
Course examines rhetoric, or the art of persuasion, as it relates to popular culture. Students will apply rhetorical theory to such topics as music, film and advertising.

CA 230 Communication in Organizations 3 cr
Application of communication principles and techniques to those aspects of one's life in an organization that have been shown to be the most difficult and troublesome parts of the communication milieu in the world of work. Includes interviewing, conference participation, leadership decisions, conflict management, and organizational change as communication phenomena. Fee.

CA 240 Digital Cinema Production 3 cr
This course will teach the basics of directing, composition, lighting, audio and editing in the digital realm. Techniques of working with actors and the technical and aesthetic considerations of moving-picture photography, audio design and storytelling through editing will be covered by lecture, example, and practical exercise. Technology Fee.

CA 241 Introduction to Television Studio Production 3 cr
Theory and practice of television production. Concentrates on exploring the uses of television in varied contexts, including corporate, community, and broadcasting applications. Fee.

CA 244 Introduction to Radio Production 3 cr
Introduction to the theory and techniques of radio production. Emphasis on the effective use of words, music, and sound. Students create and critique radio dramas, public affairs and documentary programming, commercials, promotional and public service announcements, and music programs. Fee.

CA 250 Radio and Television Performance 3 cr
Course focuses on the unique aspects of radio and television as communicating media. Different styles of delivery for various media projects will be studied--broadcast news, advertising, and entertainment. Course also focuses

on restraints and requirements of the individual medium on the practice of broadcast delivery. Pre-requisite: CA 110. Fee.

CA 260 Digital Writing & Production 3 cr
This course considers the nature of the digital environment as it relates to communication. Topics include writing in the online environment, effective use of images and multimedia, and basic web design. Computer Fee.

CA 270 Sports Journalism 3 cr
This is a traditional lecture and writing course that will provide students with an overview of sports journalism and hone writing, reporting and editing skills. Students will learn how to write a game story, advance/follow-up story, sports column and feature story during the semester. As in the journalism industry, students will adhere to strict deadlines. Computer Fee.

CA 271 Visual and Message Communication 3 cr
An introduction to visual principles as the basis of graphic design communication and elements and issues of visual language. The focus is on the formal elements of visual communication theories including basic design principles, composition, color, texture, and shape in the form of applied visual problem-solving exercises. Students are introduced to Adobe Photoshop and InDesign. Computer Fee.

CA 275 Small Group Discussion 3 cr
Theory and practice in leading and participating in group discussions. Special focus on group problem solving and the management of conflict in group meetings. This course includes a video-component. Fee.

CA 281 Editing and Layout 3 cr
Principles and practices of selection and preparation of written and pictorial materials for newspapers, magazines, and related media. Layout and design, production planning, and related topics. Pre-requisite: CA 220. Computer Fee.

CA 284 Japanese History in Film and Literature 3 cr
This course will introduce students to major themes in recent Japanese history, including samurai culture and other issues pertaining to social class, Westernization, the postwar family, sixties radicalism, and recent popular culture. Student will explore these themes through Japanese film and literature, and thus become familiar with major directors, including Akira Kurosawa, Yasujiro Ozo, and Juzo Itami, and novelists such as Junichiro Tanizaki and Yukio Mishima.

CA 286 Principles of Public Relations 3 cr
An overview of the principles and techniques of public relations. Concentrates on the role of public relations in our society, the audience for public relations, and the mass media as public-relations vehicles. Pre-requisites: CA 101 or permission of instructor; EH 101, EH 102. Fee.

CA 288 History of the Mass Media 3 cr
The role of journalism in American society from the Revolution to the present. This course is also listed as HY 288. Fee.

CA 290 Special Topics 3 cr
A variable-topics course treating communication concepts and topics relevant to the disciplines. May be repeated once when course content changes. Fee.

CA 300 Foundations of Communication Research (C) 3 cr
Introduction to research foundations in the field of communication. Includes historical, critical, descriptive, and experimental methods. Pre-requisite: CA 200. Computer Fee.

CA 310 Persuasion 3 cr
Basic theories and techniques of persuasion and their application to typical communication situations and problems in today's society. Fee.

CA 315 Gender and Communication 3 cr
Survey of research and theory concerning the differences in communication between men and women and the effects and functions of communication between men and women. Fee.

CA 320 Broadcast Scriptwriting 3 cr
Study and practice in the techniques of writing scripts for radio and television. Special scripting projects. Fee.

CA 321 Advertising Media Planning 3 cr
Students develop an understanding of planning traditional, nontraditional and digital media as part of an integrated brand communication strategy. The course concentrates specifically on how media work together strategically to shape consumers' brand experiences across media platforms. Pre-requisites: CA 221 and CA 300. Fee.

CA 322 Creative Strategy 3 cr
Students develop an understanding of how verbal and visual ideas effectively position brands in the mind of the consumer through the implementation of creative strategies. The course concentrates on writing effective copy for traditional, nontraditional and digital media as part of a strategic brand communication campaign. Pre-requisites: EH 102, CA 221 and CA 310. Fee.

CA 325 Applied Communication Workshop 3 cr
A workshop stressing practical applications of the principles and theories of communication disciplines to those settings and problems in the world of work that are of special interest to the students enrolled. Pre-requisite: Permission of instructor. Fee.

CA 330 Intercultural Communication in the Global Organization (W) 3 cr
CA 330 is the study of the theory and practice of intercultural communication. This course's goal is to focus on global dialogues within critical organizational incidents. This course has three objectives: to explain the culture-based situational conflict model; to integrate theory and practice in the discussion of organizational conflict; and to provide an excellent opportunity for writing within the organizational communication content area. Fee.

CA 340 Video Field Production 3 cr
The focus of this course is on production techniques, processes, and skills. Analysis of television production as a communication process, program formats, advanced production equipment and facilities, production unit management, and the role of the director. Fee.

CA 341 Intermediate TV Studio Production 3 cr
This course will give students practical grounding in the concepts and technology associated with production of studio-based news and information programs. Fee.

CA 343 Film History 3 cr
An examination of the development of motion pictures from 1893 to the present. Films representing major periods, movements, and styles will be examined. Fee

CA 344 Film & Television Genres 3 cr
A study of the formation and evolution of film and television genres. Selected genres will be studied in terms of their structure and cultural history. Fee

CA 350 Broadcast News 3 cr
Course includes both writing for the broadcast media and exploring broadcast news operations. Assignments include writing broadcast news stories and evaluating broadcast news operations. Lectures cover the characteristics of broadcast news, news styles, news policy, and ethics and responsibility in broadcast news. Pre-requisite: CA 220. Fee.

CA 352 Media Literacy in the Information Age 3 cr
Study of how to be a good consumer of mass media messages. Topics include how media messages are affected by media production techniques, media technology, professional values, and the media's political-economic structure. Pre-requisite: CA 101. Fee.

CA 356 Digital Cinema Management 3 cr
A survey of the legal, budgeting, revenue stream and distribution issues associated with film and television production. Topics include preproduction and production management, script breakdown, scheduling, and above and below the line talent. Computer Fee.

CA 357 Basic Film Production 3 cr
This course will teach the basics of planning, scripting, shooting and editing short films in the 16mm format. Technology Fee.

CA 358 Digital Compositing and Graphics Animation 3 cr
This course will introduce the basics of digital special-effects, two-dimensional computer animation and two-and three-dimensional video graphics. Technology Fee.

CA 360 Communication and the Internet (C) 3 cr
Intensive study and application of rhetorical and communication theories to understanding problems that arise as the Internet and the World Wide Web begin to render fixed-media-based communication obsolete. Implications for advertising, journalism, organizational record keeping and management, interpersonal communication, training, entertainment, etc. Computer fee.

CA 366 Visual Information for Electronic Communication Media 3 cr
Rhetorical issues in the design of Internet and World Wide Web materials. Focus on how motion, color, and other visual elements compete for audience attention; how rhetorical theory, learning theory, and communication theory

inform the myriad decisions involved in visual presentation. This course will address these rhetorical issues from the creator's and user's viewpoint. Computer Fee.

CA 370 Intermediate Reporting and Writing (W) 3 cr

This is a practicum course that will teach the practical skills needed for public affairs reporting and newswriting. Among other assignments, students will write assigned news articles for the USA student newspaper, The Vanguard. Course requirements might include covering public meetings held in the evening hours. Pre-requisite: CA 220. Fee.

CA 371 Branding and Visual Messages 3 cr

The focus of this course examines the understanding of how to build, measure and manage a brand from visual conception. Emphasis is on the visual aspects of brand management from the creative power of visual branding through research and visual strategy development and theories. Advanced areas of digital and/or print media are used in creative development and execution of persuasive and effective messages. Computer Fee.

CA 381 Strategic Publication Design 3 cr

Strategic publications are created to communicate with target audiences as part of a strategic plan. Introduction to the principles of planning, designing, and producing publications for print and web design are focused on along with the principles of traditional and digital design, composition, computerized layout, typography and graphics. Pre-requisite: CA 101 and 220. Recommended: 221, 281, or 286. Computer Fee.

CA 382 Photojournalism 3 cr

The study of basic photography and the principles of still photography journalism, with particular emphasis on camera use, photo processing, visual aesthetics, and journalistic story-telling. Computer Fee.

CA 383 Digital Photography 3 cr

Through this course students will develop a general understanding of the ability of photographic images to communicate concepts, ideas and emotion through creative photography. It will be a hands-on course, in which students will use digital cameras to product photographs that achieve the desired message. Computer Fee.

CA 384 Account Management 3 cr

Students learn the account service function in an advertising agency. They develop an understanding of the account manager's role by focusing on the inter-relationships between the account manager, creative, media planners and other agency specialists. Pre-requisites: CA 221 and CA 321 or CA 322. Computer Fee.

CA 385 Magazine Writing and Editing 3 cr

CA 385 is designed to give students a broad overview of the magazine industry and its current trends, while also teaching them the skills needed to become successful magazine writers. Pre-requisite: CA 220. Computer Fee.

CA 386 Public Relations Communication Methods (W) 3 cr

The course provides a framework for the development of solidly written pieces for the public relations professional. It examines the techniques and approaches to communication tools across various media channels including traditional, nontraditional and digital media as well as strategies and tactics of public relations campaigns for internal and external audiences. Pre-requisites: CA 220 and CA 286. Computer Fee.

CA 387 Advanced News and Feature Writing 3 cr

A writing and reporting course focusing on advanced skills, including alternative structures for news stories. Emphasis is given to newspaper and magazine feature writing. Pre-requisite: CA 220. Computer Fee.

CA 390 Special Topics 1-3 cr

An advanced variable-topic course treating communication concepts and topics relevant to the discipline. May be repeated once when course content changes. Fee.

CA 394 Directed Study in Communication 1-3 cr

Directed individual study of literature in an area of need and interest of the student. May be repeated for a maximum of six hours' credit. Pre-requisites: Approval of the instructor. Open to students with sixteen hours in the field. Fee.

CA 410 Advanced Persuasion 3 cr

An advanced examination of and application of persuasive techniques in communication situations and contexts (e.g., field, laboratory, interpersonal, small group, nonverbal, mass communication). Fee.

CA 411 Relational Communication 3 cr

Examines the literature surrounding various interpersonal conflict problems (such as betrayal of a social contract) from a variety of theoretical perspectives. Fee.

CA 422 Rhetorical Theory 3 cr

A broad survey of the Western rhetorical tradition designed to give students a working knowledge of rhetoric and its historical and contemporary influence on communicative events and perspectives. Fee.

CA 424 Rhetorical Criticism (W) 3 cr

This course is designed to introduce students to the process of rhetorical analysis. Through criticism of communication artifacts, students learn to identify key elements of the rhetorical process and to develop critical thinking, writing, and viewing skills. The course prepares students to interpret, understand, analyze, and critique communication in diverse contexts including speeches, advertisements, interpersonal conversations, films, and works of art to name a few. Pre-requisites: EH 101 and EH 102; CA 422. Fee.

CA 425 Contemporary Issues in Rhetoric 3 cr

Close examination of a single contemporary rhetorical phenomenon. Topics will rotate based upon disciplinary relevance and student needs. May be repeated once for credit when content varies for a maximum of six credits. Fee.

CA 430 Advanced Organizational Communication 3 cr

Study and application of organizational and communication theory of assessment of organizational and community needs. Critical analysis of intervention programs and strategies. Pre-requisites: CA 230, and CA 300. Junior or senior standing. Fee.

CA 435 Communication Training and Development Programs (W) 3 cr

Review and analysis of communication training and development programs designed to solve communication problems in groups and organizations. Students will develop and present a training or development program. Pre-requisites: CA 330, and CA 430. Fee.

CA 436 Crisis Communication (W) 3 cr

An interesting study of systemic organizational crisis. The goal of this class is to bring into focus a comprehensive discussion of crisis as an organizationally based phenomenon with profound effects on individuals, communities, and our society as a whole. The course focuses on the communicative dimensions of crisis: how risk is discussed, how meaning is constructed, how explanations are offered, how blame is apportioned, and how crisis functions as a force for change. Capstone course for the Organizational Communication Concentration. Fee.

CA 440 Advanced Video Field Production 3 cr

Theory and practice of television production. Concentrates on exploring and understanding the concepts and technology involved in advanced video production for a variety of applications including commercial, corporate and community outlets. Fee.

CA 441 Advanced TV Studio Production 3 cr

Advanced theory and practice of television production. Concentrates on exploring the advanced uses of television in varied contexts, including corporate, community, and broadcasting applications. Pre-requisite: CA 241. Technology fee.

CA 445 Communication Ethics and Social Responsibility 3 cr

Study of social responsibility and ethics in communication. Acquaints student with ethical standards and expectations society has for communicators. Capstone Course. Fee.

CA 449 Mass Media and Social Effects 3 cr

Examination of the interaction between mass communication and American society. Current research literature in the field will be analyzed and methods of improving the system will be discussed. Fee.

CA 450 Advanced Broadcast News 3 cr

This is an advanced course in broadcast news reporting and production. Students will have hands-on practice in a newsroom situation. Pre-requisite: CA 350. Co-requisite: CA 451. Computer Fee.

CA 451 Producing the News 3 cr

This course gives students experience in producing newscasts for the media. Students will learn the techniques for assembling, timing, writing, and executing complete newscasts. Pre-requisite: CA 350. Computer Fee.

CA 452 The News Documentary 3 cr

This course gives students experience in producing short documentaries for the media.

Students will produce their own documentary with the intent of entering the finished product in student competitions. Pre-requisite: CA 450. Computer Fee.

CA 453 Political Communication: Processes and Ethics 3 cr

Provides students with a broad overview of political communication from both historical and contemporary perspectives so students may understand how the subject has evolved over time to become a unique field of theoretical and research interest. Special attention is paid to campaigns and elections, agenda-setting research, and media power. The major focus is on the United States. Fee.

CA 455 Law of Communication 3 cr

Study of the broad application of principles of law to American communication, including study of free speech, freedom of information, mass media law and regulation including libel, copyright, and right of privacy. Pre-requisite: CA 200. Fee.

CA 460 Communication Technology Systems 3 cr

An examination of the new communication technology systems with an emphasis on how they reconfigure patterns of communication organizations, production, storage, and dissemination. The role of communication technology systems today and tomorrow, and implications for organizational, local, national, and international contexts will be studied. Computer Fee.

CA 470 Audience Dynamics 3 cr

CA 470 explores how audience dynamics (attitudes, feelings, beliefs, experiences, values, needs, and behavior) influence message development in public relations and advertising campaigns. Fee.

CA 471 Professional and Creative Portfolio Development 3 cr

This course focuses on how to conceptualize and develop a professional and create portfolio by creating a campaign spanning digital mass communication. Students examine the advertising creative industry from the perspectives of the media designer, freelancer, and entrepreneur while centering on the tools, techniques, principles, methods, strategies and practical skills needed to build an inspired portfolio. Computer Fee.

CA 472 Enterprise Reporting 3 cr

Advanced study of news reporting and presentation techniques, including investigative reporting. Students will produce a professional quality-print project. Pre-requisite: CA 370. Computer Fee.

CA 474 Consumer Sales Promotion 3 cr

This course explores the role, function, planning and implementation of sales promotion in the brand communication process. Topics include contests, coupons, price discounts, sampling, and sweepstakes as well as the legal regulation of sales promotions.

CA 475 Communication and Group Processes 3 cr

The nature of small group processes. Leadership, communication, and decision making in small groups. Pre-requisite: Junior or senior standing. Fee.

CA 476 Advertising Campaigns I 3 cr

Creation of advertising campaigns for specific organizations; integration of advertising theories, strategies and procedures into comprehensive communication programs. Pre-requisites: CA 321, CA 322; senior standing. Fee.

CA 478 Advertising Campaigns II 3 cr

Students develop a strategic integrated advertising campaign for a selected client. Campaign development includes the integration of research, planning and objective setting, branding, message, media and creative strategies, promotions, budgeting and evaluations. Pre-requisites: CA 476. Fee.

CA 481 Editorial and Column Writing (W) 3 cr

An examination of the editorial and other opinion and persuasive communications used by the print and electronic media. Pre-requisites: CA 220, and EH 102. Computer Fee.

CA 482 Multimedia Story Telling 3 cr

This course will teach the basics of creating a professioinal-quality journalism story for the Web using multimedia techniques. We also explore how multimedia and interactivity are changing the communication experience for communication practitioners as well as for their audiences. Technology Fee.

CA 484 Managing Public Relations 3 cr

Study of the operation and objectives of corporate and agency public relations using the case study approach. Emphasis is given to relating the management function of decision-making and policy formation to the communication process. Pre-requisites: CA 386, CA 300 or permission of instructor. Fee.

CA 486 Public Relations Campaigns 3 cr

Researching, planning, and preparing for an integrated public relations campaign. Pre-requisites: CA 300, CA 386. Fee.

CA 490 Special Topics 1-3 cr

An advanced variable-topic course treating communication concepts and topics relevant to the discipline. May be repeated once when course content changes. Fee.

CA 492 Seminar 1-3 cr

An investigation of advanced topics and concepts of communication. Topics will rotate based upon disciplinary relevance and student needs. May be repeated once for credit when content varies. Pre-requisite: Senior standing. Fee.

CA 494 Directed Study in Communication 1-3 cr

Investigation of questions of special interest in communication. May be repeated to a maximum of six semester hours, provided no repetition of subject matter occurs. Students are required to file a description of their goals and objectives for their study. This description is to be specific so that it can serve in place of a syllabus for this course. Pre-requisite: Consent of the instructor. Fee.

CA 496 Professional Studies: Internship 1-3 cr

On-the-job experience in a selected communication area related to potential career selection. Supervision by communication advisor and off-campus agency required. The Internship Program may be repeated for up to six credits. This course may also be taken through the Cooperative Education Program. Pre-requisite: Prior approval of internship coordinator or department chair. Fee.

CA 499 Senior Honors Project 3-6 cr

Under the advice and guidance of a faculty mentor, honors students will identify and carry out a research project, relevant to the field of communication study that will lead to a formal presentation at the annual Honors Student Colloquium. The senior project will be judged and graded by three faculty, chaired by the honors mentor. This course is required for Honors recognition and may be repeated for up to six credit hours.

CA 500 Foundations of Graduate Study in Communication 1 cr

This one-hour course provides an introduction to graduate study in the University of South Alabama communication department. Upon course completion, students should be able to: identify department faculty members and their areas of research; understand the program degree requirements and prepare a course map for individual programs; identify personal graduate school schools and research interests; understand how the Institutional Review Board operates and why it is an essential component of graduate research. Fee.

CA 501 Communication Research Methods I 3 cr

An investigation of research used in the study of communication; overview and introduction to qualitative and quantitative methodologies used in basic and applied communication research settings; in depth study of a variety of qualitative methodologies; study of the use and practical applications of triangulation research methods; study of the management and purchase of research services. Pre-requisites: Graduate standing and CA 500. CA 500 may be taken concurrently. Fee.

CA 502 Communication Theory 3 cr

A survey of the theoretical perspectives that guide the study of human communication. Competing and complementary epistemological frameworks will be compared. Pre-requisites: Graduate standing and CA 500. CA 500 may be taken concurrently. Fee.

CA 503 Communication Research Methods II 3 cr

An advanced investigation of research methodologies used in the study of communication with in-depth study of a variety of quantitative methodologies used in basic and applied communication research settings; study of statistical applications; practical interpretations of computer-assisted data analysis. Pre-requisites: Graduate standing and CA 500. CA 500 may be taken concurrently. Fee.

CA 510 Advanced Argumentation and Persuasion 3 cr

Advanced analysis and development of persuasive messages and argumentative strategies. Ethical responsibilities of the message sender will also be addressed. Pre-requisites: Graduate standing, consent of advisor and CA 500. CA 500 may be taken concurrently. Fee.

CA 511 Theoretical Foundations in Relational Communication 3 cr

Review of the interpersonal communication research literature with respect to the process of mutual adaptation and negotiation. The social and psychological processes constraining and organizing interpersonal communication will be studied. Topics include verbal and nonverbal codes, message production and interpretation, conversation management, relationship definition, and interpersonal communication competence. Pre-requisites: Graduate standing, consent of advisor and CA 500. CA 500 may be taken concurrently. Fee.

CA 522 Rhetorical Theory 3 cr

A broad survey of the Western rhetorical tradition designed to give students a working knowledge of rhetoric and its historical and contemporary influence on communicative events and perspectives. Fee.

CA 524 Rhetorical Criticism 3 cr

This course is designed to introduce students to the process of rhetorical analysis. Through criticism of communication artifacts, students learn to identify key elements of the rhetorical process and to develop critical thinking, writing, and viewing skills. This course prepares students to interpret, understand, analyze, and critique communication in diverse contexts including speeches, advertisements, interpersonal conversations, films, and works of art to name a few. Fee.

CA 525 Issues in Rhetoric 3 cr

Close examination of a single contemporary rhetorical phenomenon. Topics will rotate based upon disciplinary relevance and student needs. May be repeated once for credit when content varies for a maximum of six credits. Fee.

CA 530 Analysis of Communication in Organizations 3 cr

Analysis of interpersonal, dyadic, group, and organization-wide communication events that occur in organizational settings. Attention will be directed to the network of messages that occur in organizations and the organizational change that occurs when a message system is disrupted or changed. Organizational communication research methodologies will be introduced. Pre-requisites: Graduate standing, consent of advisor and CA 500. CA 500 may be taken concurrently. Fee.

CA 535 Communication Training and Development Programs 3 cr

Review and analysis of communication training and development programs designed to solve communication problems in groups and organizations. Students will develop and present a training or development program. Fee.

CA 540 Advanced Video Field Production 3 cr

Theory and practice of television production. Concentrates on exploring and understanding the concepts and technology involved in advanced video production for a variety of applications including commercial, corporate and community outlets. Fee.

CA 541 Advanced Television Studio Production 3 cr

Advanced theory and practice of television production. Concentrates on exploring the advanced uses of television in varied contexts, including corporate, community, and broadcasting applications. Fee.

CA 542 Moving Image Structure and Process 3 cr

An analysis of moving-image form and process for decision makers who supervise, produce, and/or evaluate electronic and/or film media for organizations. Theories of narrative and of moving-image syntax provide principles for structuring media content and managing the production process. Computer Fee.

CA 545 Ethics and Responsibility in Corporate and Public Communication 3 cr

Advanced analysis and interaction between organizations and the social institutions of American society. Study of the literature and communication ethics and social responsibility. Pre-requisites: Graduate standing, consent of advisor and CA 500. CA 500 may be taken concurrently. Fee.

CA 549 Mass Media and Social Effects 3 cr

A study of the role of corporate and public communication in the American social structure, including mass media extensions and impact upon institutions. Consideration of historical, legal, social, and economic issues. Pre-requisites: Graduate standing, consent of advisor and CA 500. CA 500 may be taken concurrently. Fee.

CA 555 Corporate and Public Communication Law 3 cr

A survey of the law as it deals with public communication. The course provides a working knowledge of First Amendment theory, copyright, trademark, advertising, contracts, access and administrative laws as they relate to the public relations environment. Pre-requisites: Graduate standing, consent of advisor and CA 500. CA 500 may be taken concurrently. Fee.

CA 560 Communication Technology Systems 3 cr

An examination of the new communication technology systems with an emphasis on how they reconfigure patterns of communication organizations, production, storage, and dissemination. The role of communication technology systems today and tomorrow, and implications for organizational, local, national, and international contexts will be studied. Computer Fee.

CA 561 Teaching and Professionalism 3 cr

This course will explore the practice of teaching and learning. In this course, the primary goal is to help students to make the transition from student to future colleague. Thus there will also be a heavy emphasis on professionalization in the communication studies discipline.

CA 570 Audience Dynamics 3 cr

CA 570 explores how audience dynamics (attitudes, feelings, beliefs, experiences, values, needs, and behavior), influence message development in public relations and advertising campaigns. Fee.

CA 572 Graduate News Reporting 3 cr

Advanced study of news reporting and presentation techniques, including investigative reporting. Students concentrating in print will produce a professional quality-print project. Computer Fee.

CA 575 Investigation of Group Communication 3 cr

An in-depth analysis of study of group communication theories. Topics to be covered include: decision making, conflict, conformity, leadership, and observation methods. Pre-requisites: Graduate standing, consent of advisor and CA 500. CA 500 may be taken concurrently. Fee.

CA 576 U.S. Advertising 3 cr

An in-depth study of the field of advertising focusing specifically on the cultural history of American advertising, as well as the contemporary issues, problems and challenges facing the advertising industry.

CA 581 Editorial and Column Writing 3 cr

An examination of editorial and other opinion and persuasive communication used by the print and electronic media. Computer Fee.

CA 585 Public Relations Crisis Management 3 cr

A comprehensive analysis of public relations as a management function. Examination of the public relations function within organizations, their problems, and procedures. An in-depth look at relevant social science theories that explain common public relations problems. Study of these theories to understand the effects of different public relations techniques. Pre-requisites: Graduate standing, consent of advisor and CA 500. CA 500 may be taken concurrently. Fee.

CA 586 Public Relations Campaigns 3 cr

Researching, planning, and preparing for an integrated public relations campaign. Fee.

CA 590 Special Topics in Communication 1-3 cr

A detailed examination of selected topics in communication theory. Topic announced prior to registration. May be repeated once when course content changes. Pre-requisites: Graduate standing, consent of advisor and CA 500. CA 500 may be taken concurrently. Fee.

CA 592 Seminar in Communication Theory 1-3 cr

Departmental seminar investigating a selected field of communication theory through in-depth evaluation of its accompanying body of literature. Topic announced prior to registration. Course may be repeated once when subject matter varies. Pre-requisites: Graduate standing, consent of advisor and CA 500. CA 500 may be taken concurrently. Fee.

CA 594 Directed Study in Communication 1-3 cr

Independent research in field, laboratory, or library under the direction of a member of the graduate faculty. Pre-requisites: Graduate standing, consent of advisor and instructor.

CA 595 Project in Communication 3 cr

Work on a significant communication problem within the student's area of specialization. Project will involve analysis of the problem, development of significant communication theory applications, and administration

of the solution suggested by the analysis. Project will be designed in consultation with the major advisor and approved by the student's advising committee. A maximum of three hours of CA 595 may be applied to the student's degree.

CA 599 Thesis 3 cr

A thesis involves original research of a communication-related issue. Any methodology recognized as legitimate in the communication academic field can be used and should be appropriate for the research question(s) asked. A thesis includes statement of research questions or hypotheses, an introduction, a literature review, a methodology section, a results section, a discussion section, and a conclusion. This may vary to some extent when using a qualitative methodology. The student must prepare a thesis proposal and have it accepted by his or her committee and the graduate coordinator of the College of Arts and Sciences. The thesis must be orally defended in front of the student's committee and achieve approval from the committee members, the graduate coordinator of the College of Arts and Sciences, and the dean of the Graduate School. A maximum of three hours of CA 599 may be applied to the student's degree.

COLLEGE OF ARTS AND SCIENCES (CAS)

CAS 100 First Year Experience 2 cr

A course for first-year students majoring in the College of Arts and Sciences that assists with maximizing the student's potential to achieve academic success and to adjust responsibility to the individual and interpersonal challenges presented by college life. Taught in small groups, the course provides an introduction to the nature of higher education and a general orientation to the functions and resources of the University.

CAS 190 Special Topics 1-3 cr

This variable content course deals with selected topics from any of the disciplines in the College of Arts and Sciences. Topics will focus on current and relevant issues and may contain a service-learning component. The course may be repeated for credit when the topic varies for a maximum of six credit hours.

CELL BIOLOGY AND NEUROSCIENCE (CBN)

CBN 516 Literature Reports 1 cr

Students and faculty participate in a supervised reading of the current literature and meet periodically (usually once a week) to interact in a discussion of the selected article or topic. The goal of this course is to maintain the faculty's and students' level of information at a "state of the art" in both methods and theory in the discipline and to develop critical skills in reviewing the literature.

CBN 517 Directed Studies 1-6 cr

Students participate in research under the direction of a graduate faculty member. The student may pursue independent research or participate in a literature project.

CBN 590 Special Topics 1-3 cr

Each course provides in-depth tutorial exposure to specific areas in the discipline. Student and/or faculty presentations followed by group discussions (usually in the Socratic mode), examine the subject matter in an area of current interest either to one student or to a group of students. Credits and titles are arranged with an individual faculty member.

CBN 610 Molecular and Cellular Neuroscience 2 cr

A course which requires students to read and evaluate critically the contemporary literature dealing with the cellular and molecular mechanisms of neural function.

CBN 616 Research Seminar 1 cr

Students and faculty present a research topic for discussion before the members of the department. The presentations are usually scheduled on a rotational basis. The student may present research data for critique by the faculty.

CBN 799 Research/Dissertation 1-6 cr

Independent research by the student under the sponsorship of the graduate faculty in individual departments in the Basic Medical Sciences. Pre-requisite: Approved formal research proposal.

CLINICAL/COUNSELING PSYCHOLOGY (CCP)

CCP 706 Professional Ethics and Practice in Psychology 3 cr

This course provides instruction through readings, lecture, and case studies in the application of ethics in the professional practice of psychology. In addition, the course focuses on the philosophical foundations, professional identity, and standards of practice found in both clinical psychology and counseling psychology.

CCP 742 Advanced Psychological Assessment 3 cr

This course will offer an in-depth understanding of the assessment of complex cases, which includes both mental illness and physical disorders, as well as the impact of complex social issues, such as culture, ethnicity, and economic issues. The course covers topics pertaining to adults and children. The emphasis will be on the integration of nomothetic and empirical perspectives with idiographic approaches in an evidence-based assessment model. Topics covered will be assessing special populations (e.g., severely mentally ill, trauma, forensic, parents), therapeutic assessment, person-centered report writing, providing feedback, theoretical and scientific issues in assessment, and current controversies.

CCP 745 Teaching of Psychology 3 cr

This course will offer an in-depth understanding of the teaching of psychology at the post secondary level.

CCP 750 Applied Psychophysiology and Biofeedback 3 cr

This course will survey theory, research, and applications of psychophysiology and biofeedback in the prevention and treatment of illness and the enhancement and maintenance of health. Pre-requisite: CCP 706.

CCP 752 Clinical Neuropsychology 3 cr

This course will offer an in-depth understanding of the different theories of brain function in humans. Assessment methods for detecting abnormal functioning and the localization of functioning by behavioral methods will also be examined. The possible etiologies of abnormal functioning as well as their treatment will be reviewed.

CCP 756 Practicum Therapy 1-3 cr

Supervised experience with child and/or adult populations; includes case conference and seminars. This course may include supervised placement in an applied setting. Pre-requisite: CCP 706.

CCP 758 Psychology of Resilience and Response to Trauma 3 cr

This course will offer an in-depth understanding of resilience, as it manifests across the lifespan in response to various types of traumas (natural vs. man-made; community-wide versus family-or-individually-specific). Prevention and reduction of psychological impact related to trauma and the development, enhancement, and maintenance of resilience in the face of adversity will be emphasized. Pre-requisite: CCP 706.

CCP 759 Group and Systems Theory and Intervention 3 cr

This course will survey group and systems theories and the interventions that have been derived from this perspective. The dynamics of group processes will be delineated. Pre-requisite: CCP 706.

CCP 763 Prevention and Treatment of Public Health Problems 3 cr

This course will survey the basic theory and techniques underlying the study of public health problems. Research related to the prevention and treatment of several specific public health problems (e.g., suicide, HIV/AIDS, youth violence) will be covered in depth.

CCP 764 Consulting Psychology and Program Development 3 cr

This course provides an overview of approaches to psychological consulting and program development in individual, small group and large organization contexts. Specific aspects of psychological consulting in mental health, business, and educational settings will be reviewed.

CCP 766 Supervision of Clinical Interventions 3 cr

This course provides an overview of the various theoretical approaches to supervision of professional psychological services, particularly psychotherapy services. In addition, relevant research findings in the area of supervision are reviewed. Students also have the opportunity to receive feedback on audio/video tapes of their supervision sessions with a junior graduate student clinician. Pre-requisites: CCP 706 and CCP 756.

CCP 772 Child and Family Psychopathology and Intervention 3 cr

This course provides an overview of current theory and research findings relevant to psychological disorders typically occurring in childhood and adolescence. In addition, evidence-based interventions for various childhood disorders are reviewed. A focus will be upon an ecological and developmental view

of childhood psychopathology that integrates family, community, and societal forces in a comprehensive view of such disorders. Pre-requisite: CCP 706.

CCP 780 Applied Health Psychology 3 cr
This course will survey theory, research, and applications of health psychology in the prevention and treatment of illness and the enhancement and maintenance of health. Pre-requisite: CCP 706.

CCP 790 Special Topics 3 cr
Selected topics in psychology and may be repeated for credit when course varies.

CCP 796 Directed Studies 1-3 cr
Directed study and research.

CCP 799 Dissertation Research 1-6 cr
Completion and oral defense of a dissertation based upon original research. May be repeated for up to 12 hours credit. A minimum of nine hours credit is required to meet degree requirements. Pre-requisite: Approval of research prospectus including IRB or Animal Use and Care Committee approval if applicable.

CIVIL ENGINEERING (CE)

CE 102 Introduction to Civil Engineering 2 cr
Introduction to the issues facing today's Civil Engineers. Students will learn the basic techniques of working in teams. Computer aided design and applications using spreadsheets in Civil Engineering will be introduced. Laptop computer required. Pre-requisite: None. Fee.

CE 204 Surveying Fundamentals 3 cr
Applications of fundamental surveying techniques. Students will be introduced to the applications of Global Positioning System (GPS) and Geographical Information Systems (GIS) in Civil Engineering. Pre-requisites: CE 102 and one of the following: math placement score of 85 or MA 113 or MA 115 or MA 125. Co-requisite: CE 205.

CE 205 Surveying Fundamentals Lab 1 cr
Students will collect field data using state-of-the-art surveying and GPS equipment. Collected data will be used in Geographic Information Systems (GIS) software. Pre-requisites: CE 102 and one of the following: math placement score of 85 or MA 113 or MA 115 or MA 125. Co-requisite: CE 204. Fee.

CE 314 Civil Engineering Materials 3 cr
Study of engineering properties of materials used in civil engineering including steel, concrete, asphalt, and timber. Pre-requisite: CH 132, EG 315. Co-requisite: CE 315. Fee.

CE 315 Civil Engineering Materials Lab (W) 1 cr
Study of experimental techniques used to evaluate engineering properties of materials. These techniques will be used to test materials used in civil engineering according to ASTM standards. Pre-requisite: CH 132. Co-requisite: CE 314. Fee.

CE 340 Soil Mechanics 3 cr
An Introduction to Soil Mechanics. Soil identification and engineering properties of soils. Analysis of elementary geohydraulics and geomechanics problems. Pre-requisites: EG 315, EG 360. Fee.

CE 341 Geotechnical Laboratory (W) 1 cr
Soil identification and classification: experimental measurement of soil properties and technical reporting. Pre-requisites: EH 102. Co-requisite: CE 340. Fee.

CE 352 Transportation Engineering 3 cr
Principles of transportation engineering with emphasis on highways and traffic. Pre-requisites: CE 204, CE 205. Fee.

CE 360 Water Resources Engineering I 2 cr
The application of fluid mechanics and other science and engineering disciplines in the development of structures, projects, and systems involving water resources. Introductions to open-channel flow and closed-conduit flow, hydraulic structures, hydraulic machinery, and groundwater flow. Pre-requisite: EG 360.

CE 367 Hydraulics Laboratory (W) 1 cr
Laboratory and field measurement of fluid and flow properties: hydraulic laboratory practice and model simulation techniques. Pre-requisite: EG 360. Co-requisite: CE 360. Fee.

CE 370 Introduction to Environmental Engineering 3 cr
Introduction to the fundamentals of water quality characterization, water pollution hazardous waste management, water and wastewater treatment, solid waste management, and waste minimization and control. Pre-requisites: CH 132, MA 238. Co-requisite: CE 374. Fee.

CE 374 Introduction to Environmental Engineering Lab 1 cr
Introduction to specific physical, chemical, and microbiological methods of analysis common to environmental engineering including laboratory and field measurement of water quality characteristics and interpretation of results. Pre-requisites: CH 132, MA 238. Co-requisite: CE 370. Fee.

CE 384 Structural Analysis 3 cr
Analysis of statically determinate structures such as trusses, beams, and frames including the calculation of deflections. Introduction to analysis of indeterminate structures. Pre-requisite: EG 315. Co-requisite: CE 385. Fee.

CE 385 Structural Analysis Lab 1 cr
Modeling and analysis of determinate and indeterminate structures. Use of state-of-the-art structural analysis software. Pre-requisite: EG 315. Co-requisite: CE 384. Fee.

CE 410 Construction Engineering 3 cr
An introduction to the construction industry and the role of civil engineering in construction. Construction engineering methods including preparation of cost estimates, critical path scheduling and resource allocation. (PCS or instructor permission). Fee.

CE 431 Civil Engineering Design I 2 cr
Introduction to the practice of civil engineering and the engineering design process. In depth consideration of ethical issues in engineering practice. Participation in engineering design teams for project planning, proposal development, and completion of a feasibility study. Written and oral presentations of results. A senior capstone course. Pre-requisite: Must have completed or be enrolled in 3 of the 6 following courses - CE 352, CE 443, CE 460, CE 470 and CE 480 or CE 485. Fee.

CE 432 Civil Engineering Design II 3(1) cr
A multidisciplinary development of a project involving analysis and design in civil engineering. Implementation of design concepts and methodologies from conception to final design. Completion of a comprehensive design project including cost estimates, oral and written presentation of results. A senior capstone course. Pre-requisite: CE 431. Fee.

CE 442 Foundation Engineering 3 cr
Principles of foundation analysis, design and construction in engineering practice. Pre-requisite: CE 443. Fee.

CE 443 Geotechnical Engineering 2 cr
An Introduction to Geotechnical Engineering. Analysis of geomechanical and geohydraulic problems accompanying the design of foundations, retaining structures and slopes. Pre-requisite: CE 340. Co-requisite: CE 441. Fee.

CE 452 Transportation Geometric Design 3 cr
This course will provide students with an understanding of the basic principles and techniques of highway design, including route-layout, alignment and intersection design, and earthwork evaluation. Students will be exposed to state-of-the-art computer tools to generate and analyze designs. Pre-requisite: CE 352. Fee.

CE 460 Water Resources Engineering II 3 cr
The application of hydrologic and hydraulic principles for hydrologic analysis, frequency analysis, flood routing, hydrologic simulation, urban hydrology, floodplain hydraulics, and coastal engineering. Pre-requisite: CE 360.

CE 466 Coastal and Harbor Engineering 3 cr
An introduction to the principles of coastal hydraulic and sedimentary processes and the design of coastal and harbor works such as ship channels, marinas, jetties, breakwaters, groins, seawalls and beach nourishment projects. Pre-requisite: CE 460. Fee.

CE 470 Water and Wastewater Treatment Design 3 cr
Development of the principles of design for components of water supply and wastewater treatment facilities, including drinking water distribution and wastewater collection systems. Pre-requisites: CE 360, CE 370, CE 374. Co-requisite: CE 471. Fee.

CE 471 Water and Wastewater Treatment Design Lab 1 cr
Application of design principles and criteria to analyze, design, and evaluate water and wastewater treatment facility components, including water distribution and wastewater collection systems. Pre-requisites: CE 360, CE 370, CE 374. Co-requisite: CE 470. Fee.

CE 474 Industrial Waste Treatment 3 cr
Topics in Industrial Waste Treatment unit processes and their design, including those addressing waste water treatment, air pollution control, solid waste, and hazardous waste management. Pre-requisite: CE 470 or instructor approval. Fee.

CE 480 Design of Steel Structures 3 cr
Design of steel trusses, girders, building frames, and other steel structures. Pre-requisite: CE 384. Co-requisite: CE 481. Fee.

CE 481 Steel Design Laboratory 1 cr
Application of structural steel design methods to specific cases. Pre-requisite: CE 384. Co-requisite: CE 480. Fee.

CE 485 Reinforced Concrete Design 3 cr
Fundamentals of reinforced concrete analysis and design. Design of beams, one-way slabs, short columns, and single footings. Calculations of cracking and deflection of beams. Pre-requisite: CE 384. Co-requisite: CE 486. Fee.

CE 486 Reinforced Concrete Design Lab 1 cr
Integrated reinforced concrete design problems similar to those found in practice will be presented. Students will solve similar problems in class during the lab period. Pre-requisite: CE 384. Co-requisite: CE 485. Fee.

CE 490 Special Topics 1-4 cr
Topics of current civil engineering interest. Fee.

CE 494 Directed Independent Study 1-4 cr
Directed study, under the guidance of a faculty advisor, or a topic from the field of civil engineering not offered in a regularly scheduled course. Requires department chair permission. Pre-requisite: Senior Status. Fee.

CE 499 Senior Honors Project (H) 3 cr
Under the advice and guidance of a faulty mentor, honors students will identify and carry out a research project, relevant to the field of Civil Engineering study, that will lead to a formal presentation at the annual Honors Student Colloquium. The senior project will be judged and graded by three faculty chaired by the honors mentor. This course is required for Honors recognition. Pre-requisites: Completion of the most advanced required course in the subdiscipline of the project (CE 443, CE 352, CE 460, CE 470 or CE 384) plus completion of an approved project prospectus. Fee.

CE 501 Introduction to the Coastal Design Environment 3 cr
An overview of the unique aspects of the design environment faced by civil engineers along the coast including water wave mechanics, coastal water levels, coastal circulation and mixing, coastal groundwater levels and flow, coastal sediment transport, and hurricane winds. Fee.

CE 502 Introduction to Civil Engineering Design in the Coastal Environment 3 cr
An introduction to the design of civil engineering infrastructure in the coastal environment. This includes an overview and design of beaches, seawalls, revetments, piers, jetties, constructed wetlands, coastal bridges and roadways, building, sewer outfalls and other environmental protection devices. This will include coastal regulatory policies. Pre-requisite: CE 501. Fee.

CE 510 Construction Engineering 3 cr
An introduction to the construction industry and the role of civil engineering in construction. Construction engineering methods including preparations of cost estimates, critical path scheduling and resource allocation. Instructor permission. Fee.

CE 540 Advanced Soil Mechanics 3 cr
Shearing strength and deformation behavior of soils with applications to retraining structures, slopes and bearing capacity. Behavior of cohesionless soils and cohesive soils under drained and undrained conditions. Permeability, steady state flow and effective stress in soils. Consolidation theory. Pre-requisite: CE 443 or equivalent. Fee.

CE 542 Foundation Engineering 3 cr
This course is to provide advanced knowledge of selected geotechnical principals for analysis, design and construction of a variety of foundation systems. This course is dually listed with an equivalent 400 level course (CE 442). Pre-requisite: CE 441, CE 443 or Instructor Permission. Fee.

CE 547 Ground Water 3 cr
Principals of fluid flow through porous media. Well hydraulics. Ground water contamination, including principals that govern fate, transport, and remediation. Pre-requisites: CE 340, CE 470. Fee.

CE 551 Traffic Engineering 3 cr
This course will focus on traffic flow parameters and their influence on roadway traffic conditions, with emphasis on traffic data collection, traffic safety analysis, roadway markings, traffic signs, traffic signal timing and signal capacity analysis, and traffic management systems. Pre-requisite: CE 352 or equivalent. Fee.

CE 552 Transportation Geometric Design 3 cr
This course will provide students with an understanding of the basic principles and techniques of highway design, including route-layout, alignment and intersection design, and earthwork evaluation. Students will be exposed to state-of-the-art computer tools to generate and analyze designs. This course is dually listed with an equivalent 400 level course (CE 452). Pre-requisite: CE 352 or equivalent, or Instructor Permission. Fee.

CE 553 Transportation Systems Evaluation 3 cr
This course will focus on concepts and principles of transportation economic analysis, transportation costs and benefits, user and nonuse consequences, methods of evaluation of plans and projects, environmental impact assessments, and transportation programming and management. Pre-requisite: Consent of instructor. Fee.

CE 560 Coastal Hydrodynamics 3 cr
Theory and analysis of advanced coastal and estuarine hydrodynamics. Topics include wave mechanics, tidal dynamics, coastal and estuarine circulation, and transport and mixing in coastal waters. Pre-requisite: CE 501.

CE 563 Numerical Modeling of Coastal Hydrodynamics 3 cr
Theory and application of numerical models to coastal hydrodynamics. Topics include an overview of numerical simulation techniques, wave transformation processes, engineering wave models, principles of circulation, and advanced circulation models. Pre-requisite: CE 501.

CE 566 Coastal and Harbor Engineering 3 cr
Advanced principles of coastal hydraulic and sedimentary processes and the design of coastal and harbor works such as ship channels, marina, jetties, breakwaters, groins, seawalls and beach nourishment projects. This course is dually listed with an equivalent 400 level course (CE 466). Pre-requisite: CE 460, CE 501 or Instructor Permission. Fee.

CE 571 Biological Wastewater Treatment 3 cr
Theory, analysis and design criteria of biological treatment systems for municipal and industrial wastewaters, including suspended and attached growth processes in both the aerobic and anaerobic environments. Pre-requisites: CE 470 or equivalent. Fee.

CE 572 Physical Wastewater Treatment 3 cr
Advanced theory and applications in physical and chemical wastewater treatment. Topics covered include mass balance; reactor design, modeling, and analysis; filtration; mixing and flocculation; flotation; dissolved oxygen transfer optimization; chemical treatment of nutrient loads; disinfection; and residuals management. Pre-requisite: CE 470 or equivalent. Fee.

CE 574 Industrial Waste Treatment 3 cr
Topics in Industrial Waste Treatment unit processes and their design, including those addressing waste water treatment, air pollution, solid waste, and hazardous waste management. This course is dually listed with an equivalent 400 level course (CE 474). Pre-requisite: CE 470 or Instructor Permission. Fee.

CE 579 Fundamentals of Environmental Engineering 3 cr
Fundamentals of water quality characterization, water pollution, hazardous waste management, water and wastewater treatment, solid waste management, and waste minimization and control. This course includes a comprehensive project in addition to the lecture class. Note: This course is a core course for MS degree students in the Environmental Toxicology Program, and not intended for Engineering Majors. Instructor Permission. This course is dually listed with CE 370. Fee.

CE 580 Steel Design 3 cr
Design of steel trusses, girders, building frames, and other steel structures. This course is dually listed with an equivalent 400 level course (CE 480). Pre-requisite: CE 384, CE 385, or Instructor Permission. Fee.

CE 581 Steel Design Lab 1 cr
Application of structural steel design methods to specific cases. This course is dually listed with an equivalent 400 level course

(CE 481). Pre-requisite: CE 384, CE 385, or Instructor Permission. Fee.

CE 583 Advanced Steel Design 3 cr
This course covers the design of built-up members, composite beams, columns and floors. Design of advanced bolted and welded connections will also be covered. Students will use state-of-the-art software to model and design complex steel structures. Pre-requisite: CE 480, CE 481 or Equivalent. Fee.

CE 584 Advanced Structural Analysis 3 cr
Students will be introduced to the analysis of indeterminate structures using classical and matrix methods. Students will also be introduced to advanced structural modeling techniques using state-of-the-art software. Pre-requisite: CE 384, CE 385 or Equivalent. Fee.

CE 585 Concrete Design 3 cr
Fundamentals of reinforced concrete analysis and design. Design of beams, one-way slabs, short columns, and single footings. Calculations of cracking and deflection of beams. This course is dually listed with an equivalent 400 level course (CE 485). Pre-requisite: CE 384, CE 385, or Instructor Permission. Fee.

CE 586 Concrete Design Lab 1 cr
Integrated reinforced concrete design problems similar to those found in practice will be presented. Students will solve similar problems in class during the lab period. This course is dually listed with a 400 level course (CE 486). Pre-requisite: CE 384, CE 385, or Instructor Permission. Fee.

CE 587 Advanced Concrete Design 3 cr
Students will be introduced to the analysis and design of reinforced concrete footings, retaining walls, two-way floor systems, long columns, beams subjected to torsion and deep beams. Pre-requisites: CE 485, CE 486, or equivalent. Fee.

CE 588 Prestressed Concrete Design 3 cr
Students will be introduced to the concepts of prestressing, loss of prestress, design of prestressed beams, columns and slabs. Pre-requisite: CE 485, CE 486 or Equivalent. Fee.

CE 590 Special Topics 1 - 4 cr
Topics of current civil engineering interest. Fee.

CE 592 Directed Independent Study 1-3 cr
Directed study, under the guidance of a faculty advisor, of a topic from the field of Civil Engineering not offered in a regularly scheduled course. Pre-requisite: Consent of instructor. Fee.

CE 594 Projects in Civil Engineering 1-3 cr
May be repeated for credit. Pre-requisite: Approved proposal and consent of director of engineering graduate studies. Fee.

CE 599 Thesis 1-6 cr
Thesis research. May be taken more than once. Pre-requisite: Approved prospectus. Fee.

COUNSELOR EDUCATION (CED)

CED 560 Diagnostic and Treatment Planning 3 cr
The Diagnostic and Statistical Manual of Mental Disorders (DSM) is used to develop a basic understanding of mental disorders. Students learn to utilize the DSM classification system to identify counseling techniques and develop counseling plans. Prerequisite: Grade of "B" or above in CED 571 and EPY 555.

CED 561 Marriage and Family Counseling 3 cr
The theories, principles, and techniques of counseling couples and families are examined. Other topics include: ethical and multicultural issues, assessment, and current research in marriage and family counseling.

CED 562 Addictions Counseling 3 cr
This course provides an overview of research and theory in regards to the etiology, assessment, diagnosis and treatment of addictive disorders, e.g. alcoholism, drug addiction, gambling, etc. The course will review theoretical and evidence-based models of counseling for addictive disorders as well as considerations for treating addictive disorders among various special populations and with culturally diverse clients.

CED 563 Divorce Mediation 3 cr
This course will introduce students to the techniques of divorce mediation. Legal, ethical and psychological issues in the divorce mediation process will be examined with special emphasis on the neutral role of the mediator explored.

CED 564 Gerontological Counseling 3 cr
Emphasis is on a basic knowledge of the theories, principles, and techniques of counseling elderly individuals, couples, and their families. Includes such topics as: assessment, ethical and cultural issues, model programs, and current research in gerontological counseling.

CED 565 Foundations of School Counseling 3 cr
Provides an overview of the history, philosophical foundations and professional duty of professional school counseling. Review of historical and contextual forces that shaped the evolution of professional school counselors' roles and functions within schools. Special emphasis will be placed on current trends and best practices as identified by ASCA and current literature.

CED 566 Multicultural Counseling 3 cr
Includes a study of historical and current theories and issues in multicultural counseling, provides an understanding of societal trends and changes, and demonstrates strategies/techniques for cross-cultural counseling techniques through class exercises, case studies, and demonstrations. Reflective experiences are used to allow for the development of cultural self-knowledge.

CED 567 Couples Counseling and Human Sexuality 3 cr
This course will provide an overview of various theoretical approaches and related research findings for couples counseling. The course will also provide an overview of current theory and research in human sexuality, including sexual development, sexual well being/wellness, sexual orientation and sexual dysfunction and disorders. The course will apply particular focus to sexuality issues as they are an aspect of individual and couples counseling work.

CED 568 Clinical Mental Health Counseling 3 cr
This course examines community mental health counseling and includes a survey of its organizational, fiscal, and legal dimensions; of community needs assessment, program delivery, advocacy, funding, and intervention; of the principles of consultation, education and outreach; of client and community characteristics; and of the various practice settings and roles.

CED 569 Child, Adolescent and Family Counseling 3 cr
This course provides an overview of current theoretical perspective and evidence-based intervention paradigms regarding psychological, behavioral, cultural and social context/environmental problems commonly occurring during childhood problems at various levels of social ecology: individual, cultural, academic, familial, community and societal.

CED 571 Foundations of Clinical Mental Health Counseling 3 cr
This course is an introduction to the historical and philosophical foundations of Clinical Mental Health Counseling as well as the various contemporary professional and clinical practice issues facing this counseling specialty. The goal of the course is to foster a working knowledge for students of these issues and to teach students to skillfully apply public policy (mental health, financial, and regulatory) to the task of refining or improving delivery of mental health services.

CED 572 Principles and Theories of Counseling 3 cr
Includes a study of various theories, principles, and techniques in counseling. Opportunity is provided for the implementation of counseling techniques through the study of case studies and transcripts.

CED 573 Educational and Occupational Information Systems, Materials and Resources 3 cr
The study of educational, vocational, psychological, and individual resources needed to make employment decisions. Emphasis is on the collection and evaluation of information, procedures and strategies for researching employment opportunities, and the management of information services.

CED 574 Group Counseling Theory and Process 3 cr
Includes both the theory and practice of group counseling, counseling with clients of diverse backgrounds, and selecting group work suitable to multicultural needs. Emphasis is on the developmental level and background of clients with whom the counselor expects to work.

CED 576 Supervised Practicum in Counseling 3 cr
This course requires the student to demonstrate the appropriate use of a variety of counseling skills and techniques. Audio and video tapes of individual counseling sessions are critiqued in class by the instructor. Pre-requisites: Grade of "B" or above in CED 571 or CED 565, CED 566, CED 572, CED 574, CED 584, and CED 586. Counseling majors only.

CED 578 Supervised Practicum in Group Counseling 3 cr

Supervised practice is provided in group counseling and other group work experience appropriate for a counselor. Practicum experience is offered in the educational setting in which the student plans to work. Pre-requisite: Special permission of the instructor.

CED 579 Social and Psychological Aspects of Disability 3 cr

The theory, research, and practices in related disciplines which contribute to an understanding of human disability. Field work and case studies serve as integrating activities.

CED 580 Student Personnel Services 3 cr

Included is a survey of historical developments and current practices in student personnel services in post-high school educational institutions. The organization, administration, and functions of the various services are stressed.

CED 582 Data Driven School Counseling 3 cr

Provides an overview of how school counselors can access, interpret and use achievement data, demographic data, school process data and perception data to inform school counseling programmatic decisions. Assessment of systemic data, using data to guide program development, formative and summative evaluation methods, and strategies for dissemination of data are reviewed.

CED 584 Seminar in Ethical and Legal Issues In Counseling 3 cr

Ethical standards of the profession and current legal issues will be examined in the context of case studies and current literature. Critical analysis by each student of legal and ethical issues faced by counselors and psychometrists will be stressed.

CED 586 Counseling Skills and Processes 3 cr

Emphasis is placed on the counseling procedures involved in developing and maintaining the therapeutic relationship. Students are required to model basic skills of counseling using videotaped incidents and observations for feedback on skill development. Pre-requisite: Grade "B" or above in CED 584 or may take concurrently. Counseling majors only.

CED 587 Behavioral Counseling 3 cr

Study and practice in Cognitive/Behavioral theories of counseling. Includes skills and techniques, concepts and principles, and treatment plans from the cognitive/behavioral model.

CED 588 Development, Assessment, and Intervention 3 cr

Emphasis is placed on a basic knowledge of the theories, principles, and techniques of career counseling used for a wide range of ages. Other topics include: model career development programs, assessment, population and age diversity, individual characteristics, placement and current research. Pre-requisite: Counseling and Psychometry majors only.

CED 590 Special Topics 3 cr

Guided supervision in the completion of learning tasks in counselor education such as program design and revision, study of a significant topic, theory, model, and supervision of selected learning activities to acquire specific counseling and testing skills.

CED 591 Advocacy, Collaboration, and Consultation 3 cr

The primary purpose of the course is to expose students to models of advocacy, collaboration, and consultation that are useful in school and clinical mental health counseling. Students will learn the theoretical foundations of advocacy, collaboration, and consultation; learn current models of each of the three skills, practice and work toward development of basic mastery of the use advocacy, collaboration, and consultation skills, and identify how they can put such skills to use in professional settings in order to promote social justice and equity for their clients.

CED 592 Crisis and Trauma Counseling 3 cr

Students will gain knowledge of research-information theoretical models of etiology and development of problems such as suicidality and other forms of mental health crisis, as well as grief, trauma, and disaster-related mental health symptoms. Students will also gain knowledge of evidence-based models of counseling and intervention in these areas such as comprehensive risk assessment strategies, psychological first aid and systems of mental health crisis management. Pre-requisite: "B" or above in CED 571, 572 and 584. CED 584 may be taken concurrently.

CED 594 Directed Study and Research 1-3 cr

Students explore through directed study problems and issues of special interest or significance in Counselor Education. Not more than three semester hours of any departmental 594 courses can be accepted toward a degree program.

CED 595 Internship: School Counseling 3, 6, 9 cr

The internship is a supervised learning experience in a work setting similar to that in which a counselor eventually will be employed. The internship provides the student with an opportunity to apply the theories and concepts learned during the graduate program. Not more than 12 hours may be taken. Pre-requisites: Special permission of the instructor, and grade of "B" or above in CED 586 and CED 576 and successful completion of the Praxis II Subject Test.

CED 596 Internship: School Psychometry 3, 6, 9 cr

The internship is a supervised learning experience in a work setting similar to that in which a school psychometrist eventually will be employed. The internship provides the student with an opportunity to apply the theories and concepts learned during the graduate program. Not more than 12 hours may be taken. Pre-requisites: Special permission of the instructor, and grade of "B" or above in EPY 556, EPY 558, and CED 583.

CED 597 Internship: Clinical Mental Health 3, 6, 9 cr

The internship is a supervised learning experience in a work setting similar to that in which a community counselor eventually will be employed. The internship provides the student with an opportunity to apply the theories and concepts learned during the graduate program. Not more than 12 hours may be taken. Pre-requisites: Special permission of the instructor, and grade of "B" or above in CED 586 and CED 576.

CED 598 Internship: Rehabilitation Counseling 3, 6, 9 cr

The internship is a supervised learning experience in a work setting similar to that in which a rehabilitation counselor eventually will be employed. The internship provides the student with an opportunity to apply the theories and concepts learned during the graduate program. Not more than 12 hours may be taken. Pre-requisites: Special permission of the instructor, and grade of "B" or above in CED 586 and CED 576.

CED 599 Thesis 1-9 cr

A student selects a project, study, or investigation which is related to an area of specialization in Counselor Education. The project forms a basis for the thesis. A thesis committee will provide direction during the writing of the thesis.

CED 672 Advanced Counseling Theory and Practice 3 cr

An advanced study of counseling theories and strategies as they apply to practical situations and special populations. Pre-requisite: CED 572.

CED 674 Advanced Theory and Practice in Group Counseling 3 cr

This course provides the student with advanced skills and knowledge designed to facilitate working with groups. The course emphasizes group theory, research, and participation in group dynamics. Pre-requisite: CED 574.

CED 676 Advanced Practicum in Counseling 3 cr

Supervised field experience in appropriate settings. Required weekly seminar. Pre-requisites: Special permission of the instructor and CED 576.

CED 678 Negotiation Training 3 cr

This course focuses on the development of negotiation, conflict resolution, and communication skills needed to be effective in resolving a variety of problems. Students will have an opportunity to research and practice the skills in the negotiation process by applying communication and conflict resolution techniques in simulated and real situations.

CED 690 Special Topics 3 cr

Guided supervision in the completion of learning tasks in counselor education such as program design and revision, study of a significant topic, theory, model, and supervision of selected learning activities to acquire specific counseling and testing skills.

CED 694 Directed Study and Research 1-3 cr

Students explore through directed study problems and issues of special interest or significance in Counselor Education. Not more than three semester hours of any departmental 694 courses can be accepted toward a degree program.

CED 699 Research Project 3-9 cr

A supervised field project, study, or investigation in the Counselor Specialist Program, serving as the culminating experience in the program. Applying concepts and skills learned during the sixth-year program, the student will conduct an investigation and prepare a field project report in standard form. Pre-requisites: CED 576 and special permission of the instructor.

CHEMISTRY (CH)

CH 100 Fundamentals of Chemistry 4 cr

An introduction to the fundamental concepts of chemistry. Pre-requisite: Mathematics Placement Test score which allows registration for MA 112. Students are advised to concurrently register for MA 112 and CH 100. Students whose Mathematics Placement Exam score does not allow them to register for MA 112 should first complete MTH 100 (or DS 090) with a C or better as a Pre-requisite for CH 100. CH 100 may not be used to satisfy the Natural Science requirement for the College of Arts and Sciences. (Offered Fall and Spring Semesters).

CH 101 Survey of Inorganic and Organic Chemistry 3 cr

An intensive presentation of inorganic and organic chemistry principles selected to convey a basic understanding of their relationship to and function in the life process. Laboratory exercises will introduce students to basic laboratory procedures, often using exercises related to life process. This course is generally taken by students in the College of Nursing. CH 101L must be taken concurrently. Together, CH 101 and CH 101L count as one laboratory science course, partially fulfilling general education requirements.(Offered Fall and Spring Semesters.) **Core Course**.

CH 101L Survey of Inorganic and Organic Chemistry Laboratory 1 cr

Laboratory exercises associated with CH 101. CH 101 must be taken concurrently. Together, CH 101 and CH 101L count as one laboratory science course, partially fulfilling general education requirements. Fee. **Core Course**.

CH 103 Chemistry: Its Role in Society 3 cr

Chemical principles to allow understanding of the technical aspects of air and water pollution, chemical solutions of the energy crisis, the polymer industry, drugs, nutrition, and genetic engineering. CH 103 is not designed to lead to other chemistry courses and may not be used to substitute for CH 131 for students majoring or minoring in Chemistry. CH 103L must be taken concurrently. Together, CH 103 and CH 103L count as one laboratory science course, partially fulfilling general education requirements.(Offered Fall and Spring Semesters.) **Core Course**.

CH 103L Chemistry: Its Role in Society Laboratory 1 cr

Laboratory exercises associated with CH 103. CH 103 must be taken concurrently. Together, CH 103 and CH 103L count as one laboratory science course, partially fulfilling general education requirements. Fee. **Core Course**.

CH 131 General Chemistry I 3 cr

First of a two-semester sequence for majors, minors, and others seeking quantitative treatment. Topics include the nuclear model, stoichiometry, chemical reactions, gas laws, thermochemistry, atomic structure, and molecular bonding. CH 131 and CH 131L must be taken concurrently. Together, CH 131 and CH 131L count as one laboratory science course partially fulfilling general education requirements. (Offered Fall and Spring Semesters). Pre-requisites: CH 100 or ACT Math score of 24 or greater (or its equivalent as determined by the University) or letter grade of C or higher in MA 113 (or any higher level MA experience) or a score of 90 or greater on the Mathematics Placement Test and the completion of a high school physical science unit (or its equivalent) or one term of college chemistry. **Core Course.**

CH 131L General Chemistry I Laboratory 1 cr

Laboratory exercises associated with CH 131. CH 131 must be taken concurrently or as a Pre-requisite. Together, CH 131 and CH 131L count as one laboratory science course, partially fulfilling general education requirements. Fee. **Core Course**.

CH 132 General Chemistry II 3 cr

Continuation of CH 131. Topics include solutions, colligative properties, chemical kinetics, equilibrium, acids and bases, pH, buffers, titrations, thermodynamics, and electrochemistry. Additional topics may include nuclear chemistry, organic and biochemistry, chemistry of inorganic compounds, transition metal complexes, and industrial chemistry. CH 132L must be taken concurrently. Together, CH 132 and CH 132L count as one laboratory science course, partially fulfilling general education requirements. (Offered Fall and Spring Semesters.) Pre-requisites: CH 131, CH 131L. **Core Course**.

CH 132L General Chemistry II Laboratory 1 cr

Laboratory exercises associated with CH 132. CH 132 must be taken concurrently or as a Pre-requisite. Together, CH 132 and CH 132L count as one laboratory science course, partially fulfilling general education requirements. Fee. **Core Course**.

CH 141 Chemical Principles 4 cr

A one-semester accelerated introductory course in chemistry for majors, minors, and others seeking a more physical and quantitative treatment. Covers stoichiometry, states of matter, chemical bonding and structure, solutions, kinetics, gaseous and aqueous equilibria thermodynamics, electrochemistry, and nuclear chemistry. CH 141L must be taken concurrently. Together, CH 141 and CH 141L count as one laboratory science course, partially fulfilling general education requirements. (Offered Fall and Spring Semesters.) Pre-requisite: ACS Chemistry Placement Qualifying Exam score of 45 or above. **Core Course**.

CH 141L Chemistry Principles Laboratory 1 cr

Laboratory exercises associated with CH 141. CH 141 must be taken concurrently or as a Pre-requisite. Together, CH 141 and CH 141L count as one laboratory science course, partially fulfilling general education requirements. Fee. **Core Course**.

CH 150 Introduction to Computer Chemistry (C) 2 cr

This course will introduce the student to direct application and use of computer activity for applications in chemistry: acquisition of data from instrumentation, data analysis, presentation of experimental data, and chemical structure and modeling programs. (Offered Spring Semester.) Pre-requisites: CH 131 or CH 141 concurrent; MA 115. Fee.

CH 201 Organic Chemistry I 3 cr

Fundamentals of structure and chemical behavior of organic molecules including nomenclature, properties, structure, stereochemistry, spectroscopy (both infrared and nuclear magnetic resonance), reactions, synthesis, and mechanisms of alkanes, alkenes, alkyl halides, and alcohols. (Offered Fall and Spring Semesters.) Pre-requisites: CH 132 with CH 132L or CH 141 with CH 141L. Co-requisite: CH 201L.

CH 201L Organic Chemistry I Laboratory 1 cr

Laboratory exercises associated with CH 201. The laboratory introduces basic organic laboratory practices such as the collection of physical properties data, separation and purification techniques, synthesis, and spectroscopic methods. (Offered Fall and Spring Semesters.) Pre-requisites: CH 132 with CH 132L or CH 141 with CH 141L. Co-requisite: CH 201. Fee.

CH 202 Organic Chemistry II 3 cr

Continuation of study of structure and chemical behavior of organic molecules including aromatic compounds, ketones and aldehydes amines, carboxylic acids and their derivatives, carbohydrates, amino acids, peptides and proteins, nucleic acids, alkynes, ethers and epoxides, and conjugated dienes. (Offered Fall and Spring Semesters.) Pre-requisites: CH 201 with CH 201L. Co-requisite: CH 202L.

CH 202L Organic Chemistry II Laboratory 1 cr

Laboratory exercises associated with CH 202. The laboratory continues with the basic organic laboratory practices with additional synthetic methods and an introduction to nuclear magnetic resonance spectroscopy. (Offered Fall and Spring Semesters.) Pre-requisites: CH 201 and CH 201L. Co-requisite: CH 202. Fee

CH 265 Introductory Analysis 3 cr

A detailed study of the fundamental theories and principles of chemistry with emphasis on their application to quantitative analysis. (Because proficiency of the material covered in CH 132 is vital for success in this course, students are strongly advised to take the two courses as close together as schedules permit. Offered Fall and Spring Semesters.) Pre-requisites: CH 132 with CH 132L or CH 141 with CH 141L. Co-requisite: CH 265L.

CH 265L Introductory Analysis Laboratory 1 cr

Laboratory exercises associated with CH 265. (Offered Fall and Spring Semesters.) Pre-requisites: CH 132 with CH 132L or CH 141 with CH 141L. Co-requisite: CH 265. Fee.

CH 300 Physical Chemistry for Life Sciences (W) 3 cr

Designed to introduce the concepts of physical chemistry to students interested in the biochemical and biological aspects of chemistry. Topics are presented from viewpoint of their applications to biochemical problems: thermodynamics/ biochemical energetics, properties of solutions, biological redox reactions, chemical/enzyme kinetics. (Offered Fall Semester.) Pre-requisites: EH 102, CH 265 with CH 265L; MA 126; PH 202; CH 440 (concurrent). Co-requisite: CH 300L.

CH 300L Physical Chemistry for Life Sciences Laboratory 1 cr

Laboratory exercises associated with CH 300. (Offered Fall Semester.) Pre-requisites: CH 265 with CH 265L; MA 126; PH 202; CH 440 (concurrent). Co-requisite: CH 300. Fee.

CH 301 Physical Chemistry I (W) 3 cr

Gas Laws, First and Second Law of Thermodynamics, Phase Equilibrium, Chemical Equilibrium, Physical Chemistry of Solutions, Electrochemistry, Transport Properties, and Chemical Kinetics. (Offered Fall Semester.) Pre-requisites: EH 102 or EH 105, CH 265 with CH 265L; MA 126; PH 202 or MA 227 (prior to or concurrently) and PH 115. Co-requisite for chemistry majors is CH 301L.

CH 301L Physical Chemistry I Laboratory 1 cr

Laboratory exercises associated with CH 301. (Offered Fall Semester.) Pre-requisites: EH 102 or EH 105, CH 265 with CH 265L; MA 126; PH 202 or MA 227 (prior to or concurrently) and PH 115. Co-requisite: CH 301. Lab is required for chemistry majors. Fee.

CH 302 Physical Chemistry II (W) 3 cr

Quantum Theory and Applications to Atoms and Molecules, Spectroscopy, and Statistical Thermodynamics. (Offered Spring Semester.) Pre-requisites: EH 102 or EH 105, CH 265 with CH 265L and MA 126; PH 202 or MA 227 (prior to or concurrently) and PH 115. Co-requisite for chemistry majors is CH 302L.

CH 302L Physical Chemistry II Laboratory 1 cr

Laboratory exercises associated with CH 302. (Offered Spring Semester.) Pre-requisites: EH 102 or EH 105, CH 265 with CH 265L; MA 126; PH 202 or MA 227 (prior to or concurrently) and PH 115. Co-requisite: CH 302. Lab is required for chemistry majors. Fee.

CH 394 Directed Studies 1-4 cr

Student works in research laboratory under faculty guidance. May be repeated; cannot exceed four credits. Pre-requisite: Junior standing or permission of department chair. Fee.

CH 401 Intermediate Inorganic Chemistry 3 cr

Atomic and molecular structure and bonding emphasizing the use of symmetry, group theory, and molecular orbitals; NMR spectrometry; coordination chemistry; organometallic chemistry and homogeneous catalysis. (Offered Spring Semester.) Pre-requisites: CH 301, CH 301L, CH 302, and CH 302L. Co-requisite: CH 401L.

CH 401L Intermediate Inorganic Chemistry Laboratory 2 cr

Laboratory exercises associated with CH 401. (Offered Spring Semester.) Pre-requisites: CH 301. CH 301L, CH 302, and CH 302L. Co-requisite: CH 401. Fee.

CH 403 Bioinorganic Chemistry 3 cr

Survey of bioinorganic chemistry appropriate for upper-level undergraduate and beginning graduate students. The approach will be molecular and chemical in nature with a focus on the study of the non-carbon elements, especially the transition metals, as related to biological activity. (Offered Fall Semester.) Pre-requisites: CH 202. Recommended: CH 301, CH 302, or CH 440 recommended. Fee.

CH 413 Organic Reaction Mechanisms and Synthesis 3 cr

Study of organic reaction kinetics and mechanisms. Study of the synthesis of nature products and their mechanism of formation with concurrent discussion of nuclear magnetic resonance spectroscopy. (Offered as required.) Pre-requisites: CH 202 and CH 301. Fee.

CH 414 Environmental Chemistry 3 cr

Introduces the cycling of elements in the earth as groundwork for understanding the chemical reactions and fate of chemical species introduced as contaminants to the environment. The chemistry of natural and anthropogenic contaminants in the atmosphere, the hydrosphere, the lithosphere and the transport and transformation of chemical species in the environment are discussed. CH 414L must be taken concurrently. (Offered in Fall Semester) Pre-requisites: CH 201, CH 265.

CH 414L Environmental Chemistry Laboratory 1 cr

Laboratory exercises associated with CH 414. Real-world samples will be used to learn appropriate isolation techniques followed by chemical and instrumental analysis. CH 414 must be taken concurrently. (Offered in Fall Semester) Pre-requisites: CH 201, CH 265. Fee.

CH 440 Biochemistry I 3 cr

Study of fundamental biochemical concepts; emphasis is placed on protein, carbohydrate, and lipid structures as related to their functional behavior; enzyme kinetics and mechanisms of action; thermodynamic relationships in biochemical systems. (Offered Fall Semester.) Cross-listed with BLY 440. Pre-requisite: CH 202.

CH 441 Biochemistry II 3 cr

Study of the reactions and regulation of intermediary metabolism; the biochemistry of genetic systems to include regulatory mechanisms and protein, synthesis. (Offered Spring Semester.) Cross-listed with BLY 441. Pre-requisite: CH 440 or BLY 440. Fee.

CH 443 Laboratory Studies in Biochemistry 2 cr

Course familiarizes the student with basic laboratory techniques commonly employed in biochemical research. (Offered Spring Semester.) Pre-requisite: CH 440 or BLY 440. Cross-listed with BLY 443. Fee.

CH 451 Biophysical Chemistry 3 cr

The study of the hydrodynamic and optical properties and methods used to elucidate the structure, conformation and function of biological macromolecules. (Offered as required.) Pre-requisites: CH 300 or CH 301 and CH 440 or permission of instructor.

CH 465 Instrumental Analysis 3 cr

Modern analytical instruments, their operating principles, and their applications. (Offered Fall Semester.) Pre-requisites: CH 265 with CH 265L; CH 301 with CH 301L or CH 302 with CH 302L. Co-requisite: CH 465L

CH 465L Instrumental Analysis Laboratory 2 cr

Laboratory exercises associated with CH 465. (Offered Fall Semester.) Pre-requisites: CH 265 with CH 265L; and CH 301 with CH 301L or CH 302 with CH 302L. Co-requisite: CH 465. Fee.

CH 470 Computational Chemistry (C) 4 cr

Designed to provide an introduction to some of the techniques used in molecular modeling and computational chemistry, and to illustrate how these techniques can be used to study physical, chemical and biological phenomena. Topics: quantum mechanical methods, empirical force fields, molecular mechanics and dynamics, Monte Carlo, continuum electrostatics, and free energy perturbation methods. (Offered Spring Semester.) Pre-requisites: CH 132 or CH 141; CH 202; permission of instructor. Fee.

CH 490 Special Topics 1-4 cr

Study of a significant topic in chemistry. May be repeated for a maximum of four credits when the content varies. Pre-requisite: Senior standing.

CH 492 Seminar I 1 cr

Information retrieval from scientific references, journals, and on-line databases directed toward computer-based preparation of a student seminar. (Offered Fall and Spring Semesters.) Pre-requisite: Senior standing or permission of department chair. Fee.

CH 493 Seminar II 1 cr

Continuation of CH 492. Taken the next semester registered after successful completion of CH 492 unless special permission granted by the Department Chair. Presentation of a formal seminar for Department Faculty and students. (Offered Fall and Spring Semesters.) Pre-requisite: CH 492 previous semester or permission of department chair. Fee.

CH 494 Directed Studies 1-4 cr

Student works in a research laboratory under faculty guidance. May be repeated; cannot exceed four credits. Pre-requisite: Senior standing or permission of the department chair. Fee.

CH 499 Senior Honors Chemistry Project 3 cr

Student research under faculty direction; written report and oral presentation of research work to faculty and students. This course may be repeated once for a maximum of six credits. Permission of department chair. Fee.

CH 514 Environmental Chemistry 3 cr

Introduces the cycling of elements in the earth as groundwork for understanding the chemical reactions and fate of chemical species

introduced as contaminants to the environment. The chemistry of natural and anthropogenic contaminants in the atmosphere, the hydrosphere, the lithosphere and the transport and transformation of chemical species in the environment are discussed. CH 514L must be taken concurrently. (Offered in Fall Semester) Pre-requisite: CH 202.

CH 514L Environmental Chemistry Laboratory 1 cr
Laboratory exercises associated with CH 514. Real-world samples will be used to learn appropriate isolation techniques followed by chemical and instrumental analysis. CH 514 must be taken concurrently. (Offered in Fall Semester) Pre-requisite: CH 202. Fee.

CH 515 Environmental Toxicology 3 cr
Introduction to the scientific and technical principles of toxicological processes in the context of the ecosystem. Students will understand both the types of major environmental toxicants and how to properly evaluate their toxicity and factors that influence toxicity. Students will recognize and coherently formulate risk assessment and by using the tools and techniques acquired, develop and communicate proposals for remedy.

CH 521 Marine Natural Product Chemistry 3 cr
Chemical-physical analysis and synthesis of alkaloids, antibiotics, algae and bacterial metabolites, plant pigments, steroids, and terpenes found in the marine environment. (Offered as required.) Pre-requisites: CH 202; Graduate status. Fee.

CH 530 Biochemistry of Marine Organism 3 cr
Study of biochemical regulatory processes associated with energy production, vision, defense mechanisms and other physiological activities within vertebrate and invertebrate species of the marine environment. (Offered as required.) Pre-requisite: Graduate status. Fee.

CH 540 Biochemistry I 3 cr
Study of fundamental biochemical concepts; emphasis is placed on protein, carbohydrate, and lipid structures as related to their functional behavior, enzyme kinetics and mechanisms of action; thermodynamic relationships in biochemical systems. (Offered Fall Semester.) Pre-requisites: CH 202; Graduate status. Fee.

CH 541 Biochemistry II 3 cr
Study of the reactions and regulations of intermediary metabolism; the biochemistry of genetic systems to include regulatory mechanisms and protein synthesis. (Offered Spring Semester.) Pre-requisites: CH 540 or BLY 540; Graduate status. Fee.

CH 543 Laboratory Studies in Biochemistry 3 cr
Course familiarizes the student with basic laboratory techniques commonly employed in biochemical research. (Offered Spring Semester.) Pre-requisite: CH 540 or concurrent enrollment in CH 441/541. Fee.

CH 550 Readings in Marine Chemistry 3 cr
Readings of primary literature on topics of special interest in the area of marine chemistry and biochemistry. (Offered as required.) Pre-requisite: Graduate status. Fee.

CH 551 Biophysical Chemistry 3 cr
The study of the hydrodynamic and optical properties and methods used to elucidate the structure, conformation and function of biological macromolecules. (Offered as required.) Pre-requisites: CH 300 or CH 301; CH 440; Graduate status or permission of instructor. Fee.

CH 565 Instrumental Analysis 3 cr
Modern analytical instruments, their operating principles, and their applications. (Offered Fall Semester.) Pre-requisites: CH 265 with CH 265L; CH 301 with CH 301L or CH 302 with CH 302L; Graduate status. Co-requisite: CH 565L.

CH 565L Instrumental Analysis Laboratory 2 cr
Laboratory exercises associated with CH 565. (Offered Fall Semester.) Pre-requisites: CH 265 with CH 265L; CH 301 with CH 301L or CH 302 with CH 302L; Graduate status. Co-requisite: CH 565. Fee.

CH 570 Computational Chemistry (C) 4 cr
Designed to provide an introduction to some of the techniques used in molecular modeling and computational chemistry, and to illustrate how these techniques can be used to study physical, chemical and biological phenomena. Topics: quantum mechanical methods, empirical force fields, molecular mechanics and dynamics, Monte Carlo, continuum electrostatics, and free energy perturbation methods. (Offered Spring Semester.) Pre-requisite: Graduate status. Fee.

CH 571 Oxygen Transport Proteins in Marine Organisms 3 cr
Study of the structure-function relationships of oxygen transport proteins utilized by marine vertebrates and invertebrates. (Offered as required.) Pre-requisite: Graduate status or permission of instructor.

CH 590 Special Topics 1-4 cr
Study of a significant topic in chemistry. May be repeated for a maximum of four credits when the content varies. Pre-requisite: Graduate status.

CH 592 Seminar 1 cr
The use of scientific references and journals retrieval. Library assignment may be directed toward preparation of student seminars which are scheduled concurrently. (Offered Fall and Spring Semester.) Pre-requisite: Graduate status. Fee.

CH 594 Directed Studies 1-4 cr
Literature survey and research under senior staff guidance. May be repeated, but not to exceed four credits. Pre-requisite: Graduate status. Fee.

CHEMICAL ENGINEERING (CHE)

CHE 101 Introduction to Chemical Engineering 1 cr
Introduction to Chemical Engineering as a profession. Topics covered include: careers in chemical engineering, education of chemical engineers and ethics in engineering. Fee.

CHE 102 Computer-Aided Design in Chemical Engineering 3 cr
Introduction to the use of computer software for the analysis and design of chemical engineering systems. Fee.

CHE 190 Special Topics 1-5 cr
Topics of current chemical engineering interest. Fee.

CHE 203 Elementary Principles of Chemical Processes 4 cr
Application of multicomponent material and energy balances to chemical processes involving phase changes and chemical reactions. Pre-requisite: CH 132. Co-requisite: MA 126

CHE 290 Special Topics 1-5 cr
Topics of current chemical engineering interest. Fee.

CHE 311 Chemical Engineering Separations I 3 cr
Applications of material balances and equilibrium relations to equilibrium stage design. Design of single stages and cascades for absorption, stripping, distillation, liquid-liquid extraction, and bioseparations. Pre-requisites: CHE 203 and CHE 331. Fee.

CHE 321 Transport Phenomena I 3 cr
Fundamentals of momentum transfer with applications in fluid flow through pipes and process equipment. Pre-requisites: MA 238, EG 270, and CHE 203 Fee.

CHE 322 Transport Phenomena II 3 cr
Fundamentals of conductive, convective, and radiative modes of heat transfer with applications in the design of heat exchanges. Pre-requisite: CHE 321. Fee.

CHE 331 Chemical Engineering Thermodynamics I 3 cr
This course introduces the fundamentals of thermophysical property estimation and modeling of non-ideal pure and multicomponent fluid systems, including an introduction to multicomponent vapor/liquid equilibria. Pre-requisites: EG 270, CH 201, CHE 203 and MA 238. Fee.

CHE 332 Chemical Engineering Thermodynamics II 3 cr
This class is an advanced thermodynamics course that uses a molecular level viewpoint to introduce students to applications of thermodynamics principles to complex chemical engineering problems including multicomponent, non-ideal fluid phase equilibria (VLE, VLLE, SLE), and chemical reaction equilibria. The concepts of chemical potential, fugacity, partial molar and excess properties as well as complex activity coefficient models are introduced to solve these problems. Pre-requisites: CHE 331. Fee.

CHE 342 Engineering Communication (W) 3 cr
Formal and informal reports, oral presentations, and visual aids. Pre-requisites: BLY 121, EH 102. Co-requisite: CHE 321. Fee.

CHE 351 Process Measurements Laboratory I 1 cr
Laboratory practices for measurement of thermodynamic and transport properties. Numerical tools for modeling chemical phenomenon using

experimental data. Co-requisite: CHE 331, CHE 342

CHE 352 Process Measurements Laboratory II 1 cr
Laboratory practices for measurement of reaction and phase change parameters. Statistical tools for assessing experimental data. Pre-requisite: CHE 351. Co-requisite: CHE 332, CHE 372.

CHE 372 Chemical Reactor Design 3 cr
The application of reaction, enzyme, and cellular growth kinetics and materials mixing patterns to chemical and bio reactor analysis and design. Analysis of reactors with multiple reactions, as well as multi-reactor configurations and reactor optimization. Co-requisites: CHE 322 and CHE 332. Fee.

CHE 390 Special Topics 1-5 cr
Topics of current chemical engineering interest. Fee.

CHE 403 Bioinorganic Chemistry 3 cr
Survey of bioinorganic chemistry appropriate for upper-level undergraduate and beginning graduate students. The approach will be molecular and chemical in nature with a focus on the study of the non-carbon elements, especially the transition metals, as related to biological activity. Cross listed with CH 503. Pre-requisite: CH 201. Fee.

CHE 421 Chemical Engineering Separations II 3 cr
Fundamentals of mass transfer. Mass, energy, and momentum transfer analogies. Design of mass transfer equipment. Pre-requisites: CHE 311 and CHE 322. Fee.

CHE 441 Chemical Engineering Operations Laboratory I (W) 2 cr
Laboratory studies of the unit operations of chemical engineering with emphasis on momentum and heat transfer. Pre-requisites: CHE 322, CHE 342. Fee.

CHE 442 Chemical Engineering Operations Laboratory II (W) 2 cr
Laboratory studies of the unit operations of chemical engineering with emphasis on stagewise and differential contractors. Pre-requisites: CHE 342, CHE 421. Fee.

CHE 451 Process Models 3 cr
Mathematical modeling, simulation, and dynamics of chemical process systems for design and analysis. Pre-requisite: CHE 322. Fee.

CHE 452 Process Dynamics and Control 3 cr
Mathematical modeling, simulation and dynamics of chemical process systems, Feedback and Feed-forward control of chemical processes. Specification of control loops. Selection and tuning of controller modes. Pre-requisite: CHE 372. Fee.

CHE 461 Process Design I 3 cr
Engineering economics and elements of process design, including energy and material balances, manufacturing and product cost. Unit operation equipment sizing, and cost. Pre-requisites: EG 231, CHE 332, CHE 342, CHE 372. Fee.

CHE 462 Process Design II 3 cr
Selection, design and specification of principal chemical processes. This course is considered a "senior capstone design course". Pre-requisite: CHE 461. Co-requisite: CHE 452. Fee.

CHE 463 Simulation of Chemical Processes 3 cr
In this course, students utilize modern software tools, such as Aspen Plus, to model steady state chemical processes. Simulation topics include physical property selection, flowsheet generation, separations and reactors. Pre-requisites: CHE 311, CHE 332, and CHE 372. Fee.

CHE 490 Special Topics 1-3 cr
Topics of current chemical engineering interest. Pre-requisite: Consent of the department chair or department approval. Fee.

CHE 494 Directed Independent Study 1-3 cr
Directed study, under the guidance of a faculty advisor, of a topic from the field of chemical engineering, not offered in a regularly scheduled course. A written report is required. May be repeated for a maximum of 6 credit hours. Pre-requisites: Consent of department chair and minimum GPA of 3.00 for admission or departmental approval. Fee.

CHE 499 Senior Honors Project (H) 1-6 cr
Under the advice and guidance of a faculty mentor, honors students will identify and carry out a research project, relevant to the field of chemical engineering. The senior project will be judged and graded by three faculty chaired by the honors mentor. This course is required for Honors recognition. A minimum of 4 credit hours is required but students may enroll for a maximum of 6 credit hours over two semesters. Pre-requisites: CHE 332, CHE 322 and completion of an approved project prospectus.

CHE 503 Bioinorganic Chemistry 3 cr
Survey of bioinorganic chemistry appropriate for upper-level undergraduate and beginning graduate students. The approach will be molecular and chemical in nature with a focus on the study of the non-carbon elements, especially the transition metals, as related to biological activity. Cross listed with CH 403. Fee.

CHE 510 Thermodynamics of Chemical Systems 4 cr
Advanced classical and molecular thermodynamics as applied to non-ideal multicomponent phase and reaction equilibria for chemical engineering applications. An introduction to statistical thermodynamics will also be given. Fee.

CHE 520 Transport Phenomena I 4 cr
Unified treatment of momentum, energy and mass transport. Emphasis on steady and unsteady state macroscopic processes. Fee.

CHE 521 Transport Phenomena II 3 cr
Unified treatment of momentum, energy and mass transport. Emphasis on steady and unsteady state microscopic processes. Fee.

CHE 525 Chemical Reactor Analysis 4 cr
Single and multiple chemical reactions and reactor systems. Reactor characterization and design. Fee.

CHE 530 Synthetic Fuels 3 cr
Fundamentals of gasification and liquefaction concepts applied to fossil fuels and biomass conversion. Fee.

CHE 550 Chemical Process Control 3 cr
Sampled-data algorithms, feedback, feed-forward, deadtime compensation, advanced control schemes applied to chemical engineering processes. Fee.

CHE 551 Advanced Chemical Engineering Modeling 4 cr
Advanced mathematical modeling of chemical process systems for design and analysis. Fee.

CHE 563 Simulation of Chemical Processes 3 cr
In this course, students utilize modern software tools, such as Aspen Plus, to model steady state chemical processes. Simulation topics include physical property selection, flowsheet generation, separations and reactors. Fee.

CHE 570 Separation Processes 3 cr
Analysis and design of separation processes. Topics include molecular diffusion and convective mass transfer with applications in the chemical, petroleum and pharmaceutical industries. Fee.

CHE 575 Chemical Process Synthesis and Optimization 3 cr
Use of analysis, synthesis, and optimization in process development. Fee.

CHE 580 Chemical Process Safety and Design 3 cr
Fundamental principles of chemical process safety, fires and explosions and design for the mitigation of associated hazards. Fee.

CHE 590 Special Topics 3 cr
Topics of current chemical engineering interest. Pre-requisite: Consent of department chair or departmental approval. Fee.

CHE 592 Directed Independent Study 1-4 cr
Directed study, under the guidance of a faculty advisor, of a topic from the field of chemical engineering not offered in a regularly scheduled course. A written report is required. Pre-requisites: Consent of the department chair and overall GPA of 2.5 for admission or departmental approval. Fee.

CHE 594 Project in Chemical Engineering 3 cr
Approved investigation of original problems under direction of a faculty member. Pre-requisite: Approved prospectus. Fee.

CHE 599 Thesis 1-6 cr
May be taken more than once. Only 6 hours may be applied for credit toward a degree. Pre-requisite: Approved prospectus. Fee.

COMPUTER AND INFORMATION SCIENCES (CIS)

All prerequisites must be passed with a minimum grade of C.

CIS 010 Computer Proficiency Exam 0 cr
The purpose of this course is to administer the Computer Proficiency Exam (CPE) for

enrolled students. The CPE consists of multiple choice and performance-based questions for general computer, internet, WWW, e-mail, and office application concepts. Performance-based questions require a series of actions in a simulated environment to demonstrate specific skills being assessed. No outside materials or assistance from the applications' Help files are allowed.

CIS 101 Freshman Seminar CIS 2 cr
A course for first-time students that assists with maximizing the student's potential to achieve academic success and to adjust responsibly to the individual and interpersonal challenges presented by college life for a major in the School of Computing. Taught in small groups, the course provides an introduction to the nature of higher education and a general orientation to the functions and resources of the University and the School of Computing. Extensive reading and writing assignments relevant to the student's first year experience are required.

CIS 110 Introduction to Computer and Information Sciences 3 cr
An introduction to information technology using a programming language to study applications in text searching, in real-time 3-D animation, and in sound production. A discussion of social, ethical, and philosophical implications of computing. No Pre-requisite.

CIS 115 Beginning Programming 4 cr
A first course in programming using a visual, event-driven programming language. Coverage includes algorithmic problem solving, fundamentals of programming, procedures, decisions, repetition, and arrays. Pre-requisite: MA 112 or MA 125 or MA 267, or a Math-ACT score of 23 or higher, or a Math Placement Test score of 80 or higher.

CIS 150 Introduction to Computer Applications 3 cr
This course is designed to provide a broad-based introduction to the use of computers to enhance personal productivity. Topics to be covered are use of a graphical user interface, word processing, spreadsheet analysis, basic image management related to documents and reports and the fundamentals of Internet publishing. No Pre-requisites.

CIS 155 Educational and Social Computing 3 cr
This course provides a hands-on approach that focuses on the use of current and emerging computing technologies. Topics include: Use of the University adopted Learning Management System (LMS), Google Apps, Google Docs, safe computing practices, and current trends in social networking.

CIS 190 Computer and Information Sciences Special Topics 1-3 cr
Selected topics in computer and information sciences. Pre-requisite: Permission of the specialization coordinator.

CIS 210 Introduction to C++ Programming 3 cr
Introduction and fundamentals of C++ programming, input-output operations, variables, data types, arithmetic expressions, control statements, looping, functions, arrays, pointers, strings, structures, and abstract data types. co-requisite: MA 125.

CIS 211 Advanced C++ Programming 1 cr
Advanced concepts in C++ Programming, constructors, destructors, classes and operation overloading. Pre-requisite: CIS 210 or MA 233.

CIS 227 Numerical Computation I 3 cr
Floating point numbers, representation, and errors; software tools for scientific computing; elementary problems in scientific computing. Pre-requisite: MA 126.

CIS 235 Programming Language Seminar 3 cr
Fundamentals of syntax and style for a relevant, or current programming language. Includes application development in that language. Pre-requisite: Knowledge of a programming language.

CIS 250 Advanced Computer Applications 3 cr
This course provides continuing coverage of advanced office technologies. Areas of emphasis include: e-mail, the WWW, searching for information on the Web, developing a visual graphics-based presentation, and data management using a database management tool. Students will be required to complete computer-based labs in these areas. Pre-requisites: CIS 150 or placement by exam.

CIS 300 Information Technology in Society 1 cr
A discussion of personal, local, national, and global impact of information technology on ethical, legal, and social issues. Pre-requisite: Junior standing in the School of Computing.

CIS 321 Data Communications and Networking 3 cr
An introduction to data communications, computer networking, and network operating systems. Topics include: basic concepts of data transmission, network architectures, communications devices, and communications protocols. Pre-requisite: ISC 245 or ITE 271 or CIS 120.

CIS 324 Database Design, Development, and Management 3 cr
Analysis, design, and development of desktop database systems. Coverage of normalization concepts, DBMS models, E-R/Semantic modeling, and query processing. Pre-requisites: MA 112, or a Math-ACT score of 23 or higher, or a Math Placement Test score of 80 or higher, or ISC 245 or ITE 271.

CIS 401 Accelerated Programming 3 cr
This course presents programming concepts in an accelerated manner. Coverage includes ADT's, classes and class libraries, and simple data structures such as linked lists, stacks, queues. Laboratory assignments will be done in a high-level, object-oriented language. This course does not count towards a graduate degree in CIS. Pre-requisite. Prior programming experience desired and permission of Coordinator.

CIS 402 Accelerated Operating Systems Computer Architecture 3 cr
This course presents computer architecture and operating systems concepts in an accelerated manner. Coverage includes machine and assembly languages, functioning of a simple processor, machine-level data flow, microprogramming, I/O, interrupts and processing drivers, memory management, dynamic process scheduling, and multitasking. This course does not count towards a graduate degree in CIS. Pre-requisite. Prior programming experience desired and permission of Coordinator.

CIS 403 Accelerated Data and File Structures 3 cr
This course applies advanced programming concepts and techniques to data structures such as linear and linked lists, trees, records, files and database. Sequential and random access file processing methods; searching and sorting methods. Laboratory assignments will be done in a high-level, object-oriented language. This course does not count towards a graduate degree in CIS. Pre-requisite: CIS 401.

CIS 439 Windows Programming 3 cr
This course continues and expands the study of programming begun in either ITE 285 or CSC 121. Concepts previously learned are extended to application programming in the windows (GUI) environment. Students will make use of the OLE, DDE, AI features of windows in programming projects. Students will write and use their own DLL's in producing user interfaces and applications projects. Pre-requisite: CSC 230 or ITE 285.

CIS 490 Computer and Information Sciences Special Topics 3 cr
Advanced selected topics in computer and information sciences. Pre-requisite: Permission of the Specialization Coordinator.

CIS 494 Directed Study 1-3 cr
May be taken for a maximum of six (6) credits, only three (3) of which may be applied to the CIS major or minor. Pre-requisite: Permission of the Specialization Coordinator.

CIS 496 Computer and Information Sciences Internship 0-3 cr
CIS internship program is designed to give advanced students practical experience in the computer industry. Students will work on sponsored projects with faculty advisors. Credit may apply to degree with approval of the dean. Pre-requisites: GPA of 2.75 or better and approval of the dean.

CIS 497 Senior Project (W) 3 cr
Development and documentation of a comprehensive software and/or hardware project. Oral and written reports will be required. Senior standing and instructor permission are required. This course is to be taken by seniors in the semester they plan to graduate. Pre-requisites: EH 372 or EH 387 and application for graduation during the semester requested and completion of the following required courses according to major:
Computer Science: CSC 333 and CSC 340
Information Systems: ISC 360
Information Technology: ITE 370

***Those seniors who plan to graduate in the summer should take this course during the spring semester before their summer graduation.**

CIS 498 CIS Senior Seminar 0 cr

A series of mini-seminars designed to prepare graduating seniors for transition to professional careers in computing or graduate study and to assess student learning outcomes in the curriculum. Mini-seminars would include, but would not be limited to: resume development, mock interviews, interview tips and techniques, career planning, professionalism and ethics in the workplace, and advanced graduate study and professional development. Each student will be required to complete a senior exit exam, a senior exit survey, and an exit interview with the dean of the School of Computing and the coordinator for the student's program. Co-requisite: CIS 497. Pre-requisites: EH 372 and application for graduation during the semester requested and completion of the following required course according to major:
Computer Science: CSC 333 and CSC 340
Information Systems: ISC 360
Information Technology: ITE 370

CIS 499 Computer and Information Sciences Senior Honors Project 1-6 cr

Under the advice and guidance of a faculty mentor, honors students will identify and carry out a research project, relevant to the field of computing, that will lead to a formal presentation at the annual Honors Student Colloquium. The senior honors project will be judged and graded by three faculty chaired by the honors mentor. This course is required for Honors recognition and may be repeated for up to six credit hours. Pre-requisite: Completion of an approved project prospectus and permission of the appropriate coordinator.

CIS 500 Basic Computing Principles and Applications 3 cr

Introduction to computers and computer applications. Components of a computer system will be presented. Word processing, system design and implementation, and programming concepts will be introduced. Not to be taken for CIS graduate credit. Pre-requisite: Graduate Standing.

CIS 518 CIS Research Methodologies 3 cr

A review of computer and information science literature and research topics. Techniques for defining research goals will be described. Students will be expected to identify a research area and conduct a complete review of the literature. Pre-requisite: CIS Graduate Professional Component.

CIS 530 Information Assurance and IT Auditing 3 cr

This course covers the understanding and managing of risks and threats to information and information systems. This includes protecting and defending information and information systems by ensuring through authorization and other concepts such as accessibility, secrecy, reliability, and authentication. Pre-requisite: CIS Graduate Professional Component.

CIS 535 Digital Forensic Analysis 3 cr

This course provides students with advanced tools, techniques, and methodologies for accumulating, securing, analyzing, managing, and reporting evidence related to a forensics examination. The professional communication and presentation of the results of forensic investigations will be emphasized. Pre-requisite: CIS Graduate Professional Component.

CIS 538 Operating Systems Concepts and Security 3 cr

This course examines the concepts of operating systems such as memory and virtual memory management, as well as processor, process, device, and file management. Topics include the management and organization of network operating systems and operating system security and ethics. Students will manage, configure, and secure operating systems such as Windows, Unix, and Linux in laboratory environments. Pre-requisite: CIS Graduate Professional Component.

CIS 539 Windows Programming 3 cr

The practice and principles of developing interactive desktop computer applications. Aspects to be covered will include graphical user interfaces; use of sophisticated widget, container, and utility libraries; event-driven programming; two-dimensional graphics; in-memory database; and deployment.

CIS 540 Network Security Management 3 cr

This course examines network and web security issues including: risks and threats, system access points, hardware and software defense methods, and organizational security policies. The course will cover the analysis of systems for vulnerabilities, the implementation of security procedures, the monitoring of systems for security breaches, and the recovery or restoration of breached systems. Pre-requisite: CIS Graduate Professional Component.

CIS 590 Computer and Information Science Special Topics 3 cr

Advanced selected topics in computer and information sciences. Pre-requisite: Permission of the Director of SoC Graduate Studies.

CIS 594 Directed Study 3 cr

May be taken for a maximum of three credits to count towards the degree. Pre-requisite: Permission of the Director of SoC Graduate Studies.

CIS 595 Computer and Information Sciences Research Development 1-3 cr

Development of the research proposal for master's thesis. Pre-requisite: Permission of the Director of SoC Graduate Studies and CIS 518.

CIS 596 Computer and Information Sciences Graduate Internship 0-3 cr

CIS graduate internship program is designed to give graduate students practical experience in the computer industry. Students will work on sponsored projects with faculty advisors. Up to three (3) hours may be counted toward the degree. Pre-requisite: Permission of the Director of SoC Graduate Studies.

CIS 597 Computer and Information Sciences Graduate Seminar 1 cr

This course prepares graduate assistants in the School of Computing to provide support and assistance to faculty for research and instruction in School of Computing. Topical coverage includes but is not limited to: graduate assistant expectations and responsibilities, protection of student educational information (FERPA), practical skills in assisting in computing instruction, graduate assistant best practices, and tips from faculty and experienced graduate assistants. This course does not count towards a graduate degree in CIS. Pre-requisite: Permission of the Director of SoC Graduate Studies.

CIS 599 Computer and Information Sciences Thesis 1-3 cr

This course may be repeated for a maximum of six (6) credits. A thesis committee will provide direction during the thesis. Pre-requisite: CIS 595, approval of thesis proposal by the student's thesis committee and by the Director of SoC Graduate Studies.

CRIMINAL JUSTICE (CJ)

CJ 205 Introduction to Criminal Justice 3 cr

A review of the system for the delivery of Criminal Justice services in the U.S. and an analysis of operational practices at the major criminal justice decision stages. Criminal Justice major must pass with a "C" or better.

CJ 310 Research Methods 3 cr

Examines the concepts and techniques of systematic political analyses and research methodology. (Identical to PSC 310). CJ & PSC majors must pass with a "C" or better. Pre-requisite: CJ 205.

CJ 320 Modern Police Functions 3 cr

An advanced survey of law enforcement, concentrating on the police with emphasis on functions (law enforcement, order maintenance, and public service) and responsibilities, including organizational and managerial aspects of policing in American society. CJ majors must pass with a "C" or better. Pre-requisite: CJ 205.

CJ 321 Introduction to Security 3 cr

The historical, philosophical, and legal basis of security. The role of security in modern society. A survey of the administrative, personnel, and physical aspects of the security field. Pre-requisite: CJ 205.

CJ 330 Judicial Process 3 cr

The study of American judicial process at the federal and state court levels. (Identical to PSC 330). CJ majors must pass with a "C" or better. Pre-requisite: CJ 205.

CJ 331 Constitutional Law (W) 3 cr

Principles of constitutional powers and liberties will be examined through an analysis of decisions and opinions by the U.S. Supreme Court. (Identical to PSC 331). Pre-requisites: EH 102 and CJ 205.

CJ 332 Criminal Law 3 cr

A study of the origins and nature of the acts that constitute crimes with a detailed examination of the elements of certain criminal offense. Pre-requisite: CJ 205.

CJ 336 Legal Theory 3 cr

Explores theoretical issues and problems in the area of law, including theories about the nature of law, legal validity, the relations between morality and law, and our obligation

to obey the law. Specific problems, such as legal moralism, are also examined. Cross-listed as PHL 336. Credit cannot be received for both CJ 336 and PHL 336. Pre-requisite: CJ 205.

CJ 337 Liability and Punishment 3 cr
Explores theoretical issues and problems in the areas of law (especially criminal law) concerning liability and punishment. Topics to be examined include diminished capacity, theories of punishment, and capital punishment. Cross-listed as PHL 337. Credit cannot be received for both CJ 337 and PHL 337. Pre-requisite: CJ 205.

CJ 340 Policies and Procedures of Corrections 3 cr
An overview of the policies and procedures of major correctional systems and methods of treatment of offenders. CJ majors must pass with a "C" or better. Pre-requisite: CJ 205.

CJ 360 Introduction to the Offender 3 cr
Study of traditional and modern explanations of crime and criminality. CJ majors must pass with a "C" or better. Pre-requisite: CJ 205.

CJ 370 Criminal Justice Policies 3 cr
An examination of theoretical explanations of criminal phenomena and an analysis of the impact of such theories on public policy decisions. Pre-requisite: CJ 205.

CJ 372 Gender and Criminal Justice 3 cr
This course utilizes gender as a conceptual construct in studying actors and the institutional processes in the criminal justice system. Women's roles as criminals, crime victims and law enforcement officials will be examined. Pre-requisite: CJ 205.

CJ 390 Special Topics 3 cr
Study of a significant topic or problem in criminal justice. May be repeated up to two times when content varies. Only 6 credit hours may be applied to the Criminal Justice major. Pre-requisite: CJ 205.

CJ 422 Criminal Investigations 3 cr
Explores criminal investigation procedures including theory of investigation, case presentation, interrogation, and special problems in criminal investigation. Pre-requisite: CJ 205.

CJ 423 Criminalistics 3 cr
Survey of scientific crime detection methods; crime scene search, identification, and preservation of evidence; uses of the laboratory for criminal investigation. Pre-requisite: CJ 205.

CJ 430 Criminal Procedure (W) 3 cr
An examination of constitutional criminal procedure concerning the laws of arrest, search, and seizure and their implications in the admissibility of evidence during the subsequent trial of the defendant. Pre-requisites: EH 102 and CJ 205.

CJ 440 Community-Based Corrections (W) 3 cr
Examines alternatives to incarceration for offenders with emphasis on current research. Pre-requisites: EH 102 and CJ 205.

CJ 450 Juvenile Justice Administration and Policies 3 cr
A study of statutory law and criminal justice system practices and programs as they relate to the administration of juvenile justice. Pre-requisite: CJ 205.

CJ 471 Criminal Justice and the Community 3 cr
A presentation of current research on a wide range of topics that impact on the relationship of police and the community. Pre-requisite: CJ 205.

CJ 472 Comparative Criminal Justice Systems 3 cr
A review of cultural influences on penal codes, crime rates, crime control methods, and organizational structures of the delivery of criminal justice services in selected countries. Pre-requisite: CJ 205.

CJ 473 International Law 3 cr
The course covers major issues, cases and topics in public and private international law. Topics covered include individuals and corporations, diplomatic relations, extraterritorial jurisdiction, human rights, economic relations, treaty system, environmental law, arbitration and adjudication, and the use of force (Identical to PSC 473 and IS 473). Pre-requisite: CJ 205.

CJ 492 Capstone Seminar in Criminal Justice (W) 3 cr
Required course for all criminal justice majors and serves as the comprehensive experience in criminal justice. The course will be taught at the senior level and will focus on criminal justice issues at the national and international levels. In addition to the course requirements, including a major research paper, students must take the ETS field test in criminal justice and receive a satisfactory score. Criminal Justice majors must pass with a "C" or better. This course serves as a capstone course for criminal justice majors. Pre-requisite: Senior Criminal Justice Major. Taught in the fall semester. Pre-requisites: EH 102, CJ 205, CJ 310, CJ 320, CJ 330, CJ 340, and CJ 360.

CJ 494 Directed Studies 1-3 cr
Under the guidance of a faculty member, the student will pursue directed research or readings on an approved topic in criminal justice. May be repeated for a maximum of 3 credit hours. Pre-requisites: CJ 205, senior` standing, CJ major, and a minimum GPA of "B" in both CJ and overall.

CJ 496 Professional Studies: Internship 3-12 cr
Relates the participant's classroom studies with occupational and professional experiences in an approved criminal justice agency. Written reports required. Course may be repeated for a maximum of twelve hours credit. Only 3 hours apply to the criminal justice curriculum. S/U grading only. Open only to CJ majors and minors and with permission of department chair. Pre-requisite: CJ 205.

CJ 497 Practicum in Polling 3 cr
Supervised experience in all aspects of the survey research process, including but not limited to literature review, research design, questionnaire development, sampling techniques, interviewing, data analysis and interpretation and presentation of findings. Pre-requisite: Permission of the professor, PSC 130, CJ 205, and CJ 310, and S/U grading only.

CJ 498 Practicum in Policy Studies 3 cr
Students will be exposed to a variety of experiences associated with the operations of a fully operational research center, including in service and management training, consulting, sponsored research organizational assessments, strategic and program planning, operations, program evaluation, intergovernmental fiscal processes including the search for funding, and grant writing. Research assignments will include basic research design, survey and focus group instrument development, administration of surveys, handling focus groups, curriculum preparation and administration, data manipulation and analysis, and report writing. Pre-requisites: Permission of the professor, PSC 130, CJ 205, CJ 310, and S/U grading only.

CJ 499 Honors Thesis (W) 3 cr
The research and writing of a major paper in the field or Criminal Justice. Pre-requisite: USA Honors Program

CLASSICS (CLA)

CLA 103 Art History I 3 cr
A survey of art and architecture of Europe and the Near East from the prehistoric to the end of the Gothic era. identical with ARH 103. Credit cannot be received for both CLA 103 and ARH 103. Fee. **Core Course**.

CLA 105 Encounter with the Humanities 3 cr
Introduction to the various disciplines within the humanities with emphasis on the role each plays in a liberal arts education. Identical with AIS 105. Credit cannot be received for both AIS 105 and CLA 105. **Core Course**.

CLA 110 Introduction to Ancient Greek and Roman Culture 3 cr
A survey of the history, literature, philosophy, religion, art architecture, sociology, and political institutions of the Greek and Roman world with readings in translation from major Greek and Latin authors.

CLA 240 Western Philosophy: Classical 3 cr
Survey of classical Greek philosophy. The philosophers surveyed may include Presocratic philosophers, Socrates, Plato, Aristotle, and Hellenistic philosophers. Fulfills the General Education Requirement. Identical with PHL 240. Credit cannot be received for both CLA 240 and PHL 240.

CLA 304 Ancient Greek Art and Architecture 3 cr
Architecture, sculpture, and painting in ancient Greece and the expansion and influence of Greek culture in the Ancient World. Pre-requisite: ARH 103 or CLA 110. Identical with CLA 304. Credit cannot be received for both CLA 304 and ARH 304. Fee.

CLA 306 Roman Art 3 cr
Architecture, sculpture, and painting in Ancient Rome and its empire. Pre-requisite: ARH 103 or CLA 110. Identical with ARH 306. Credit cannot be received for both ARH 306 and CLA 306.

CLA 310 Classical Mythology 3 cr

Through the disciplines of English and Philosophy, this course will provide an introduction to myths and to the literature that recounts the myths, legends, and folktales of ancient Greece and Rome. Not only will this course offer a survey of Greek and Roman myth, but also will look at how different writers treat the material and why their treatments vary. Pre-requisites: EH 101 and EH 102. Identical with PHL 310, EH 310 and REL 310. Credit cannot be received for both CLA 310 and either PHL 310, EH 310 or REL 310.

CLA 311 Political Philosophy I: Classical and Medieval 3 cr

An examination of the central themes of classical Western political philosophy through the reading and discussing of the primary works of such thinkers as Plato, Aristotle, Augustine, and Aquinas. Identical with PHL 311 and PSC 311. Credit cannot be received for both CLA 311 and either PSC 311 or PHL 311.

CLA Special Topics 3 cr

Different figures, periods or topics of significance in Classics will be studied as announced. May be repeated, when content varies, for a total of six hours.

CLA 454 Ancient Greek Culture 3 cr

Through the disciplines of History and Philosophy, ancient Greek culture, including its history, literature, philosophy, art and architecture will be examined. Pre-requisite: EH 102.

CLA 455 Ancient Roman Culture 3 cr

Through the disciplines of History and Philosophy, ancient roman culture, including its history, literature, philosophy, art and architecture will be examined. Pre-requisite: EH 102.

CLA 492 Seminar 3 cr

An in-depth investigation of figures, periods or topics in Classics for advanced undergraduates. May be repeated, when content varies, for a total of six hours.

CLA 494 Directed Studies 1-3 cr

Directed research in classics under the guidance of a member of the department. Credit according to the magnitude of the individual project. May be repeated, if content varies, for a total of three hours. Pre-requisites: Junior or senior standing and approval of directing professor and department chair.

CLA 594 Directed Studies 3 cr

Directed research in classics under the guidance of a member of the department. May be repeated, if content varies, for a total of six hours. Prerequisite: Graduate Student in Department conferring a Graduate Degree (hence not open to Philosophy majors in any Concentration in Philosophy).

COMMUNITY/MENTAL HEALTH NURSING (CMN)

CMN 350 Psychiatric/Mental Health Nursing 2 cr

Analysis of theories, concepts, evidence, issues and trends from contemporary nursing science and related disciplines in promoting the health of individuals and families experiencing psychiatric-mental health concerns. The emphasis is on the use of the nursing process and other systematic approaches to plan, implement, and evaluate health promotion and maintenance activities, illness care, and rehabilitation with individuals and families experiencing psychiatric-mental health concerns in a variety of acute and community settings. Pre-requisites or Co-requisites: NU 300, NU 301. Co-requisite: CMN 351.

CMN 351 Psychiatric/Mental Health Nursing Clinical 2 cr

Clinical practice course in psychiatric-mental health nursing. Focus is on the application of theories, concepts, research, and issues and trends in psychiatric-mental health nursing. Emphasis is on the role of the professional nurse in psychiatric-mental health nursing and on the use of the nursing process with children, adolescents, adults, and families experiencing psychiatric-mental health concerns. Pre-requisites or Co-requisites: NU 300, NU 301. Co-requisite: CMN 350.

CMN 411 Nursing in Community Systems 4 cr

The purpose of this course is to provide students an in-depth exploration of community health nursing concepts and principles from a population health care perspective. The course focuses on the prevention of disease and promotion of health. Resources which support disease prevention and health promotion are investigated and evaluated. The changing needs of an increasingly culturally diverse population within the social context of community systems are examined along with the environmental, economical, political, and legal constraints to the health of community systems. Course content includes concepts from nursing and the public health sciences. The course will emphasize the use of nursing process and public health concepts to assess the complex factors in the community that affect the health of populations. Pre-requisite: NU 410.

CMN 420 Community Health Nursing Care 3 cr

The purpose of this course is to provide students an opportunity to explore community health nursing concepts and principles from a population health care perspective. The changing needs of an increasingly culturally diverse population within the social context of community systems are examined along with the environmental, economical, political, and legal constraints to the health of community systems. Pre-requisites: CMN 350, CMN 351, MCN 347, MCN 348. Pre-requisites/Co-requisites: AHN 447, AHN 448. Co-requisite: NU 421.

CMN 421 Community Health Nursing Clinical 1 cr

The purpose of the course is to provide students the opportunity to complete a clinical project integrating community health nursing concepts and principles from an aggregate health care perspective. The changing needs of an increasingly culturally diverse population within the social context of the community are examined. Course content includes environmental, economical, political, and legal constraints to the health of aggregates. Pre-requisites/Co-requisites: AHN 447, AHN 448. Pre-requisites: MCN 347, MCN 348, CMN 350, CMN 351. Co-requisite: CMN 420.

CMN 548 Advanced Family Psychiatric Mental Health Nursing I 3 cr

The purpose of this first didactic course is to prepare Psychiatric/Mental Health Nurse Practitioner students to assess, diagnose, and manage selected health care needs of adults and children. Emphasis is placed on synthesis and application of nursing and related theories and scientific knowledge to the development of differential/nursing diagnoses as a basis for health promotion and management. Pre-requisites: NU 545, NU 518, NU 607. Co-requisite: CMN 551.

CMN 549 Advanced Psychiatric Mental Health Nursing Practicum I 1 cr

The purpose of this first practicum course is to provide opportunities for Psychiatric/ Mental Health Nurse Practitioner students to apply concepts from Advanced Family Nursing I in selected clinical settings. The focus is continued refinement of cognitive and clinical skills needed to provide comprehensive health assessments of adults and children and to apply diagnostic reasoning. Co-requisite: CMN 548.

CMN 551 Health Promotion/ Disease Prevention Family Psychiatric Nursing 2 cr

This didactic course prepares the Psychiatric/ Mental Health Nurse Practitioner student to identify and implement appropriate and culturally sensitive health promotion and disease prevention strategies across the lifespan of individuals and families in primary care settings. Emphasis is placed on health promotion/ disease prevention with strategic planning at the primary, secondary, and tertiary levels. Co-requisite: CMN 548.

CMN 552 Advanced Family Psychiatric Nursing II 3 cr

This didactic course prepares the Psychiatric-Mental Health Nurse Practitioner student to assess, diagnose, and manage selected health care needs of culturally diverse populations across the life span. The focus is on advanced practice nursing with individuals and families in a variety of health care settings. Emphasis is placed on wellness and the pathophysiology and epidemiology underlying acute and chronic psychiatric/mental health problems. Pre-requisite: CMN 548. Pre-requisite or Co-requisite: NU 578. Co-requisite: CMN 553

CMN 553 Advanced Family Psychiatric Nursing Practicum II 3 cr

The purpose of this practicum course is to provide opportunities for Psychiatric/Mental Health Nurse Practitioner students who apply concepts from Advanced Psychiatric/Mental Health Nursing II in primary and acute care setting with adults and families experiencing psychiatric/mental health concerns. The emphasis is on mental health nursing across the lifespan. Co-requisite: CMN 552.

CMN 554 Advanced Family Psychiatric Nursing III 3 cr

The purpose of this course is to provide the Psychiatric-Mental Health Nurse Practitioner student an in depth study of psychiatric/mental

health care management of adults and their families within the framework of advanced nursing. The focus is on selected acute and chronic complex psychiatric/ mental health care problems. Emphasis is on the interaction among health care providers in a culturally diverse environment. Pre-requisite: CMN 552. Co-requisite: CMN 555

CMN 555 Advanced Family Psychiatric Nursing III 3 cr

The purpose of this course is to provide opportunity for the Psychiatric-Mental Health Nurse Practitioner student to practice within an advanced nursing framework. The focus is on the role of the advanced practice nurse in the health care management of adults with psychiatric/mental health concerns. Emphasis is on collaboration with other health care providers in a culturally diverse environment. Co-requisite: CMN 554

CMN 556 Advanced Family Psychiatric Nursing Internship 3 cr

The purpose of this culminating course is to provide a preceptor and faculty facilitated experience in the Psychiatric-Mental Health Nurse Practitioner role. The focus is on the application and synthesis of knowledge and skills acquired in all previous courses. Pre-requisite: CMN 554. Co-requisite: CMN 557. Pre-requisites or Co-requisites: NU 613, NU 608, NU 610.

CMN 557 Advanced Family Psychiatric Nursing IV 3 cr

The purpose of this course is to provide a forum for the evaluation of issues and trends encountered in Advanced Psychiatric-Mental Health Nursing care. Emphasis is on critical analysis and management of issues by the Psychiatric-Mental Health Nurse Practitioner in an interdisciplinary health care delivery system. Co-requisite: CMN 556.

CMN 568 Advanced Family Nursing I 3 cr

The purpose of this first didactic course is to prepare Family Nurse Practitioner students to assess, diagnose, and manage selected health care needs of adults and children. Emphasis is placed on synthesis and application of nursing and related theories and scientific knowledge to the development of differential/nursing diagnoses as a basis for health promotion and management. Pre-requisites or Co-requisites: NU 545, NU 518, NU 607. Co-requisites: CMN 569, CMN 571.

CMN 569 Advanced Family Nursing Practicum I 1 cr

The purpose of this first practicum course is to provide opportunities for Family Nurse Practitioner students to apply concepts from Advanced Family Nursing I in selected clinical settings. The focus is continue refinement of cognitive and clinical skills needed to provide comprehensive health assessments of adults and children and to apply diagnostic reasoning. Co-requisite: CMN 568.

CMN 571 Health Promotion/ Disease Prevention Family Nursing 2 cr

The purpose of this didactic course is to prepare the Family Nurse Practitioner student to identify and implement appropriate and culturally competent health promotion and disease prevention strategies across the lifespan. The focus is on the advanced practice nursing of individuals and families in primary care settings. Emphasis is placed on health promotion/disease prevention with strategic planning at the primary, secondary and tertiary levels of prevention. Prevention, early diagnosis, prompts treatment, and in-depth patient education with dysmetabolic syndrome and diabetes will be emphasized. Effective strategies for life-style behavior change will also be evaluated. Co-requisite: CMN 568.

CMN 572 Advanced Family Nursing II 3 cr

This didactic course prepares the FNP student to assess, diagnose, and manage selected health care needs of culturally diverse populations across the lifespan. The focus is on the advanced practice nursing of individuals and families in primary care settings. Emphasis is placed on wellness and the pathophysiology and epidemiology underlying acute and chronic health problems. Pre-requisite: CMN 568. Pre-requisite or Co-requisite: NU 578. Co-requisite: CMN 573.

CMN 573 Advanced Family Nursing Practicum II 3 cr

This practicum course provides opportunities for the FNP to apply concepts from CMN 572 FNP II in selected clinical settings. Focus is on individuals and families in primary care settings. The emphasis is culturally competent health care delivery of health care, diagnostic reasoning and decision making/critical thinking. Co-requisite: CMN 572.

CMN 574 Advanced Family Nursing III 3 cr

This course provides an in-depth study of the health care management of children, adults, and families within the framework of advanced nursing. Emphasis is on the interaction among health care providers in a culturally diverse environment. The focus is on selected acute and chronic complex health problems of children, adults, and families in primary health care settings. Pre-requisite: CMN 572. Co-requisite: CMN 575.

CMN 575 Advanced Family Nursing Practicum III 3 cr

This practicum course provides an opportunity for the FNP student to practice within an advanced nursing framework. The focus is on the role of the advanced practice nurse in the health care management of children, adults, and families. Emphasis is on collaboration with other health care providers in a culturally diverse environment. Co-requisite: CMN 574.

CMN 576 Advanced Family Nursing Internship 3 cr

The purpose of this culminating clinical course is to provide a preceptor and faculty facilitated experience in the Family Nurse Practitioner role. The focus is on the application and synthesis of knowledge and skills acquired in all previous courses. Pre-requisite: CMN 574. Co-requisite: CMN 577. Pre-requisites or Co-requisites: NU 613, NU 608, NU 610.

CMN 577 Advanced Family Nursing IV 3 cr

The purpose of this course is to provide a forum for the evaluation of issues and trends encountered in health care. Emphasis is on critical analysis and management of these issues by the FNP student in an interdisciplinary health care system. Co-requisite: CMN 576.

CMN 604 Psych (Family) NP Project Planning and Management 3 cr

This course assists the psychiatric (Family) nurse practitioner DNP student to learn the processes embedded in developing a doctoral synthesis project. The course will address all aspects of project planning and development as a preliminary step to the acute care pediatric nurse practitioner students' selection of a topic or phenomenon of interest for the project and will incorporate well -built questions, search strategies and outcomes, identification of resources needed, plan for evaluation and dissemination.

CMN 617 CMN Residency I 3 cr

Theories of leadership, motivation, power, and change are used to influence change in health care organizations. This course will implement evidence-based clinical models and evaluate their effectiveness in health outcomes. The student will synthesize, critique, and apply evidence to support quality clinical or organizational practices.

In this mentored and supervised experience, the psychiatric (Family) nurse practitioner DNP student will work with the primary faculty advisor to complete projects and advance their selected practice area. The psychiatric (Family) nurse practitioner DNP student will have access to an authority for expanded scope of practice to master the DNP competencies. Residency sites will depend upon the psychiatric (Family) nurse practitioner DNP student's career trajectory and approval by collaborating faculty. During the residency semester, student must participate in scheduled scholarly seminars online. A total of 180 clinical hours of direct practice/management is required.

CMN 618 Psych (Family) NP Residency II 3 cr

Provides psychiatric (Family) nurse practitioner students the opportunity to fully express all DNP competencies. The psychiatric (Family) nurse practitioner student, guided by the faculty facilitator, will implement the scholarly doctoral system's change project.

CMN 619 Psych (Family) NP Residency III 3 cr

Final course in residency series, the psychiatric (Family) nursing student continues to implement and evaluate project plan. Provides student the opportunity to fully express all DNP competencies. The student, guided by the core faculty and advisor completes quality improvement evidence-based system's change project.

CMN 643 Public Health Project Planning and Management 3 cr

This course assists the public health nursing administration DNP student to learn the processes embedded in developing a doctoral synthesis project. The course will address all aspects of project planning and development as a preliminary step to the acute care pediatric

nurse practitioner students' selection of a topic or phenomenon of interest for the project and will incorporate well-built questions, search strategies and outcomes, identification of resources needed, plan for evaluation and dissemination.

CMN 644 Public Health Residency I 3 cr

Theories of leadership, motivation, power, and change are used to influence change in Health care organizations. This course will implement evidence-based clinical models and evaluate their effectiveness in health outcomes. The public health nursing administration will synthesize, critique, and apply evidence to support quality clinical or organizational practices.

In this mentored and supervised experience, the public health nursing administration DNP student will work with the primary faculty advisor to complete projects and advance their selected practice area. The public health nursing administration student will have access to and authority for expanded scope of practice to master the DNP competencies. Residency sites will depend upon the public health nursing administration student's career trajectory and approval by collaborating faculty. During the residency semester, student must participate in scheduled scholarly seminars online. A total of 180 clinical hours of direct practice/ management is required.

CMN 645 Public Health Residency II 3 cr

Provides public health nursing administration students the opportunity to fully express all DNP competencies. The public nursing administration student, guided by the faculty facilitator, will implement the scholarly doctoral system's change project.

CMN 646 Public Health Residency III 3 cr

Final course in residency series, the public health nursing administration student continues to implement and evaluate project plan. Provides public health nursing administration student the opportunity to fully express all DNP competencies. The public health nursing administration student, guided by the core faculty and advisor completes quality improvement evidence-based system's change project.

CMN 692 CMN-DNP Residency Progression 3 cr

Students will register for this course to complete residency course work under supervision of faculty. Students must remain continuously enrolled until all residency requirements are completed. Co-requisite; CMN 619 Pre-requisite: CMN 618

CMN 680 ADM Project Planning and Development 3 cr

The focus of this course is use of research evidence to evaluate current health outcomes of individuals and families affected by diabetes or metabolic syndrome. The student will work with the primary faculty advisor to explore concepts and theories that may be used by a system to improve health outcomes. The student will critique, synthesize, and apply evidence using theories of leadership, motivation, and change to develop a framework for clinical practice. Residency sites will depend upon the student's career trajectory and are subject to approval by course faculty. Pre-requisite: CMN 572 and CMN 573.

CMN 681 ADM Residency I 3 cr

This course focuses on the analysis of interactions of complex pathophysiologic, environmental, economic, cultural, spiritual, hereditary, and other risk factors for diabetes and metabolic syndrome and on the planning, implementation, and evaluation of culturally competent evidence and system-based health care for primary, secondary, and tertiary prevention of diabetes and metabolic syndrome in individuals and groups. The student will have authority for an expanded scope of practiced to master the DNP competencies and will participate in scheduled scholarly online seminars and telephone conferences. Pre-requisites: CMN 575, CMN 574, and CMN 680

CMN 682 ADM Residency II 3 cr

The advanced practice student, guided by the faculty facilitator, will collaborate with and lead members of the health care system in the translation of evidence into practice through the implementation of a culturally competent outcome improvement project. The student receives and provides feedback from faculty, mentors and peers. Pre-requisite: CMN 681

CMN 683 ADM Residency III 3 cr

This course provides the student with the opportunity to fully express all DNP competencies through the implementation completion and evaluation of a scholarly project plan. Pre-requisite: CMN 682

COOPERATIVE EDUCATION (COE) ALTERNATING

COE 100 Alternating Cooperative Education, 1st Training Period No Credit

Students may apply when they have completed 12 credit hours, attained a cumulative grade-point average of 2.0 or above (engineering students GPA 2.3 or above) and are classified as a full-time student upon commencement of participation in the program. Prior to the first work experience, engineering students must have a total of 24 credit hours toward the engineering degree and complete courses MA 125 and 126 and acceptance into the Cooperative Education/ Internship Program.

COE 101 Alternating Cooperative Education, 2nd Training Period No Credit

Pre-requisite: COE 100.

COE 200 Alternating Cooperative Education, 3rd Training Period No Credit

Pre-requisite: COE 101.

COE 201 Alternating Cooperative Education, 4th Training Period No Credit

Pre-requisite: COE 200.

COE 300 Alternating Cooperative Education, 5th Training Period No Credit

Pre-requisite: COE 201.

COE 301 Alternating Cooperative Education, 6th Training Period No Credit

Pre-requisite: COE 300.

COE 400 Alternating Cooperative Education, 7th Training Period No Credit

Pre-requisite: COE 301.

COE 401 Alternating Cooperative Education, 8th Training Period No Credit

Pre-requisite: COE 400.

COE 500 Alternating Cooperative Education, 1st Training Period No Credit

Pre-requisites: Acceptance into a graduate program and acceptance into the Cooperative Education Program.

COE 501 Alternating Cooperative Education, 2nd Training Period No Credit

Pre-requisite: COE 500.

COE 600 Alternating Cooperative Education, 3rd Training Period No Credit

Pre-requisite: COE 501.

COE 601 Alternating Cooperative Education, 4th Training Period No Credit

Pre-requisite: COE 600.

COOPERATIVE EDUCATION (COE) PARALLEL

COE 110 Parallel Cooperative Education, 1st Training Period No Credit

Pre-requisites: 12 hours of academic credit, a cumulative grade-point average of 2.3 or better, at least three semesters remaining before graduation and acceptance into the Parallel Cooperative Education Program.

COE 111 Parallel Cooperative Education, 2nd Training Period No Credit

COE 210 Parallel Cooperative Education, 3rd Training Period No Credit

COE 211 Parallel Cooperative Education, 4th Training Period No Credit

COE 310 Parallel Cooperative Education, 5th Training Period No Credit

COE 311 Parallel Cooperative Education, 6th Training Period No Credit

COE 410 Parallel Cooperative Education, 7th Training Period No Credit

COE 411 Parallel Cooperative Education, 8th Training Period No Credit

COE 510 Parallel Cooperative Education, 1st Training Period No Credit

Pre-requisites: Acceptance into a graduate program and acceptance into the Cooperative Education Program.

COE 511 Parallel Cooperative Education, 2nd Training Period No Credit

Pre-requisite: COE 510.

COE 610 Parallel Cooperative Education, 3rd Training Period No Credit

Pre-requisite: COE 511.

COE 611 Parallel Cooperative Education, 4th Training Period No Credit

Pre-requisite: COE 610.

COOPERATIVE EDUCATION/ INTERNSHIP (COE)

COE 120 Internship 1st Training Period No Credit

Pre-requisites: 12 hours of academic credit, a cumulative grade-point average of 2.0 or

better, with enough time remaining before graduation to complete the internship and acceptance into the Cooperative Education/ Internship Program.

COE 121 Internship 2nd Training Period **No Credit**

COE 220 Internship 3rd Training Period **No Credit**

COE 221 Internship 4th Training Period **No Credit**

CAREER PLANNING (CP)

CP 101 Freshman Seminar 2 cr

A course for first-time students that assists with maximizing the student's potential to achieve academic success and to adjust responsibly to the individual and interpersonal challenges presented by college life. Taught in small groups, the course provides an introduction to the nature of higher education and a general orientation to the functions and resources of the University. Extensive reading and writing assignments relevant to the student's first year experience are required.

CP 200 Clinical Observation (Medicine, Dentistry, Optometry, and Veterinary Medicine) 1 cr

Gives the student clinical exposure to various health-care services. A report on the experience is required. May be repeated for a maximum of six hours' credit. Pre-requisite: Sophomore status and permission of Director of Health Preprofessional Program.

CP 250 Career Planning and Development 3 cr

Principles, methods, and practice in career planning and development with emphasis on career information, self analysis, exploration of careers, career opportunities, and guidelines for goal achievement.

CP 450 The Job Campaign 3 cr

Practical approach to career development designed to help students develop strategies for obtaining suitable employment and making career choices. Emphasis is on the principles, methods, and practice in achieving career goals through the study of careers, preparing resumes, writing letters of application, practicing job interview techniques, and identifying prospective employers.

CARDIORESPIRATORY CARE (CRC)

All courses require admission to the professional component or permission of the chair.

CRC 330 Cardiorespiratory Care Assessment Skills 5 cr

A presentation of patient assessment skills to prepare for subsequent courses in the curriculum. Modules included are chart review and history, vital signs, physical assessment of the chest, chest radiography, laboratory assessment, bedside pulmonary function testing, electrocardiography, and cardiopulmonary resuscitation. Students are prepared to function in a problem-based learning curriculum. Special fee.

CRC 331 Respiratory Anatomy and Physiology 3 cr

The structure and function of the respiratory system will be discussed. Emphasis will be placed on (1) the physiologic ramifications associated with respiratory therapeutic intervention and (2) interrelationships between the pulmonary and renal systems and how these two systems influence and control the body's acid-base status.

CRC 332 Intermittent and Diagnostic Cardiorespiratory Care 4 cr

This course will focus on cases involving patients receiving intermittent respiratory care modalities including oxygen and aerosol therapy, resuscitation, airway care, pharmacology, chest physiotherapy, incentive spirometry, and IPPB. Infection control issues will be included. Diagnostic issues include pulmonary function testing and arterial blood gas analysis. Students will discuss the pathophysiology, health promotion and disease prevention aspects of each case. Relevant laboratory exercises will be conducted.

CRC 334 Pharmacology 3 cr

An overview of pharmacological principles will be presented. Emphasis will be given to drugs influencing the respiratory, cardiovascular, nervous, and renal systems.

CRC 335 Intensive Cardiorespiratory Care 5 cr

This course will focus on cases involving patients receiving intensive cardiorespiratory care modalities including mechanical ventilation, invasive and non-invasive monitoring, artificial airways, and hyperbaric oxygen therapy. Diagnostic issues will include hemodynamic monitoring and fiberoptic bronchoscopy. Students will discuss the pharmacology, pathophysiology, health promotion and disease prevention aspects of each case. Relevant laboratory exercises will be conducted.

CRC 342 Intermittent Cardio-respiratory Care Practicum 3 cr

Clinical experiences are conducted in the care of patients who are receiving respiratory care modalities, as discussed in the cases in CRC 332. Students prepare and present case studies relevant to this patient population.

CRC 345 Intensive Cardiorespiratory Care Practicum 6 cr

Clinical experiences will involve patients who receive intermittent and intensive care modalities and diagnostic procedures discussed in the cases in CRC 335. Students will prepare and present case studies relevant to this patient population.

CRC 415 Research Methodology 2 cr

A survey of research designs, methods, and evaluative techniques, applicable to basic science and clinical research studies.

CRC 430 Neonatal-Pediatric Cardiorespiratory Care 3 cr

This course will focus on cases involving infants and children. Topics include developmental anatomy and physiology, assessment, pathophysiology, basic and intensive care, pharmacology, extracorporeal membrane oxygenation, and resuscitation. Students will discuss the pharmacology, pathophysiology, health promotion and disease prevention aspects of each case. Relevant laboratory exercises will be conducted.

CRC 431 Special Procedures 3 cr

This course will focus on diagnosis and treatment of patients with cardiopulmonary diseases. Diagnostic measures including polysomnography, bronchoscopy, and advanced pulmonary function testing will be discussed. Intervention and treatment options such as cardiac catheterization and cardiac surgery, subacute mechanical ventilation, rehabilitation services, and long-term and home care, hyperbaric oxygen therapy will be included. Advanced Cardiac Life Support (ACLS) will also be taught. Students will also discuss health promotion and disease prevention. Special fee.

CRC 435 Critical Care Concepts 3 cr

This course presents current theories and applications of adult critical care, in addition to those of mechanical ventilation. It focuses on pathophysiology, diagnostic procedures, and clinical presentation of disease.

CRC 440 Advanced Clinical I (W) 6 hrs

Clinical experiences will involve the care of neonatal and pediatric patients who receive intermittent and intensive cardiorespiratory care, as discussed in the cases in CRC 430. Students will prepare and present case studies relevant to this patient population.

CRC 441 Advanced Clinical II 6 hrs

Clinical experiences involve the care of patients who are placed in subacute settings, in the sleep laboratory, and those who receive intensive cardiovascular procedures and pulmonary function testing, and bronchoscopy. Students will prepare and present case studies relevant to this patient population.

CRC 446 Cardiorespiratory Care Education - (W) 2 cr

General educational principles and projects will receive major emphasis. These principles and projects include writing instructional objectives, developing didactic and clinical instructional strategies, and constructing evaluation instruments. Accreditation and credentialing issues will also be addressed. Developing and presenting instructional units will be among the various projects assigned.

CRC 447 Cardiorespiratory Care Management 2 cr

This course will provide the student with experiences and projects pertaining to the management of a respiratory therapy and cardiopulmonary department. Some management functions include: JCAHO respiratory therapy standards, staff scheduling, departmental budgeting, quality assurance, evaluation of personnel, purchasing, and grievance procedures.

CRC 450 Clinical Research I - (W) 2 cr

This is the first part of a two-part course. Students will design and perform a research project, relating to either clinical practice, education, or management. The work involved in this course will extend through two successive semesters. Students register for CRC 450 Fall

Semester of the senior year for one credit, and for CRC 451 Spring Semester for two credit hours. Special fee.

CRC 451 Clinical Research II - (W) 2 cr

This is the second part of a two-part course. Students will design and perform a research project, relating to either clinical practice, education, or management. The work involved in this course will extend through two successive semesters. Students register for CRC 450 Fall Semester of the senior year for one credit, and for CRC 451 Spring Semester for two credit hours. Special fee.

CRC 460 Advanced-level Exam Review 3 cr

This course is designed to assist students prepare for the Written Registry Examination (WRE) offered by the National Board for Respiratory Care (NBRC). All the respiratory therapy equipment, therapeutic modalities, therapeutic interventions, medications, and related procedures relevant to the NBRC WRE will be reviewed in the form of practice examinations. The written registry examination matrix will be used as the main resource for this course.

CRC 499 Senior Honors Project - (H,W) 3-6 cr

Under the advice and guidance of a faculty mentor, honors students will conduct a research project relevant to the field of Cardiorespiratory Care. This research will lead to a formal presentation at the annual Honors Student Colloquium. The senior project will be judged and graded by three faculty members chaired by the honors mentor. This course is required for Honors recognition and may be repeated for up to six credit hours. Pre-requisites: Permission of the department chair and completion of an approved project prospectus.

CRC 533 Obstructive Pulmonary Disease Management 3 cr

This course provides the information necessary for disease management of patients with obstructive pulmonary disease (OPD). Emphasis will be placed on epidemiology, clinical manifestations, diagnosis, patient and family teaching skills, and patient management. Smoking cessation techniques are included. The administrative aspects of establishing a program/clinic and reimbursement issues will be discussed. This course is open to registered respiratory therapists and registered nurses (with baccalaureate degrees), nurse practitioners, NP students, physician assistants, and PA students. Successful completion of this course will help prepare for the National Asthma Education Certification Board examination.

CRC 543 Obstructive Pulmonary Disease Management-Clinical Practicum 3 cr

This course provides the clinical skills necessary for COPD and asthma management. Emphasis is on the clinical manifestations, verifying diagnosis, patient and family teaching skills, smoking cessation techniques, administrative aspects of reimbursement and establishing a clinic, and disease management, in several clinical settings. This course is the clinical correlate of CRC 533, open to registered respiratory therapists and registered nurses (with baccalaureate degrees), nurse practitioners, NP students, physician assistants and PA students. Successful completion of this course will help prepare for the National Asthma Education Certification Board examination. The Pre-requisite for this course is CRC 533.

CRC 590 Special Topics in RT Education 3 cr

Topics will include accreditation, use of NBRC school score reports and self-assessment examinations, roles of key personnel, tenure and promotion policies, the instructor's roles in classroom, laboratory and clinical instruction, student evaluation, student counseling and services, higher education law, and current issues in respiratory therapy and allied health education.

COMPUTER SCIENCE (CSC)

All Prerequisites must be passed with a minimum grade of "C".

CSC 108 Introduction to Computer Science 3 cr

An introduction to the major areas of computer science, such as computing systems, the binary number system, data representation, hardware, programming languages, operating systems, applications, and communications. Historical societal, ethical, and current issues associated with computer science are discussed as students explore academic, research, and career opportunities in the field of computer science.

CSC 120 Problem Solving and Programming Concepts I 4 cr

Introduction to the design of algorithms and their implementation in a high-level programming language. Topics include: algorithm design strategies, programming concepts, programming environment, data structures, searching and sorting methods, and internal representation of data types. Pre-requisites: MA 113, MA 115, MA 125 or Math-ACT score of 27 or higher or Math Placement Test score of 90 or higher.

CSC 121 Problem Solving and Programming Concepts II 4 cr

Continuation of CSC 120. Topics include: object-oriented programming concepts, abstract data types, graphical user interfaces and event-driven programming, exception handling, text and binary file I/O, and an overview of dynamic data structures. Pre-requisites: CSC 120.

CSC 190 Computer Science Special Topics 1 cr

Selected topics in computer science. Pre-requisite: Permission of the CSC coordinator.

CSC 228 Digital Logic and Computer Architecture 3 cr

Topics include: Boolean algebra, minimization techniques, combinatorial and sequential circuit analysis, memory organization, microprocessor concepts, and system architecture. Pre-requisite or Co-requisite: CSC 121.

CSC 230 Data Structures 3 cr

Extension of elementary data structures as covered in CSC 121, techniques to organize and access collections of data, definition, implementation, and use of Classes and Abstract Data Types (ADT). Topics include: recursion, search trees, algorithmic complexity, advanced searching and sorting algorithms, and graphs and their application problems. Pre-requisite: one of CSC 121 or CIS 211. Pre-requisite or Co-requisite MA 267.

CSC 311 Networking and Communications 3 cr

An introduction to computer networks. Topics include: data transmission, network architectures, communication devices and protocols, network routing and flow algorithms. Pre-requisite or Co-requisite: CSC 230.

CSC 320 Computer Organization and Architecture 3 cr

An introduction to computer organization using a top down approach from system component to the register level, internal representation of data, general assembly and linking concepts, addressing modes, and introduction to a specific processor, its architecture and operating system. Pre-requisite: CSC 230, CSC 228.

CSC 322 Operating Systems 3 cr

This course covers the development of operating systems that control computing systems. Topics include: file systems, process management, scheduling, memory management (real and virtual), security, and concurrency. Case studies of operating systems are examined. Pre-requisite: CSC 230.

CSC 324 Database Concepts 3 cr

Introduction to database design and implementation. Aspects of data modeling, database design theory, storage, indexing, and database application development. Entity-relationship model, relational data model, schema refinement, normal forms, file organizations, index structures, and embedded SQL application development. Pre-requisite: CSC 230.

CSC 331 Software Engineering Principles (W) 3 cr

Models, techniques, and tools used in project management. Topics include: software development process, task scheduling, estimation and progress measurement. Coordination of development teams. Standards, testing plans, configuration management, metrics and use of CASE tools, systems delivery and maintenance strategies. Pre-requisite: CA 275 and one of CSC 230 or ITE 285.

CSC 333 Programming Language Theory 3 cr

Formal examination of programming languages. Formal language concepts including syntax and basic grammars are studied. Language features such as data types and structures, control structures and data flow are examined. The run-time environment and the process of interpretation/compilation are covered. Interpreter and compilation techniques are introduced. Pre-requisite: CSC 230.

CSC 340 Secure Software Engineering 3 cr

This course will present sound security principles that should be incorporated into the software development process. Students will learn a risk management framework for

software engineering efforts as well as best practices for software security including code reviews, architectural risk analysis, penetration testing, risk-based security tests, abuse cases, security requirements, and security operations. Students will also learn common flaws that lead to exploitation and be able to identify and mitigate such errors in practice. Out of class labs and exercises reinforce concepts presented in class. Pre-requisite: CSC 331.

CSC 410 Compiler Design and Construction 3 cr

Lexical analysis, syntactic analysis, intermediate code generation, object code generation, optimization, memory use, generators for scanners and parsers. Pre-requisite: CSC 333.

CSC 411 Communications and Network Analysis 3 cr

Data communications and computer networks. An in-depth treatment of network architectures and protocols for both WANs and LANs. Topics include: network routing and flow algorithms, Internet working, and distributed systems. Pre-requisite: CSC 311 and CSC 322.

CSC 412 Real-Time Software Systems 3 cr

Design and implementation of software for real-time computer systems. Survey of typical real-time systems; techniques for code-conversation, error checking, and transmission monitoring. Pre-requisite: CSC 311 and CSC 322.

CSC 413 Computer Graphics 3 cr

An in-depth study of hardware and software techniques used in computer graphics. Study of display and entry devices including refresh, storage, and raster scan topics. Software techniques will include display files, windowing, clipping, two and three-dimensional transformations, and hidden-surface removal. Pre-requisite: CSC 230 and MA 126.

CSC 414 Modeling and Simulation 3 cr

Analytic and simulation models developed using deterministic and stochastic techniques. Topics include: event-driven simulations, queuing theory, Markov processes, and dynamic systems. 'Real world' project required. Pre-requisite: CSC 230 and MA 126, and one of ST 310, ST 315, or ST 320.

CSC 415 Numerical Analysis 3 cr

Mathematical preliminaries, solving linear systems, numerical solution of ordinary and partial differential equations. Pre-requisites: CSC 230 and MA 126.

CSC 416 Artificial Intelligence Theory and Programming 3 cr

Introduction to basic concepts, implementation techniques, and philosophies of artificial intelligence and intelligent systems. Introduction to expert systems, fuzzy logic systems, neural networks, and techniques for Artificial Intelligence Programming. The fundamentals of an AI programming language (LISP or PROLOG) will be presented. The language will then be used to solve problems in typical AI applications. Pre-requisite: CSC 230.

CSC 417 Game Development 3 cr

Introduction to computer game development, including a variety of related topics. The course will be driven by research/technical paper discussions, student presentations, and projects. The direction of the course will be guided to some extent by student interest. Pre-requisite: CSC 230 and MA 126.

CSC 432 Performance Evaluation of Algorithms 3 cr

Classification and analysis of algorithms including recursive, divide and conquer, greedy, etc. Data structures and algorithms design and performance. Run time and main storage complexity analysis. Performance evaluation measurements will be discussed and popular benchmarking techniques reviewed. P, NP, and NP complete complexities will be discussed. Pre-requisites: CSC 230 and MA 126.

CSC 434 Formal Language and Automata Theory 3 cr

Mathematical preliminaries, languages, context-free grammars, parsing, normal forms, finite automata, regular languages, pushdown automata, Turing machines. Pre-requisites: CSC 333.

CSC 457 Data Warehousing 3 cr

This course focuses on the design, development and usage of data warehouses. Course content includes dimensional modeling, ETL processes, physical design, and analytical processing. New research areas related to data warehousing technology will also be discussed.

CSC 490 Computer Science Special Topics 3 cr

Advanced selected topics in computer science. Pre-requisite: Permission of the CSC Coordinator.

CSC 510 Compiler Design and Construction 3 cr

Lexical analysis, syntactic analysis, intermediate code generation, object code generation, optimization, memory use, generators for scanners and parsers. Pre-requisite: CIS Graduate Professional Component.

CSC 511 Communications and Network Analysis 3 cr

Data communications and computer networks. An in-depth treatment of network architectures and protocols for both WANs and LANs. Topics include: network routing and flow algorithms, internet working, and distributed systems. Pre-requisite: CIS Graduate Professional Component.

CSC 512 Real-time Software Systems 3 cr

Design and implementation of software for real-time computer systems. Survey of typical real-time systems; techniques for code-conversion, error checking, and transmission monitoring. Pre-requisite: CIS Graduate Professional Component.

CSC 513 Computer Graphics 3 cr

An in-depth study of hardware and software techniques used in computer graphics. Study of display and entry devices including refresh, storage, and raster scan topics. Software techniques will include display files, windowing, clipping, two and three dimensional transformations, and hidden-surface removal. Pre-requisite: CIS Graduate Professional Component.

CSC 514 Modeling and Simulation 3 cr

Analytic and simulation models developed using deterministic and stochastic techniques. Topics include: event-driven simulations, queuing theory, Markov processes, and dynamic systems. 'Real world' project required. Pre-requisites: CIS Graduate Professional Component.

CSC 515 Numerical Analysis 3 cr

Mathematical preliminaries, solving linear systems, numerical solution of ordinary and partial differential equations. Pre-requisites: MA 238.

CSC 516 Artificial Intelligence Theory and Programming 3 cr

Introduction to basic concepts, implementation techniques, and philosophies of artificial intelligence and intelligent systems. Introduction to expert systems, fuzzy logic systems, neural networks, and techniques for Artificial Intelligence Programming. The fundamentals of an AI programming language (LISP or PROLOG) will be presented. The language will then be used to solve problems in typical AI applications. Pre-requisite: Professional Component Standing.

CSC 517 Game Development 3 cr

Introduction to computer game development, including a variety of related topics. The course will be driven by research/technical paper discussions, student presentations, and projects. The direction of the course will be guided to some extent by student interest. Pre-requisite: Graduate Professional Component.

CSC 520 Computer Architecture 3 cr

Instruction set design, pipelining, instruction-level parallelism, memory hierarchy design, and multiprocessors. Pre-requisite: CIS Graduate Professional Component.

CSC 522 Performance Evaluation of Algorithms 3 cr

Mathematical foundations, analytic, empirical, and qualitative evaluation techniques; dynamic programming, greedy algorithms, graph algorithms; and selected advanced topics. Pre-requisite: CIS Graduate Professional Component.

CSC 524 Computer Language Design 3 cr

A study of programming language design and specification, including the compiling process, parsing, BNF grammars, and models of semantics. Differences between interpreters, assemblers, and compilers will be studied. Pre-requisite: CIS Graduate Professional Component.

CSC 525 Complexity Theory 3 cr

Mathematical preliminaries, languages, finite automata, Turing machines, decidability, recursive function theory, computational complexity, tractability and NP-complete problems. Pre-requisite: CIS Graduate Professional Component.

CSC 526 Data Mining 3 cr

This course provides an in-depth study of data mining. Course content includes data preparation, feature selection, pattern mining, classification, clustering, and sequence mining. New research areas in data mining will also be discussed. Laboratory assignments will provide students with opportunities to interact with and develop data mining technologies.

CSC 527 Software Engineering Principles 3 cr

Advanced concepts of software engineering will be discussed. Program testing techniques including: structured design and walk-throughs, proving program correctness and verifiability, and system coding standardization and integration will be covered in depth. Software team formulation and management techniques will be discussed. Pre-requisite: CIS Graduate Professional Component.

CSC 532 Distributed Systems 3 cr

This course will further enhance the student's understanding of the details of how an operating system functions. It will focus on the advanced concepts associated with distributed operating systems. The student will learn the underlying concepts of such systems and the algorithms needed to provide the required synchronization and communication.

CSC 533 Artificial Intelligence and Heuristic Programming 3 cr

Methods of heuristic programming, the production of intelligent algorithms, and simulation of human cognitive processes will be studied. AI languages, such as LISP and PROLOG, will be discussed. Attention placed on the relationship between man-made machines (robots) and biological organisms with natural intelligence. Expert Systems and neural network research will be studied. Pre-requisite: CIS Graduate Professional Component.

CSC 557 Data Warehousing 3 cr

This course focuses on the design, development and usage of data warehouses. Course content includes dimensional modeling, ETL processes, physical design, and analytical processing. New research areas related to data warehousing technology will also be discussed.

CSC 580 Data Security 3 cr

The objective of this course is to introduce the inherent strengths and limitations of cryptography in data security applications, focusing on the basic principles of message privacy, key negotiation, and key management. The course covers various aspects of symmetric and asymmetric ciphers and provides a broad coverage of the core areas for engineering cryptographic systems. Students will be expected to implement and analyze simple cryptographic schemes and read supporting articles and papers for presentation. Pre-requisite: CIS Graduate Professional Component.

CSC 582 Network Security 3 cr

The objective of this course is to provide students with the knowledge and skills to begin supporting network security within an organization. Students will gain an understanding of fundamental network security concepts and mechanisms, be able to identify security threats and vulnerabilities, and help respond to and recover from security incidents. Pre-requisite: CSC 580.

CSC 590 Computer Science Special Topics 3 cr

Advanced selected topics in computer science. Pre-requisite: Permission of the CSC Coordinator.

COMMUNICATION SCIENCES AND DISORDERS (CSD)

CSD 600 Doctoral Colloquium 1 cr

This seminar is designed to provide a forum for presentation and discussion of faculty and doctoral student research projects. Topics may also include: teaching and learning styles and grant writing.

CSD 650 Research Methods 3 cr

Current methods and strategies used in research of communication processes.

CSD 651 Speech and Hearing Science and Instrumentation 3 cr

Advanced review of the process of speech production, acoustic phonetics, coarticulation, and speech perception with emphasis on laboratory research methods.

CSD 662 Studies in Speech Science 3 cr

Basic and advanced principles of the acoustics and physiology of speech production.

CSD 663 Studies in Hearing Science 3 cr

Advanced study of psychological and physiological acoustics.

CSD 664 Studies in Language Science 3 cr

Intensive study of the theoretical foundations underlying syntax, semantics, pragmatics, phonology, psycholinguistics, neurolinguistics, sociolinguistics, and applied pragmatics.

CSD 665 Studies in Communication Neuroscience 3 cr

Advanced survey of neurosciences as they relate to processes and pathologies of human communication, including functional neuroanatomy and clinical neurology. Interdisciplinary research paradigms will also be discussed.

CSD 672 Laboratory in Speech Science 1 cr

Laboratory experience in speech science.

CSD 673 Laboratory in Hearing Science 1 cr

Laboratory experience in hearing science.

CSD 674 Laboratory in Language Science 1 cr

Laboratory experience in language science.

CSD 675 Laboratory in Communication Neuroscience 1 cr

Laboratory experience in neuroscience.

CSD 682 Seminar in Speech Science 3 cr

Intensive review of current research in speech production. May include normal and disordered processes. Topics may include acoustic phonetics, physiological phonetics, prosody, production and perception, fluency, and voice. May be repeated.

CSD 683 Seminar in Hearing Science 3 cr

Intensive literature review of current knowledge and research in hearing and hearing disorders. Topics may include cochlear mechanics, complex signal processing, electrophysiological measures, development of hearing, hearing in the elderly, and hearing in other species. May be repeated.

CSD 684 Seminar in Language Science 3 cr

Intensive literature review of current methods, problems, and strategies in language research. Topics may include normal language acquisition, language-learning disorders, clinical aphasiology, and neurolinguistics. May be repeated.

CSD 694 Directed Study 1-3 cr

Independent study under the direction of a graduate faculty member. May be repeated. Pre-requisite: Permission of graduate advisor.

CSD 695 Directed Research 1-3 cr

Research under the direction of a graduate faculty member. May be repeated. Pre-requisite: Permission of graduate advisor.

CSD 696 Professional Practicum: Administration 2 cr

Supervised professional experiences in administration under the guidance of graduate faculty mentors. May be repeated.

CSD 697 Professional Practicum: Clinical Supervision Variable

Supervised professional experiences in clinical teaching under the guidance of graduate faculty mentors. May be repeated.

CSD 698 Professional Practicum: Teaching 2 cr

Supervised professional experiences in academic teaching under the guidance of graduate faculty mentors. May be repeated.

CSD 799 Dissertation Research 1-9 cr

Independent research under the direction of a graduate faculty member. May be repeated. Pre-requisite: Admission to doctoral candidacy, or Consent of Dissertation Director and Graduate Advisor.

DRAMATIC ARTS (DRA)

DRA 100 Theatre Workshop: Rehearsal and Performance 1 cr

Practical experience in acting. May be repeated for a maximum of four hours. Pre-requisite: Permission of department chair.

DRA 101 Theatre Workshop: Technical Production 1 cr

Practical experience in backstage work. May be repeated for a maximum of four hours. Pre-requisite: Permission of department chair.

DRA 102 Theatre Workshop: Special Activities 1 cr

Practical experience in theatre areas other than acting and technical production. May be repeated for a maximum of four hours. Pre-requisite: Permission of department chair.

DRA 103 Theatre Symposium 0.5 cr

A symposium required of all full-time drama majors meeting weekly to share and discuss theatre activities. Four hours required for majors for graduation with adjustments made for transfer students.

DRA 104, 105 Introduction to Dance I and II 3 cr

Introduction to dance theory, basic ballet, and jazz techniques, and terminology used in theatre dance. Designed to prepare the student for performance.

DRA 110 Introduction to Drama 3 cr
A basic survey of theatre practice. Fulfills the Fine Arts requirement for Arts and Sciences. **Core Course**.

DRA 115 Acting for Non-Majors 3 cr
An interactive course designed to introduce the non-major to the art and discipline of acting as both performer and observer. Through a sequence of exercises and practice, the student will be introduced to the actor's mode of thinking, creating, and working.

DRA 116, 416 Opera and Musical Theatre Workshop 1/2 cr
A Workshop dedicated to training students in the fundamentals of performance, and production through experience with music for the stage. Standards of opera, operetta, and American musical theatre are explored in scene exercises and fully-stage productions. Enrollment is open to all students through audition or permission of the instructor. Cross-listed with MUO 116, 416

DRA 120 Acting I 3 cr
A workshop-lecture course introducing a basic process for acting on the stage in the style of modern realism.

DRA 130 Stagecraft 3 cr
A lecture-laboratory course in the fundamentals of stagecraft.

DRA 131 Fundamentals of Stage Lighting 3 cr
A lecture-laboratory course in the fundamentals of stage lighting.

DRA 132 Costume Fundamentals 3 cr
A lecture-laboratory course in the fundamentals of costuming for the stage, including basic sewing skills as they apply to theatrical costumes.

DRA 133 Computer Graphics for the Theatre (C) 1 cr
An introductory course on computer drafting and graphic design for the stage.

DRA 150 Text Analysis 3 cr
Reading and analyzing play scripts as blueprints for dramatic actions, sights, sounds, characters, and productions.

DRA 204 Dance Techniques I 3 cr
A review and expansion of technique, vocabulary, and history of ballet, jazz, and theatrical dance. Pre-requisites: DRA 104 and 105.

DRA 205 Dance Techniques II 3 cr
An exploration of modern dance techniques, vocabulary, and history with ballet as their basis. Pre-requisite: DRA 204.

DRA 210 Makeup 1 cr
A study of the materials and techniques of theatrical makeup.

DRA 220 Stage Movement 3 cr
Through exercises and scene study, student-actors explore movement for the stage. Pre-requisite: DRA 121 or permission of instructor.

DRA 221 Voice for Actors 3 cr
A workshop-lecture course in speaking voice and articulation for performance. Pre-requisite: DRA 121 or permission of instructor.

DRA 222 Acting II: Scene Study in Realism 3 cr
Course is designed to teach theory and techniques in character development and analysis, as used in Realistic theatre, through the use of scene studies. Pre-requisites: DRA 120 Acting I, DRA 220 Stage Movement, DRA 221, Voice for the Actor, or Permission of Instructor. (It may be taken concurrently with 220, 221, when frequency requires)

DRA 233 Theatrical Rendering 1 hr
Course focuses on the major painting mediums, styles of illustration, and techniques utilized in the visual presentation of design for the theatre. The student will develop artistic skills and techniques through studio work in drawing and painting projects for the theatre.

DRA 250 Theatre Management 3 cr
A basic course in the principles of accounting, purchasing, box-office management, house management, and promotion.

DRA 261 Creative Dramatics 3 cr
A practical course concerned with improvisational acting with children. Of special interest to students in Education and Leisure Services.

DRA 290 Special Topics 3 cr
Theatre and drama topics not covered in regular curriculum. May be repeated when subject varies.

DRA 300 Advanced Workshop: Rehearsal and Performance 1 cr
Advanced practical experience in acting. May be repeated for a maximum of four hours. Pre-requisites: Junior status and permission of the department chair.

DRA 301 Advanced Workshop: Technical Production 1 cr
Advanced practical experience in backstage work. May be repeated for a total of four hours. Pre-requisites: Junior status and permission of the department chair.

DRA 302 Advanced Workshop: Special Activities 1 cr
Advanced practical experience in theatre areas other than acting or technical production. May be repeated for a total of four hours. Pre-requisites: Junior status and permission of the department chair.

DRA 310 Playwriting 3 cr
Studies in character, plot development, and the one-act play form. Pre-requisite: Permission of department chair.

DRA 315 History of Musical Theatre (W) 3 cr
A comprehensive overview of the origins and evolution of American Music Theatre. The course includes both general and specific information toward appropriate choices. Cross-listed with MUL 315. Credit cannot be received for both DRA 315 and MUL 315.

DRA 320 Studies in Acting Styles 3 cr
Variable-content course treating acting styles found in different theatrical genres as well as for camera. May be repeated twice for credit when topic varies. Pre-requisites: DRA 120, 220, 221, and 222, or permission of instructor.

DRA 330 Scene Design 3 cr
The fundamentals of scene design for the stage.

DRA 331 Lighting Design 3 cr
The fundamental of lighting design for the stage. Pre-req. DRA 131.

DRA 332 Costume Design 3 cr
The fundamentals of costume design for the stage. Pre-req: DRA 132

DRA 333 Design Portfolio 1 cr
Practical lab course designing and developing aesthetically pleasing portfolio for Graduate School Interview or Professional Theatre placement. Developments of digital portfolio and web-page development both included. Pre-equisite: Junior or permission of instructor.

DRA 340 Directing I 3 cr
The fundamental techniques involved in directing a stage play: analysis, casting, and blocking. Pre-requisite: DRA 120.

DRA 350 Theatre History I (W)(C) 3 cr
A comprehensive study of the important contributions in theatre art from its beginnings to 1642.

DRA 351 Theatre History II (W) 3 cr
A continuation of DRA 350 from the Restoration to the present.

DRA 352 Costume History and Period Style 3 cr
Historical study of dress in relation to costuming for the stage.

DRA 400 Theatre Internship 6 cr
Practical experience in stock, repertory, or touring theatre. Pre-requisite: Junior status or permission of department chair.

DRA 410 3-Dimensional Makeup and Masks 3 cr
Laboratory class in basic face casting, slush mold, latex appliances, and other theatrical mask-making techniques.

DRA 431 Lighting Design 3 cr
The fundamentals of lighting design for the stage. Pre-requisite: DRA 131.

DRA 432 Costume Design 3 cr
The fundamentals of costume design for the stage. Pre-requisite: DRA 132.

DRA 434 Advanced Theatre Design 3 cr
Advanced variable topics class in design theory, concept, and research with concentration in Costume, Scenic, or Lighting. May be repeated twice with different topic. Pre-requisite: DRA 330, 331, or 332.

DRA 435 Design Practicum (Design of Main Stage) 3 cr
Provides students with practical application of design theory and actualization of design for a realized main stage production.

DRA 460 Theatre for Youth 3 cr
The reading and production techniques of plays for children and teenagers.

DRA 480 Senior Capstone 3 cr
Exploration of realized public product in student's area of concentration.

DRA 490 Special Topics 3 cr
Various topics of special interest to students of drama. Pre-requisite: Permission of department chair.

DRA 494 Directed Studies 1-3 cr
Independent study under faculty supervision, involving research, readings, or artistic projects. Pre-requisite: Permission of department chair.

DEVELOPMENTAL STUDIES (DS)

DS 014 Writing 3 cr
An examination of the sentence and paragraph. Students will review basic grammar, engage in structural analysis of the sentence, examine various techniques to achieve coherence at the paragraph level, and ultimately demonstrate these skills in writing (ranging from shorter assignments to the essay). The course emphasizes grammatical competence, sentence style, and paragraph development.

DS 082 Introductory Algebra 3 cr
This course covers elementary algebra topics including operations with sets, real numbers, fractions, decimals, percents, exponents, order of operations; use of set notation; solving and graphing linear equations and inequalities; real-world application problems; and polynomials; graphs of data. Requires five hours per week of work in a computer lab. Fee required. Prerequisite: Appropriate score on the Math Placement Exam.

ECONOMICS (ECO)

ECO 215 Principles of Microeconomics 3 cr
Functions of the price system in a market economy; role of households and business firms in mobilizing resources to meet human needs. The functional and personal distribution and use of income. Relevant problems are discussed. **Core Course**.

ECO 216 Principles of Macroeconomics3 cr
Economics as a science; its nature and functions. Analysis of the American economy from the macroeconomic viewpoint, stressing full employment, monetary and fiscal policy, national income accounting, and their application to current problems and issues. **Core Course**.

ECO 300 Introduction to Economics 3 cr
Intensive study of micro- and macroeconomic principles with emphasis on application to current economic issues and problems of interest to public school teachers and students. Pre-requisite: for non-business majors.

ECO 315 Intermediate Microeconomics 3 cr
Operation of the price system, with special reference to a market economy and to related public policies and business issues; analysis of the distribution of income; theories of consumer behavior, the firm, resource allocation, and product distribution. Pre-requisite: ECO 215 or ECO 300 for non-business majors.

ECO 316 Intermediate Macroeconomics 3 cr
The nature and control of forces in a developed economy that determine levels of employment, income and use of resources, and rate and direction of economic growth. Pre-requisite: ECO 216 or ECO 300 for non-business majors.

ECO 318 Principles of Managerial Economics 3 cr
Study of economic principles and methods in analyzing problems faced by management of a business or other type of organization; application of economic concepts to finding solutions of such problems that advance the best interest of such organizations. Pre-requisite: ECO 215 or ECO 300 for non-business majors.

ECO 322 Industrial Structure and Public Policy 3 cr
An analysis of the effect of modern industrial structure on competitive behavior and performance, in the light of contemporary price theory and the theory of workable competition; a critical evaluation of the legislative content, judicial interpretation, and economic effects of antitrust laws, current problems and proposed remedies. Pre-requisite: ECO 215 or ECO 300 for non-business majors.

ECO 323 Public Finance 3 cr
The nature, purposes, and economic effects of various types of taxes in a federal government. Problems of tax administration, budgeting, and expenditure of tax revenues. Review of current problems. Pre-requisite: ECO 215 or ECO 300 for non-business majors.

ECO 330 Current Global Economic Issues 3 cr
Application of standard economic theory of markets to analyze major issues confronting U.S. consumers and businesses in the global economy. Topics include comparative advantage, commercial policy and protectionism, currency markets and foreign exchange rates, economic integration and free trade areas, international trade accounting, and financial aspects of international trade. Pre-requisite: ECO 215 or ECO 300 for non-business majors.

ECO 343 Labor Economics 3 cr
United States population analyzed by age, sex, and other characteristics; study of the labor force and its composition; unemployment and underemployment. Education as an investment in productive resources. Economics of leisure, health, housing, recreation, and other areas of human-resource development. Pre-requisite: ECO 215 or ECO 300 for non-business majors.

ECO 363 International Economics 3 cr
Modern international trade theory; the balance of payments and adjustment processes; the evolution of international economic institutions; critical analysis of current international economic policies - trade, monetary, and regional economics organizations. Pre-requisite: ECO 215 or ECO 216 or ECO 300 for non-business majors.

ECO 372 Economics of Urban Development 3 cr
This course addresses contemporary issues of urban and metropolitan areas. The course focuses on understanding the main economic forces leading to the existence of cities and regional agglomeration. Students will also use neoclassical economic theory to critically analyze economic efficiency and the spatial structure of markets. The course includes a wide range of topics such as urban growth, business clusters, poverty, crime, urban transportation, positive and negative externalities in urban areas, land use theory, housing, and the role of local governments.

ECO 383 Economic History of the United States 3 cr
The evolution of the modern United States economic system. The parts played by exploitation of natural resources, investment from abroad, financial institutions, and technology in arriving at the present economic situation. Critical analysis of development just before, during and after World War II, and of current economic problems. Pre-requisites: ECO 215 and ECO 216, or ECO 300 for non-business majors.

ECO 453 Introduction to Econometrics 3 cr
Study of regression analysis and its application to business, economics, and other social-science problems; emphasis on model building, research writing, and econometric forecasting. Students are required to write a term paper on econometric applications under direct supervision of the instructor.

ECO 490 Special Topics 3 cr
Designed to provide senior students an opportunity to study selected topics of particular interest. Pre-requisite: Approval of department chair.

ECO 491 History of Economic Thought (W) 3 cr
Economic ideas from the Greeks to present, with intensive study of the classical, neoclassical, and contemporary schools of economic thought. Pre-requisites: EH 102 with a minimum grade of "C" and ECO 215 or ECO 300 for non-business majors.

ECO 494 Directed Study in Economics 3 cr
Reading and research on selected economic topics under guidance of the departmental faculty. Credit and Pre-requisites vary with the nature and magnitude of individual projects. Pre-requisites: Junior or senior standing, a cumulative GPA of 2.5 or better, and approval of the department chair following the evaluation of a written proposal.

ECO 496 Economics Internship 3 cr
The internship program is designed to give students practical experience in their field of study. Students complete directed projects under the supervision of Department Chair. No more than three hours of internship credit may be counted toward a degree in the Mitchell College of Business. Pre-requisites: Junior or Senior standing, declared major in Finance, overall GPA of at least 2.5, and Internship Agreement signed by Department Chair.

ECO 506 Economic Theory 3 cr
An introduction to economic theory, including the basic theory of the market (supply and demand); elasticity; introduction to market structure; trade theory; international trade and balance of payments; national income accounting; money and the banking system; macroeconomic theories, and macroeconomic stabilization policy.

ECO 507 Topics in Managerial Economics 3 cr

Selected topics in application of economic theory to managerial decisions including production and cost functions; forecasting; international trade and protectionism; exchange rates and international finance; economic integration; basic game theory; and capital budgeting.

ECO 590 Special Topics 3 cr

Designed to provide graduate students an opportunity to study selected topics. (A student may count no more than 3 hours of Special Topics in the M.B.A. degree program). Pre-requisite: Approval of department chair.

ECO 594 Independent Study in Economics 3 cr

Readings and research on selected topics. Conferences and formal research report required. Pre-requisite: Approval of department chair.

ECO 609 Industrial Organizational Economics 3 cr

This course focuses on industrial organization topics such as consumer choice, market structure, and pricing. It is designed to give students fundamentals in economics and to help them start agendas.

EDUCATIONAL FOUNDATIONS (EDF)

EDF 207 The Law and Politics of Education 3 cr

Examines the legal and political considerations that affect education in America. Emphasis will be placed on the practical applications of these considerations to the operation of schools.

EDF 211 Clinical and Laboratory Experiences in Educational Foundations 0 cr

Provides relevant clinical and laboratory experiences directly related to the several academic disciplines that constitute the social foundations of education. Must be taken with EDF 315. Requires a special fee.

EDF 290 Special Topics 1-3 cr

Varies in content in one disciplinary area of educational foundations (e.g., history of education or anthropology of education) or in an interdisciplinary area (e.g., multicultural education). May be repeated for credit when course content varies.

EDF 315 Education in a Diverse Society 3 cr

Focused on the effects of diversity on teaching and learning, this course is a study of the social context of schooling from historical, philosophical, sociological, political, and comparative perspectives. NOTE: Student must register for EDF 315 in conjunction with EPY 351. Requires clear background check.

EDF 490 Special Topics 1-3 cr

Varies in content in one disciplinary area of educational foundations (e.g., history of education or anthropology of education) or in an interdisciplinary area (e.g., multicultural education). May be repeated for credit when course content varies.

EDF 494 Directed Study 1-3 cr

Pre-requisite: Permission of Department. (No more than two directed studies can be counted toward the Bachelor's Degree and Class B Certificate.)

EDF 501 Cultural Foundations of Education 3 cr

A presentation and investigation of basic concepts, issues, and principles of American education within a social scientific framework; particular emphasis is on multicultural concerns and strategies.

EDF 515 Multicultural Education 3 cr

In a multicultural society, teachers must be able to work with students from a variety of backgrounds-some quite different from the teachers' own. Four cultural factors are the focus of this course: social class, race, gender, and ethnicity. Teachers sensitive to these factors can prepare students to survive and function in the dominant culture without sacrificing pride in the students' own cultures.

EDF 590 Special Topics 1-3 cr

Course may vary in content or may be supervised study in one disciplinary area of educational foundations (e.g., history of education or anthropology of education) or in an interdisciplinary area (e.g., multicultural education). May be repeated for credit when course content varies.

EDF 594 Directed Study and Research 1-3 cr

Students explore problems and issues of special interest or significance in educational foundations. Not more than three semester hours of any departmental 594 courses can be accepted toward a degree program.

EDF 615 Seminar in Educational Policy Studies 3 cr

This course offers advanced graduate students the opportunity to examine educational policy and policy-making from sociocultural, political, historical, philosophical, and comparative and international perspectives. After analyzing a common core of issues, students will investigate a topic of their choice using research skills from the educational foundations disciplines.

EDF 690 Special Topics 3 cr

Course may vary in content or may be supervised study in one disciplinary area of educational foundations (e.g., history of education or anthropology of education) or in an interdisciplinary area (e.g., multicultural education). May be repeated for credit when course content varies.

EDF 694 Directed Study and Research 1-3 cr

Exploration of problems and issues of special interest or significance for advanced students. Not more than three semester hours of any departmental 694 courses can be accepted toward a degree.

EDUCATIONAL LEADERSHIP (EDL)

EDL 410 Leadership Development 1 cr

This course is for undergraduates who are, or aspire to be, leaders. Faculty from throughout the University will direct weekly class sessions. Requires permission of the Dean of Students.

EDL 501 Theories of Instructional Leadership

The need for instructional leaders to understand and be able to operate within the larger context of community effect on opportunities for all students is addressed. Cooperation among schools, districts, parents, and the larger community as essential to the success of instructional leaders and students and ethical practices are emphasized.

EDL 502 Data-Driven Instructional Leadership

This course stresses the engagement of the school community in developing and maintaining a shared vision; planning effectively; using critical thinking and problem-solving techniques; collecting, analyzing, and interpreting data; and evaluation of results for the purpose of continuous school improvement.

EDL 503 Supervision and Professional Development

This course addresses how the instructional leader recruits, selects, organizes, evaluates, and mentors faculty and staff to accomplish school and system goals.

EDL 504 Ethical and Legal Dimensions of School Leadership

Students completing this course will demonstrate understanding of the legal system of schools. Students will be able to relate constitutional, federal, state, and local requirements as they concern students, employees, teachers, and instructional program administration. The students will demonstrate an understanding of the concepts of honesty, integrity, and fairness.

EDL 505 Business Management of the Learning Organization

This course explores leadership skills related to group dynamics, problem identification, accountability, diversity, economic levels, and their relationship to financing schools. Internal and external public relations and political factors which impact the funding of schools will also be presented.

EDL 506 Teaching and Learning Leaders

Student will acquire the knowledge to ensure that decisions about curricular, instructional strategies, assessment and professional development are based on sound research, best practices, and other contextual information needed to align the curricula with students needs.

EDL 512 Community Development 3 cr

Presents the field of community development, including basic terminology, concepts, methods and literature. Purposes are to present conceptual foundations of community development, provide some experiences in practical applications, and lay foundations for further study and practice in the field.

EDL 550 Principles of School Leadership 3 cr

This course provides understanding and skills in leadership and management of schools, including elements of effective classroom management, monitoring student services, and school and community relations. Management

skills associated with school facilities, transportation, and student records will be studied.

EDL 561 Development of Postsecondary Education 3 cr
This course provides an overview of the organization, development and characteristics of postsecondary education.

EDL 562 Student in Higher Education 3 cr
This course focuses on the demographics and characteristics of the American college student today. Development theories applicable to the diverse population of students (e.g., race, ethnicity, age, gender, sexual orientation, disability) are introduced and examined.

EDL 575 Organization and Planning of Postsecondary Education 3 cr
Designed as an introduction to an analysis of organizational and administrative features of postsecondary education.

EDL 578 Law and Postsecondary Education 3 cr
Explores court decisions and federal and state laws relating to governance, student rights, and tort liability in postsecondary education.

EDL 590 Special Topics 3 cr
Guided supervision in the identification and completion of educational tasks, such as program design, program revision, self study for accreditation visitation, supervision in the organization, and application of selected learning activities to acquire and enhance leadership skills.

EDL 594 Directed Study and Research 1-3 cr
Exploration of problems and issues of special interest or significance in Educational Leadership. Not more than three semester hours of any departmental 594 courses can be accepted toward a degree.

EDL 598 Residency 6 cr
The internship is designed to place candidates in the cooperating school during critical times of instructional planning. The residency allows interns to experience leadership in as many of the Alabama Leadership Standard indicators as possible. Candidates shall prepare and maintain a comprehensive portfolio which indicates the level of experience and knowledge gained in instructional leadership during the internship experiences.

EDL 603 Current Problems and Issues in Educational Administration 3 cr
Explores problems and issues at the federal, state, and local levels facing the administration and supervision of American educational institutions. Particular emphasis is on decision making affecting education.

EDL 611 Human Relations Skills 3 cr
Designed to assess and improve the student's level of competency in communication and group leadership skills, knowledge of sociocultural influences and differences, and understanding of the developmental characteristics of human beings.

EDL 621 Seminar in Program and Curriculum Development 3 cr
Designed to assess and improve the student's level of competency in program development skills, instructional strategies, systems analysis, and change innovation.

EDL 631 Seminar in Educational Management Skills 3 cr
Designed to assess and improve the student's knowledge of decision-making styles, problem-solving processes, leadership skills, implementation of organizational change, and physical environments which promote productivity. Additionally, when appropriate to the candidate's expected leadership position, current knowledge of law, finance, plant management, and professional negotiations will be stressed.

EDL 690 Special Topics 1-3 cr
May be a content-varying course or may be guided supervision in the identification and completion of educational tasks as well as supervision in the organization and application of selected learning activities to acquire and enhance leadership skills. May be repeated for credit when course content varies.

EDL 694 Directed Study and Research 3 cr
Students explore problems and issues of special interest or significance to advanced students. Not more than three semester hours of any departmental 694 courses can be accepted toward a degree.

EDL 695 Mentoring Leadership 3 cr
This course is a learning experience in mentoring relationships. The course provides an opportunity to apply the theories and concepts learned during the student's advanced graduate studies. The student will learn mentoring skills and serve as a mentor for students interested in educational administration or new to the field of administration.

EDL 699 Research Project 1-3 cr
A supervised field project, study, or investigation in Educational Leadership. The student will conduct an investigation and apply concepts and skills learned during the sixth-year program.

EDUCATIONAL MEDIA (EDM)

EDM 310 Microcomputing Systems in Education 3 cr
Basic understanding of current and emerging technologies for instructional purposes. Requires a special fee.

EDM 312 Educational Technology 3 cr
Application of current educational technology in various instructional environments. Laboratory experience is given with selected software programs. May be repeated when technological application changes.

EDM 385* Methods of Instructional Communication 3 cr
Application of current concepts in communication and instructional system design to elementary and secondary teaching. Operation of basic mediaware and overview of literature related to media use are stressed.

EDM 490 Special Topics 3 cr
Investigation of contemporary topics of interest in Educational Media. Pre-requisite: Permission of department.

EDM 494 Directed Study: ED Media 1-3 cr
Directed study in Educational Media. No more than two directed studies can count toward the Bachelor's degree. Pre-requisite: Requires departmental approval.

EDM 510 Microcomputing Systems in Education 3 cr
Application of current and emerging technologies that support and enhance instruction and can be used to improve student achievement.

EDM 520 Computing Applications in Education 3 cr
Application of current software and hardware in various instructional environments.

EDM 530 Workshop in Educational Media 1-9 cr
In-depth study and operational experience in current trends and techniques in educational media research.

EDM 533 Curriculum Media for Children 3 cr
This course explores media used for learning and enjoyment with children in preschool through grade eight. Other topics include: the professional roles and responsibilities of a collection developer; the influence of child development curriculum on collection development; an overview of the marketplace; strategies to encourage teachers to use media center materials in teaching; and related research.

EDM 552 Curriculum Media for Young Adults 3 cr
This course initiates or extends a student's knowledge of how to identify, select, and use library media resources for students in grades 6 through 12. Other topics include: the role of a library media specialist in establishing and maintaining a collection of resources; steps that can be taken to encourage students to use the collection; related research; and ways professionals can keep abreast of the latest knowledge, practices, and resources.

EDM 580 Information Literacy 3 cr
This course focuses on the role of the library media specialist in teaching students and instructional staff how to select, evaluate, and use information from print, non-print and online sources. Emphasis is placed on information access, retrieval, and interpretation; advanced research techniques; copyright laws; and lessons and projects that utilize research information.

EDM 581 Media Center Management 3 cr
This course covers the procedures and routines for effective media center management, including acquiring, organizing, classifying, cataloging, maintaining, and inventorying a relevant collection. Other topics include: selecting resources to support the total curriculum and budget, responding to the needs of a school's demographic population, assisting students and teachers in the application of information skills, and applying the fundamentals of library design to achieve an effective environment for learning and leisure use.

EDM 582 Production of Curriculum Media 3 cr
Provides instruction in the elements of planning, preparation and evaluation of

professional curricular materials for group and individual instruction.

EDM 583 Library Media Programs 3 cr
This course covers the professional responsibilities for planning, implementing, and evaluating a library media program that serves a school program. Emphasis is placed on curriculum, leadership, environment, teaching and learning styles, a planning model, collaboration, staff development, program administration and evaluation activities, and ways in which research can be used to help shape an effective program.

EDM 590 Special Topics 3 cr
Topics of contemporary interest in the area of Educational Media will be presented, discussed, and investigated.

EDM 594 Directed Study and Research 1-3 cr
Students explore problems and issues of special interest or significance in Educational Media. Not more than four semester hours maybe accepted toward degree programs.

EDM 595A Internship in Educational Media: A 1 cr
The internship is a supervised learning experience in a work setting similar to that in which a media specialist eventually will be employed. Pre-requisite: A grade of "B" or above in EDM 581.

EDM 595B Internship in Educational Media: B 1 cr
The internship is a supervised learning experience in a work setting similar to that in which a media specialist eventually will be employed. Pre-requisite: A grade of "B" or above in EDM 580.

EDM 595C Internship in Educational Media: C 1 cr
The internship is a supervised learning experience in a work setting similar to that in which a media specialist eventually will be employed. Pre-requisite: A grade of "B" or above in EDM 583.

***Only for students admitted to teacher candidacy.**

TEACHER EDUCATION (EDU)

EDU 290 Special Topics 3 cr
Guided study of selected educational tasks (e.g. curriculum revision, classroom materials development, models of learning and teaching) and teaching problems and practices for improving student achievement. Not more than six hours may be earned in Special Topics courses.

EDU 300 Classroom Management I 1 cr
An introductory course in classroom management with emphasis upon effective instructional practices that inhibit student behaviors incompatible with learning. The focus is upon PEPE and how it provides the framework for effective teaching practices through the use of rules and procedures.

EDU 301 Arts in the Elementary School 3 cr
Knowledge and skills appropriate to the elementary school art program. Techniques in media for teaching art in the various grades.

EDU 302 Classroom Management II 1 cr
An introductory course in classroom management with emphasis upon effective instructional practices that inhibit student behaviors incompatible with learning. The focus is upon PEPE and how it provides the framework for effective teaching practices through the use of rules and procedures.

EDU 303 Field Experience SPE 1 cr
An in-field opportunity for early field-based practicum in a variety of placements.

EDU 311 Partnerships in SPE 3 cr
Emphasis is on the special problems found in the home, community, and school of the exceptional child, the teacher, the family, and community resource agencies. Ways for the teacher to form teamships to work collaboratively with all human resources involved in the child's life are explored and ethical and moral standards examined.

EDU 312 Intellectual and Physical Disability 3 cr
A study of the intellectual and physical disability which usually require substantial curriculum adaptations or ecological accommodation. Historical perspectives, etiology, definitions, classification, treatment, social aspects and interdisciplinary team work will be explored.

EDU 313 Learning and Behavioral Disorders 3 cr
An examination of the definitions, characteristics, and prevalence of children with learning and/or behavioral disabilities. Emphasis is placed on the causes of problems in motor, perceptual, social, academic, affective and behavioral development. Students will be introduced to current service delivery models and the programming options for individuals with learning and behavioral disabilities.

EDU 321 Field Experience in Special Education Setting 1 cr
A series of in-field opportunities in Special Education. A variety of appropriate placements will be employed depending on each student's interests and needs.

EDU 322 Field Experience in Special Education Setting 1 cr
A series of in-field opportunities in Special Education. A variety of appropriate placements will be employed depending on each student's interests and needs. Students are placed in settings related to the students's major areas of study and co-requisite in progress. May be repeated for credit.

EDU 330 Foundations Read Instruct - W 3 cr
A course to orient the study to fundamentals in the teaching of reading and provides practice in basis skills. This course has a required field experience.

EDU 331 Teaching Reading 3 cr
A course focusing on methodology, materials, and techniques for developing systematic instruction and diagnosis appropriate for early childhood and elementary children. This course has a required field experience.

EDU 332 Teaching Language Arts 3 cr
A course presenting methods of promoting meaningful language and literacy skills in early childhood and elementary school programs. This course has a required field experience.

EDU 335 Teaching Mathematics - W 3 cr
A course which deals with effective methods of teaching mathematics to elementary school students. Emphasis will be on developing an understanding of numbers, teaching basic operations, and using teaching aids and materials to meet the various needs of elementary age children. This course has a required field experience.

EDU 336 Teaching Social Studies 3 cr
A course using problem solving and independent investigation as means as teaching the relationship of humans to their environment. Objectives, content and procedures are discussed. This course has a required field experience.

EDU 337 Teaching Science 3 cr
A course using discovery, inquiry and problem-solving approaches as a means of teaching science. Relationships of science to entire early childhood and elementary curriculum is discussed. This course has a required field experience.

EDU 340 Fundamentals of Teaching - W 3 cr
Theories and practices of planning for instruction. Conducted as a system for individually guided mastery. This course provides an introduction to effective instructional practices in the secondary classroom. The focus is on planning for and delivering instruction which promotes successful classroom management. This course has a required field experience.

EDU 341 Middle Level Education - W 3 cr
Philosophy, concepts, and issues of middle level education including the developmental stage of young adolescence, appropriate and responsive curricular, and meeting the physical, emotional, psychosocial, and cognitive needs of diverse learners.

EDU 342 Secondary Field Experience 1 cr
Supervised practice in teaching curriculum areas in middle and high school classroom settings during the semester in which block courses are taken. Pre-requisite: EDU 340.

EDU 345 Field Experience 1 cr
Supervised practice in teaching curriculum areas in the elementary or early childhood classroom setting during the semester in which sequence courses are taken.

EDU 346 K-6 Education 3 cr
This course will introduce the roles of the teacher in working with children from pre-kindergarten through the primary grades. History, management, and parent education techniques are presented.

EDU 352 Literature for Adolescents 3 cr
This course will introduce the roles of the teacher in working with children from pre-kindergarten through the primary grades, History, management, and parent education techniques are presented.

EDU 354 Serving Students Severe Disabilities 3 cr

Curriculum and methods for individuals who exhibit significant challenges in the area of cognitive, motor, self care, communicative, and/or social behaviors. emphasis is on physical management, class/individual scheduling, adapted aids and equipment, task analysis, and functional life skills.

EDU 362 Behavior Management of Exceptional Child 3 cr

Presentation of the principles and applications of behavioral modification, data collection procedures, and single-subject research designs as related to exceptional children and youth in special education environments.

EDU 363 Teach Special Needs Learners 3 cr

An examination of regular and special education K-12 curricula, materials, and procedures. Specific emphasis will be placed on the selection modification, and adaptation of curricula, materials and procedures to meet the needs of individuals with learning and behavioral disabilities.

EDU 372 Behavioral Management Exceptional Children 3 cr

Presentation of the principles and application of behavior analysis, data collection, procedures, and single subject research designs as related to exceptional children and youth.

EDU 373 Teaching Reading to Students with Disabilities 3 cr

Introduces the student to the curriculum, teaching the methodologies and instructional activities and materials associated with effective and appropriate developmental and functional reading instruction for students with disabilities.

EDU 400 Education of Exceptional Child and Youth 3 cr

Introduction to the field of exceptional children and youth, involving the study of various areas of exceptionality.

EDU 410 Formal and Informal Assessment 3 cr

Assesses developmental levels, academic, and non-academic performance of exceptional individuals through the administration and interpretation of criterion-referenced instruments and informal measures. Evaluation of classroom teaching and special education programs is also emphasized.

EDU 430 K-6 Internship 3-9 cr

Observation and supervised teaching in elementary or early childhood settings with opportunity for study and discussion of problems and issues encountered.

EDU 430L K-6 Internship Lab 3-9 cr

Observation and supervised teaching in elementary or early childhood settings with the opportunity for study and discussion of problems and issues encountered.

EDU 432 Impact Typical and Atypical Development on Education 3-9 cr

An examination of typical child development and developmental characteristics of infants, toddlers, and young children with disabilities from the prenatal period through age eight. Characteristics of disabling conditions and their impact upon development are also discussed.

EDU 433 Issues Education Young Child with Disabilities 3 cr

This course prepares students to work with infants, toddlers, and young children with disabilities and their families. Topics covered include specific teaching and intervention techniques, special education laws and regulations, and service delivery models.

EDU 451 Content Area Literacy 3 cr

Methods and materials in the teaching of reading. Development of effective study and skills at the secondary level is stressed.

EDU 453 Teaching Language Subjects 3 cr

Assists the student in organizing materials and in developing methods of teaching language subjects in secondary schools. Required field experience. Pre-requisite: EDU 340.

EDU 454 Teaching Mathematics 3 cr

Assists the student in organizing materials and in developing methods of teaching mathematics in secondary schools. Required field experience. Pre-requisite: EDU 340.

EDU 456 Teaching Science 3 cr

Assists the student in organizing materials and in developing methods of teaching science in secondary schools. Required field experience. Pre-requisite: EDU 340.

EDU 457 Teaching Social Studies 3 cr

Assists the student in organizing materials and in developing methods of teaching social studies in secondary schools. Required field experience. Pre-requisite: EDU 340.

EDU 466 Internship-Language Arts 3-9 cr

Observation and supervised teaching with opportunity for study and discussion of problems and issues encountered in the N-12 program. Students will be placed with a person holding a valid teaching certificate in the appropriate field.

EDU 467 Internship - Social Studies 3-9 cr

Observation and supervised teaching with opportunity for study and discussion of problems and issues encountered in the N-12 program. Students will be placed with a person holding a valid teaching certificate in the appropriate field.

EDU 468 Internship - Science 3-9 cr

Observation and supervised teaching with opportunity for study and discussion of problems and issues encountered in the N-12 program. Students will be placed with a person holding a valid teaching certificate in the appropriate field.

EDU 469 Internship - Math 3-9 cr

Observation and supervised teaching with opportunity for study and discussion of problems and issues encountered in the N-12 program. Students will be placed with a person holding a valid teaching certificate in the appropriate field.

EDU 490 Special Topics 3 cr

Guided study of selected educational tasks (e.g. curriculum revision, classroom materials development, models of learning and teaching) and teaching problems and practices for improving student achievement. Not more than six hours may be earned in Special Topics courses.

EDU 494 Directed Study and Research 1-3 cr

No more than six hours can be accepted for a Bachelor's Degree and Class B Certificate.

EDU 495 K-6 Internship SPE 3-9 cr

Observation and supervised K-6 classroom teaching experience providing the opportunity to synthesize all previous instruction. This culminating activity provides opportunity for study and discussion of problems and issues encountered in the practicum situation.

EDU 496 Internship 6-12 3 cr

Observation and supervised classroom teaching experience providing the opportunity to synthesize all previous instruction. This culminating activity provides opportunity for study and discussion of problems and issues encountered in the practicum situation.

EDU 497 P-3 Internship SPE 3-9 cr

Observation and supervised ECSE classroom teaching experience providing the opportunity to synthesize all previous instruction. The culminating activity provides opportunity for study and discussion of problems and issues encountered in the practicum situation.

EDU 498 P-3 Internship/ Field Experience 3 cr

Observation and supervised teaching experience providing the opportunity to synthesize all previous instruction. This culminating activity provides opportunity for study and discussion of problems and issues encountered in the practicum situation.

EDU 499 Senior Honors Project - H 3-6 cr

Under the advice and guidance of a faculty mentor, honors students will identify and carry out a research project, relevant to the field of elementary/early childhood study, that will lead to a formal presentation at the annual Honors Student Colloquium. The senior project will be judged and graded by three faculty chaired by the honors mentor. This course is required for Honors recognition and may be repeated for up to six hours. Pre-requisite: Participant in honors programs and junior level status.

ELECTRICAL AND COMPUTER ENGINEERING (EE)

EE 220 Circuit Analysis 3 cr

SI System of units; resistive networks with independent and dependent sources; Ohm's law; Kirchoff's law; nodal and loop analysis; network theorems; energy storage elements (capacitors and inductors); operational amplifiers; steady state AC analysis; and introduction to PSpice. Pre-requisite: MA 125. Fee.

EE 223 Network Analysis 3 cr

Transient analysis of RLC circuits. AC network analysis. Complex power. Three-phase systems. Measurement of average power and power-factor correction in single-phase and three-phase power systems. Magnetically coupled networks. Network frequency response functions and resonance. Networking scaling. Two-port networks. Fourier series. Pre-requisites: 'C' or better in EE 220 and credit for or concurrent registration in MA 227 and MA 238. Fee.

EE 227 Circuits and Devices Laboratory 1 cr

Introduction to electrical laboratory equipment and instrumentation: analog and digital meters, oscilloscopes, bridges, power supplies, function generators. Measurement of voltage, current, and power in DC networks and in single-phase and three-phase AC networks. Verification of Kirchoff's laws. Measurement of resistance, capacitance, and inductance. Pre-requisite: Credit for or concurrent registration in EE 223 and EH 102. Fee.

EE 263 Digital Logic Design 3 cr

Number systems, introduction to basic logic circuits, analysis and design of combinational and sequential logic circuits, HDL based logic circuit simulation and design. Pre-requisite: Credit for or concurrent registration in CIS 210 and EE 220. Fee.

EE 264 Microprocessor Systems and Interfacing 3 cr

Small computer organization, assembly and machine level programming, microprocessor architectures and instruction sets, microprocessor and microcontroller system design, and microprocessor based peripheral interfacing. Pre-requisite: EE 263. Fee.

EE 268 Digital Logic Laboratory 1 cr

A series of digital logic circuit experiments and simulations using TTL/CMOS integrated circuits designed to reinforce the material presented in EE 263. Design projects include standard SSI and MSI digital circuit based simulation and experiments. Pre-requisite: EE 263 and credit for or concurrent registration in EE 227. Fee.

EE 302 Computer Methods in ECE 1 cr

Introduction to the use of computer software such as MATHCAD/MATLAB and PSPICE/ELECTRONIC WORKBENCH for the analysis of engineering related problems and the solution of electrical/electronic circuits. Pre-requisites: EE 223 and EE 263. Fee.

EE 321 Signals and Systems 3 cr

Concepts and mathematical tools in continuous-time signal processing and linear systems analysis, illustrated with examples from signal processing, communications, and control. Mathematical representation of signals and systems. Linearity and time-invariance. System impulse and step response. Frequency domain representations: Fourier series and Fourier transforms. Filtering and signal distortion. Time/frequency sampling and interpolation. Continuous-discrete time signal conversion and quantization. Stability and causality in linear systems. Laplace transforms and Bode plots. Examples from filter design and linear control. Pre-requisites: MA 238 and EE 223. Fee.

EE 322 Probability, Random Signals and Statistical Analysis 3 cr

Discrete and continuous probability distributions; random variables; Bernoulli trials; hypothesis testing; confidence intervals; Anova multiple comparisons; Bayes' theorem; estimation; sampling; random processes and random signals in linear systems. Probability applications in computer and electrical engineering. Pre-requisite: MA 238 and credit for or concurrent registration in EE 321. Fee.

EE 328 Feedback Control Systems 3 cr

Review of the Laplace Transform. Transfer function; block diagrams; signal-flow graphs and Mason's Gain Formula. Introduction to the state-space representation. Stability of feedback control systems; Routh-Hurwitz criterion; root-locus technique and the Nyquist criterion. Bode plots; gain and phase margins. PI, PD and PID controller design. Introduction to the use of MatLab for analysis and design. Pre-requisite: EE 321. Fee.

EE 331 Physical Electronics 3 cr

Introduction to quantum concepts; particles in one dimensional potential well; tunneling. Silicon band structure, electrons and holes. Drift and diffusion current density; band bending; Einstein diffusion coefficient; recombination/generation. The pn junction; step and linear junctions; depletion layer. I-V characteristics of a pn junction and steady-state carrier concentrations at junctions. Bipolar junction transistor fundamentals; pnp and npn types; common emitter configuration, biasing and gain. Pre-requisite: PH 202 and MA 238. Fee.

EE 334 Analog and Digital Electronics 4 cr

Diode circuits, bipolar junction transistor (BJT) and basic BJT amplifiers. Field-effect transistor (FET) and basic FET Amplifiers. Amplifier frequency response. Operational amplifiers, NMOS, PMOS, and CMOS digital circuits. NMOS and CMOS Transmission gates. Bipolar digital circuits, timing diagrams, propagation delays, fan-in, and fan-out. Pre-requisites: EE 331. Fee.

EE 337 Electronics Laboratory 1 cr

Computer analysis and measurement of the characteristics and parameters of solid-state devices; transfer characteristics and parameters of power supplies; operational amplifiers; voltage and power amplifiers; oscillators and active filters. Pre-requisite: Credit for or concurrent registration in EE 334. Fee.

EE 354 Electromagnetics I 3 cr

Coulomb's Law, electrostatic field, potential and gradient, electric flux and Gauss's Law and divergence. Metallic conductors, Poisson's and Laplace equations, capacitance, dielectric materials. Electrostatic energy and forces. Steady electric currents, Ohm's Law, Kirchoff''s Laws, charge conservation and the continuity equation, Joule's Law. Biot-Savart's Law and the static magnetic field. Ampere's Law and curl. Vector magnetic potential and magnetic dipole. Magnetic materials, forces and torques. Faraday's Law, magnetic energy, and displacement current. Maxwell's equations. Plane waves in lossless and lossy media. Skin effect. Flow of electromagnetic power. Poynting's theorem. Simulations and demonstrations included for reinforcement of material. Pre-requisites: PH 202, MA 237, MA 238. Fee.

EE 355 Electromagnetics II 2 cr

Lumped versus distributed circuits. Transient response of trans mission lines with resistive and reactive loads. Reflection, transmission, attenuation and dispersion. Steady-state waves on trans mission lines. Standing wave ratio, impedance matching, and power flow. Reflection and refraction of waves at planar boundaries. Snell's Law, Brewster's Law, polarization and total internal reflection. Reflection and refraction from lossy media. Guided waves. Parallel-plate and dielectric-slab waveguides. Hollow wave-guides, cavity resonators, microstrip waveguides, optical fibers. Interaction of fields with matter and particles. Antennas and radiation of electromagnetic energy. Simulations and demonstrations included for reinforcement of material. Pre-requisite: EE 354. Fee.

EE 365 Digital Signal Processing 3 cr

Discrete-time signals and systems in the time domain and in the transform domain. LTI discrete-time systems in the transform-domain. Digital processing of continuous-time signals. Introduction to analog and digital filter structures. Introduction to MatLab based filter design. Pre-requisites: EE 321, EE 322. Fee.

EE 368 Microprocessor Systems and Interfacing Laboratory 1 cr

This laboratory is designed to reinforce the material covered in EE 264 and to provide practical hands-on experience with microprocessor software, hardware and interfacing. Topics include integration of microprocessor software, hardware and peripheral devices; assembly level programming and hardware interfaces for control and instrumentation. Pre-requisite: EE 268 and credit for or concurrent registration in EE 264. Fee.

EE 372 Introduction to Communications 3 cr

Introduction to communication systems; analog, digital, deterministic and stochastic messages; modulation; redundancy coding. Signal energy and power; correlation; orthogonal signal set and Fourier series. Fourier transforms; signal transmission through linear systems; ideal and practical filters; signal distortion; Parseval's theorem; essential bandwidth and energy and power spectral density. Amplitude modulation: DSB, SSB, AM, QAM and VSB; phase and frequency modulation and the basic design of a FM transmitter. Sampling theorem; pulse code modulation and differential pulse code modulation. Pre-requisites: EE 321 and credit for or concurrent registration in EE 322. Fee.

EE 381 Electromechanical Energy Conversion 3 cr

Introduction to the principles of electromechanical energy conversion. Energy balance, force, and torque of electromagnetic systems; magnetic circuits and ferromagnetic losses; transformers and their connections; three-phase induction motors; synchronous generators and motors; non-salient machines. Parallel operation of synchronous generators. Dynamics of electric machines. Pre-requisites: Credit for or concurrent registration in EE 354. Fee.

EE 385 Energy Conversion Laboratory 1 cr

Laboratory experiments based on: Faraday's Law and magnetic coupling; magnetic circuits; transformers (single and three phase) their connections and tests. Three phase induction motors-tests and performance characteristics; synchronous generators and motors. Machine data acquisition methods and processing using a computer. Pre-requisite: Credit for or concurrent registration in EE 381. Fee.

EE 401 Introduction to Electrical and Computer Engineering Design (W) 1 cr

Specification of design criteria. Written and oral presentations of design proposals. Coverage of professional and contemporary issues and students are required to become members of IEEE or ACM and attend two technical meetings of IEEE/ACM. Pre-requisites: CA 110, EE 321, and credit for or concurrent registration in EE 368, and EE 334. Fee.

EE 404 Electrical and Computer Engineering Design (W) 3 cr

Implementation of a design project from the field of Electrical or Computer Engineering in the broadest sense and under the guidance of a project director from the electrical and computer engineering faculty. Written and oral presentations of project proposals, interim and final reports. Students are required to be current members of the IEEE/ACM and attend two technical meetings. Pre-requisites: EE 401 and instructor's permission. Fee.

EE 422 Advanced Feedback Control Systems 3 cr

Sensors, encoders and D.C. motors in control systems. The performance and design of feedback control systems. System bandwidth; Nichol's Chart and the stability of control systems with time delays. State variable analysis and design. Use of MatLab for analysis and design. This course is dually listed with an equivalent graduate level course (EE 522) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisite: EE 328. Fee.

EE 423 Modern Control Theory 3 cr

Simulation and modeling; introduction to linear system theory; concepts of controllability and observability; specifications, structures and limitations; review of classical design methods; state feedback design methods; multivariable control; robust stability and sampled data implementation. Introduction to the use of MATLAB for design. This course is dually listed with an equivalent graduate-level course (EE 523) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisite: EE 328. Fee.

EE 424 Nonlinear Control System 3 cr

State space description; methods of linearization; isoclines; stability of nonlinear systems; Lyapunov's direct method; harmonic linearization; describing functions; dual input describing functions; Popov's method; circle criterion and computer aided analysis. This course is dually listed with an equivalent graduate-level course (EE 524) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisite: EE 328. Fee.

EE 425 Programmable Logic Controller Lab 1 cr

PLC overview; ladder logic programming; programming of timers and counters; programming control; data manipulation and math instructions; sequencers and shift register instructions; data acquisition methods. Pre-requisite: EE 334. Fee.

EE 427 Digital Control Systems 3 cr

State space and transfer function description of discrete-time systems; solution of discrete state equation; discrete-time model of analog plants; frequency domain analysis; design of discrete state-feedback regulators; observers and tracking systems. This course is dually listed with an equivalent graduate level course (EE 527) and requires a minimum GPA of 2.75 for admission. Pre-requisite: EE 328 or the instructor's permission. Fee.

EE 430 Power Semiconductor Devices 3 cr

Characteristics of power devices; physics of transport phenomena; breakdown voltage; power rectifiers; bipolar transistors; power MOSFET; insulated-gate bipolar transistor and MOs-gated thyristors. Pre-requisite: EE 331. Fee.

EE 431 Advanced Electronic Devices 3 cr

Semiconductor electronics; semiconductor diode circuit analysis; bipolar and field effect transistors; analog-to-digital and digital-to-analog circuits and active filters. This course dually listed with an equivalent graduate-level course (EE 531) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisite: EE 334. Fee.

EE 432 Microelectronic Devices 3 cr

Introduction to semiconductor material properties; semiconductor diodes; structure and operation; diode circuit applications; bipolar transistor: structure and operation; junction field effect transistors (JFETs); metal oxide field effect transistors (MOSFETs); fabrication technology and construction of semiconductor devices; biasing and stability of amplifiers. This course is dually listed with an equivalent graduate-level course (EE 532) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisite: EE 334 or instructor's permission. Fee.

EE 438 Virtual Instrumentation 3 cr

Transducers; measurement techniques; measurement errors; digital signal processing; noise sources and reduction; introduction to LabVIEW software, data acquisition and processing using computer-controlled data acquisition hardware. Pre-requisite: EE 334. Fee.

EE 439 VLSI Technology and Fabrication 3 cr

Introduction to semiconductor devices; crystal growth and wafer preparation; chemical and physical vapor deposition; oxidation; diffusion; ion implantation; lithography; etching; metallization; process integration of CMOS and bipolar technologies; diagnostic techniques and measurements; packaging; yield and reliability. This course is dually listed with an equivalent graduate-level course (EE 539) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisite: EE 331. Fee.

EE 440 HDL Logic Synthesis 3 cr

Introduction to the syntax and elements of the basic VHDL language such as entities and architectures; creating combinational, synchronous logic and state machines using both structural and behavioral VHDL; using hierarchy in large designs; synthesizing and implementing designs. This course is dually listed with an equivalent graduate-level course (EE 540) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Credit for both EE 440 and EE 443 not allowed. Pre-requisites: EE 264 and EE 268. Fee.

EE 441 Computer Networks 3 cr

Introduction to design and analysis of computer networks. Polling networks and ring networks. This course is dually listed with an equivalent graduate level course (EE 541) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisites: EE 264 and EE 268. Fee.

EE 443 HDL Logic Simulation 3 cr

Introduction to the syntax and elements of the basic Verilog language such as modules and ports; hierarchical modeling; gate-level modeling; dataflow modeling; behavioral modeling, switch-level modeling; tasks and functions; timing and delays; user-defined primitives; synthesizing and implementing designs. Emphasis is on the simulation and test bench aspects. This course is dually listed with an equivalent graduate level course (EE 543) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Credit for both EE 440 and EE 443 not allowed. Pre-requisites EE 264 and EE 268. Fee.

EE 444 Wireless Networks 3 cr

Introduction to modern wireless networks/ systems, the cellular concept, frequency reuse, interference and system capacity improvement, trunking and grade of service, multiple access techniques, wireless/wireline interworking, and ad hoc networks. This course is dually listed with an equivalent graduate-level course (EE 544) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisite: EE 372 or equivalent. Fee.

EE 445 Smart Grid 3 cr

Introduction to smart grid concepts, phasor measurement units, application of PMUs in protection and fault recovery, communication over power lines, smart metering and cyber security. Pre-requisite: EE 264, EE 381. Fee

EE 446 Embedded System Design Laboratory 1 cr

Design projects utilizing 16-bit and 32-bit microprocessor hardware and software; interfaces to memory and peripheral devices. Pre-requisite: Credit for or concurrent registration in EE 457. Fee.

EE 447 Programmable Logic Devices Lab 1 cr

Digital design projects utilizing simulation and synthesis CAD tools and targeting programmable logic devices. Pre-requisites: EE 264, EE 268. Fee.

EE 450 Fundamentals of Fourier Optics 3 cr

Two-dimensional Fourier analysis; linear systems; sampling theory; scalar diffraction theory. Fourier transform imaging properties of lenses; frequency analyses of diffraction-limited coherent and incoherent imaging systems; aberrations and resolution analysis; Vander Lugt filters and frequency domain analysis and synthesis; SAR and pattern recognition applications. Pre-requisites: EE 331, EE 355. Fee.

EE 452 Microwave Engineering 3 cr

Generation and transmission of high frequency electromagnetic energy; magnetrons,

klystrons, masers, parametric amplifiers, traveling wave tubes and solid-state devices; waveguides and resonators. This course is dually listed with an equivalent graduate level course (EE 552) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisites: EE 355. Fee.

EE 453 Antenna Design I 3 cr

Classification and fundamental parameters of antennas; linear antennas; loop antennas; arrays; broadband antennas and matching techniques. Computer-aided design of antenna systems. Pre-requisite: EE 355. Fee

EE 454 Digital Computer Architecture 3 cr

Computer organization, instruction set design; ALU design; control unit design; I/O and interrupt designs; memory organization; DMA; microprogramming; introduction to multi-processors; performance analysis. This course is dually listed with an equivalent graduate level course (EE 554) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisites: EE 264 and EE 268. Fee.

EE 455 Optoelectronics 3 cr

Wave propagation in free-space and in wave guides; optical resonators; interaction of radiation and atomic systems; laser oscillation; solid-state lasers. He-Ne and Argon lasers, integrated optics including integration of emitters and detectors; optical interconnects; spatial light modulators; optoelectronic materials and devices; and applications of optoelectronics. This course is dually listed with an equivalent graduate level course (EE 555) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisites: EE 355. Fee.

EE 456 Fiber-Optic Communication Systems 3 cr

Review of optical principles, dielectric waveguides, signal propagation, degradations and attenuation in fibers. Fiber interconnection devices, active and passive components, optical transmitters and receivers, power budget, fiber optic communication systems. Pre-requisite: EE 355. Fee.

EE 457 Embedded System Design 3 cr

Architecture and software of 16-bit and 32-bit microprocessor hardware and software; interface design to memory and peripheral devices; multiprocessing. This course is dually listed with an equivalent graduate level course (EE 557) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisites: EE 264 and EE 368. Fee.

EE 458 Radar Systems 3 cr

Introduction to radar signal processing. Continuous wave and pulsed radars. Clutter and radio wave propagation. Moving target indicator, target surveillance and tracking radar systems. Side-looking, synthetic aperture, interferometric and other airborne radars. This course is dually listed with an equivalent graduate level course (EE 558) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisites: EE 355. Fee.

EE 465 Advanced Digital Signal Processing 3 cr

Review of discrete Fourier and Z-transforms. Review of analog filter design. Canonical digital filter forms. Design of IIR and FIR digital filters. Fast Fourier transform (FFT) and applications. Hardware implementation and quantization effects. Advanced digital filter structures design. DSP algorithm design and implementation. Analysis of finite wordlength effects of DSP applications. Extensive use of MatLab for analysis and design. This course is dually listed with an equivalent graduate level course (EE 565) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisite: EE 365. Fee.

EE 468 Programmable Logic Controller 3 cr

Hardware and software principles of PLC devices, ladder logic, hardware components of PLC systems and controller configuration, basic PLC operation, program construction and manipulation, advanced operation and networking. Pre-requisites: EE 264, EE 268. Fee

EE 469 Signal Integrity 3 cr

Design techniques for high-speed digital interfaces and circuit boards; signal integrity including crosstalk and ground bounce; electromagnetic aspects of high-speed digital design; frequency-domain analysis of power-system integrity; state-of-the-art buses and standards. This course is dually listed with an equivalent graduate-level course (EE 569) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisite: EE 264, EE 268 and EE 334. Fee.

EE 470 Synthesis of Active and Passive Networks 3 cr

Reliability of network functions (high-pass, band-pass, low-pass, band-reject and equalizing filters); approximation techniques; sensitivity analysis; passive and active synthesis; positive and negative feedback and biquads. Computer techniques for the realization of standard filter forms (Butterworth, Chebyshev, Bessel, Sallen and Key, and other forms). Pre-requisite: EE 321. Fee.

EE 471 Wireless Communication 3 cr

The cellular concept and system design fundamentals, propagation in mobile radio channels, large, small scale fading and multipath; diversity and diversity combining techniques. This course is dually listed with an equivalent graduate level course (EE 571) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisite: EE 372 or equivalent. Fee.

EE 473 Advanced Communication Systems 3 cr

Digital line coding; pulse shaping; partial response signaling; scrambling; M-ary communication; digital carrier systems and digital multiplexing. Probability; random variables; quantization error in PCM; random processes; white noise and the behavior of analog systems in the presence of noise. Information theory; compact codes and error correcting codes. This course is dually listed with an equivalent graduate level course (EE 573) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisite: EE 372. Fee.

EE 481 Electrical Machines 3 cr

DC machines - motors and generators. Single-phase motors; unbalanced two-phase motors; servo-motors; commutator motors; stepper motors; synchros; shaded pole motors; reluctance and hysteresis motors and brushless DC motors. Dynamic circuit analysis of rotating machines. Pre-requisite: EE 381. Fee.

EE 482 Switch Mode Power 3 cr

Conversion design and analysis of switch mode power converters; design of magnetic components; stability considerations; input filter interactions; performance measurements and evaluations. This course is dually listed with an equivalent graduate level course (EE 582) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisites: EE 334, EE 381. Fee.

EE 483 Power Systems I 3 cr

Principles of power system analysis. Synchronous machines, transformers and loads; transmission line parameters and analysis. Impedance/admittance matrix representation of power systems. Power flow analysis and economic analysis. Pre-requisites: EE 381 and credit for or concurrent registration in EE 385. Fee.

EE 484 Power Systems II 3 cr

Symmetrical components and sequence networks; computer studies of transmission lines; fault studies using a computer; state estimation of power system and power system stability. Pre-requisite: EE 483. Fee.

EE 485 Power Distribution and Utilization 3 cr

Principles and characteristics of generating stations; transformers; conversion equipment; primary and secondary distribution systems; short-circuit calculations; selection of protective devices; system grounding and over current protection; voltage control; power factor control and correction; load and cost estimating. Pre-requisite: EE 483. Fee.

EE 486 Power Electronics 3 cr

Power semiconductor diodes and thyristors; commutation techniques; rectification circuits -uncontrolled and controlled; AC voltage controllers; DC chopper; pulse-width modulated inverters and resonant pulse inverters. This course is dually listed with an equivalent graduate level course (EE 586) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisites: EE 334 and EE 381 or equivalent. Fee.

EE 488 Illumination Engineering 3 cr

Photometric units and definitions; light sources and luminaires; interior lighting and artificial illumination design techniques; daylight lighting design; exterior lighting design and the theory of color. Optical principles and control of lighting. Pre-requisite: Instructor's permission. Fee.

EE 489 Renewable Energy 3 cr

Introduction to renewable energy sources Fuel cells: classification, configuration and operation. Hydrogen: production, purification

and storage. Photovoltaic cells: solar cells and operational characteristics. Wind turbines: operational characteristics. Energy from water sources: hydroelectric, wave and tidal energy. This course is dually listed with an equivalent graduate course and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisite: EE 381.

EE 490 Special Topics 1-3 cr
Topics of current electrical and computer engineering interests. This course requires permission of the Department Chair and a minimum GPA of 2.75 for admission. Pre-requisite: Instructor's permission. Fee.

EE 494 Directed Independent Study 1-3 cr
Directed study under the guidance of a faculty advisor, of a topic from the field of electrical and/or computer engineering, not offered in a regularly scheduled course. This course requires permission of the Department Chair and a minimum GPA of 2.75 for admission. Pre-requisite: Instructor's permission. Fee.

EE 499 ECE Senior Honors Project (H) 4 cr
Under the advice and guidance of a faculty mentor, honors students will identify and carry out a research/design project, relevant to the field of EE/CpE study, which will lead to a formal presentation at the annual Honors Student Colloquium. The senior project will be judged and graded by three faculty chaired by the honors mentor. This course is required for Honors recognition. Pre-requisites: EE 401, and an approved project prospectus. Fee.

EE 522 Advanced Feedback Control Systems 3 cr
Sensors; encoders and DC motors in control systems. The performance and design of feedback control systems. System bandwidth; Nichol's Chart and the stability of control systems with time delays. State variable analysis and design. Use of MatLab for analysis and design. This course is dually listed with an equivalent 400-level course (EE 422). Pre-requisite: EE 328 or instructor's permission. Fee.

EE 523 Modern Control Theory 3 cr
Simulation and modeling; introduction to linear system theory; concepts of controllability and observability; specifications, structures and limitations; review of classical design methods; state feedback design methods; multivariable control; robust stability; and sampled data implementation; introduction to the use of MATLAB for design. This course is dually listed with an equivalent 400-level course (EE 423). Pre-requisite: Instructor's permission. Fee.

EE 524 Nonlinear Control Systems 3 cr
State space description; methods of linearization; isoclines; stability of nonlinear systems; Lyapunov's direct method; harmonic linearization; describing functions; dual input describing functions; Popov's method; circle criterion; computer aided analysis. This course is dually listed with an equivalent 400-level course (EE 424). Pre-requisite: Instructor's permission. Fee.

EE 525 Optimal Control Systems 3 cr
Static optimization; method of Lagrange multipliers; adaptive controllers; dynamic optimization; calculus of variations; the principle of optimality and dynamic programming, Pontryagin's maximum principle; quadratic optimal control. Pre-requisite: Instructor's permission. Fee.

EE 526 Introduction to Robotics 3 cr
Basic mathematics of robotic control; homogeneous transformation; kinematics and kinematic solutions; differential relationships; dynamics; motion trajectory; robotic control systems and programming. Pre-requisite: Instructor's permission. Fee.

EE 527 Digital Control Systems 3 cr
State space and transfer function description of discrete-time systems; solution of the discrete state equation; discrete-time model of analog plants; frequency domain analysis; design of discrete state-feedback regulators; observers and tracking systems. This course is dually listed with an equivalent 400-level course (EE 427). Pre-requisite: Instructor's permission. Fee.

EE 528 Advanced System Theory 3 cr
Review of linear spaces and operators; state variable description of time varying and time invariant linear systems. Controllability and observability of linear dynamical systems, state feedback and state estimators; stability of linear systems; arbitrary pole assignment for multivariable case. Pre-requisite: Instructor's permission. Fee.

EE 530 Nanotechnology 3 cr
Nanotechnology fundamentals and principles; quantum wires and dots; single electron effects and Coulomb blockage; nanomagnets and spintronics; spin based electronics (magnetic memories, magnetic field sensors); nano fabrication; nanoelectronics (QCQ); organic electronics (carbon fullerenes, nanotubes, and polymers); advanced characterization techniques; applications, especially those related to nanotechnology; MEMS and microsystems (sensors); QWIP technology and associated nanoscience; photonic crystals; advances in nanostructured materials. Pre-requisite: Instructor's permission. Fee.

EE 531 Advanced Electronic Devices 3 cr
Semiconductor electronics; semiconductor diode circuit analysis; bipolar and field effect transistors; analog-to-digital and digital-to-analog circuits and active filters. This course is dually listed with an equivalent 400-level course (EE 431). Pre-requisite: Instructor's permission. Fee.

EE 532 Microelectronic Devices 3 cr
Introduction to semiconductor material properties; semiconductor diodes: structure and operation; diode circuit applications; bipolar transistor: structure and operation; junction field effect transistors (JFETs); metal oxide field effect transistors (MOSFETs); fabrication technology and construction of semiconductor devices; biasing and stability of amplifiers. This course is dually listed with an equivalent 400-level course (EE 432). Pre-requisite: Instructor's permission. Fee.

EE 534 VLSI Design Systems 3 cr
Review of fabrication of microelectronic devices; introduction to MOS technology; basic physical and electrical properties of field effect transistors; CMOS fabrication; layout of CMOS integrated circuits; concepts of VLSI chip design; physical design of CMOS integrated circuit using L-EDIT. Pre-requisite: Instructor's permission. Fee.

EE 535 Electronics Materials: Properties and Applications 3 cr
Schrödinger's equation, potential wells and barriers; crystallographic geometry; Kronig-Penny model; energy bands in crystalline solids; density of states - Fermi statistics; intrinsic and extrinsic semiconductors; conductivity and Hall effects; interfaces; magnetic materials; superconducting materials; optical materials. Pre-requisite: Instructor's permission. Fee.

EE 536 Introduction to Superconductivity 3 cr
Microscopic theory of superconductivity-BCS theory; superconduction tunneling phenomena; superconducting device; superconducting materials; High-temperature superconductors. Pre-requisite: Instructor's permission. Fee.

EE 537 Advanced Plasma Processing of Electronic Materials 3 cr
Analysis, design and application of DC, RF and microwave plasma in microelectronic material processing; sputtering; etching; deposition - surface modification; diagnostic and characterization techniques. Pre-requisite: Instructor's permission. Fee.

EE 538 Magnetic Recording Media 3 cr
Magnetostatic fields: magnetization processes-demagnetizing factors; magnetic circuits; hard disk/tape media; inductive and MR heads; magnetic data storage systems. Pre-requisite: Instructor's permission. Fee.

EE 539 VLSI Technology and Fabrication 3 cr
Introduction to semiconductor devices; crystal growth and wafer preparation; chemical and physical vapor deposition; oxidation; diffusion; ion implantation; lithography; etching; metallization; process integration of CMOS and bipolar technologies; diagnostic techniques and measurements; packaging; yield and reliability. This course is dually listed with an equivalent 400-level course (EE 439). Pre-requisite: Instructor's permission. Fee.

EE 540 HDL Logic Synthesis 3 cr
Introduction to the syntax and elements of the basic VHDL language such as entities and architectures; creating combinational, synchronous logic and state machines using both structural and behavioral VHDL; using hierarchy in large designs; synthesizing and implementing designs. This course is dually listed with an equivalent undergraduate-level course (EE 440) and requires a minimum GPA of 2.75 or the Instructor's permission for admission. Credit for both EE 540 and EE 543 not allowed. Pre-requisites: EE 264 and EE 268. Fee.

EE 541 Computer Networks 3 cr
Introduction to design and analysis of computer networks. Polling networks and ring networks. Networking Applications. This course is dually listed with an equivalent 400-level course (EE 441). Pre-requisite: Instructor's permission. Fee.

EE 542 Advanced Topics in Digital Design and HDLs 3 cr

Current topics of interest in digital design. State-of-the-art software tools used in digital design. Advanced topics in HDLs. Pre-requisite: Instructor's permission. Fee.

EE 543 HDL Logic Simulation 3 cr

Introduction to the syntax and elements of the basic Verilog language such as modules and ports; hierarchical modeling; gate-level modeling; dataflow modeling; behavioral modeling, switch-level modeling, tasks and functions; timing and delays; user-defined primitives; synthesizing and implementing designs. Emphasis is on simulation and test bench aspects. This course is dually listed with an equivalent undergraduate-level course (EE 443) and requires a minimum GPA of 2.75 or the Instructor's permission for admission. Credit for both EE 540 and EE 543 not allowed. Fee.

EE 544 Wireless Networks 3 cr

Introduction to modern wireless networks/ systems, the cellular concept, frequency reuse, interference and system capacity improvement, trunking and grade of service, multiple access techniques, wireless/wireline interworking, and ad hoc networks. This course is dually listed with an equivalent 400-level course (EE 444) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisite: EE 372 or equivalent or Instructor permission. Fee.

EE 545 Optical Networks 3 cr

Digital transmission using fiber optics as point-to-point link. Wavelength-division-multiplexing concepts and components, LAN, WAN, and MAN, SONET/SDH, FDDI Networks, Broadcast-and-select WDM Networks, Wavelength-routed Networks, and Performance of WDM and EDFA systems. Pre-requisite: EE 456 or equivalent or Instructor's permission. Fee.

EE 546 Neural Networks 3 cr

Introduction to neural networks and their application to electrical engineering. Concept learning and the general-to-specific ordering, decision tree learning, linear perceptrons, back propagation networks, recursive networks, radial basis networks, neural network-based control systems, unsupervised learned networks. Pre-requisite: EE 322 or equivalent or Instructor's permission. Fee.

EE 548 Computer and Network Security 3 cr

Techniques for achieving security in multi-use computer systems and distributed computer systems; cnytography; authentication and identification schemes; intrusion detection; viruses; formal models of computer security; secure operating systems; software protection; security of electronic mail and the World Wide Web; electronic commerce; payment protocols; electronic cash; firewalls; risk assessments. Pre-requisite: Instructor's permission. Fee.

EE 552 Microwave Engineering 3 cr

Generation and transmission of high frequency electromagnetic energy; magnetrons, klystrons, masers, parametric amplifiers, traveling wave tubes and solid-state devices. This course is dually listed with an equivalent 400-level course (EE 452). Pre-requisite: Instructor's permission. Fee.

EE 553 Advanced Electromagnetic Theory 3 cr

Solution of the wave equation; special theorems and concepts; analytical, asymptotic and numerical methods of solution of electromagnetic engineering problems. Pre-requisite: Instructor's permission. Fee.

EE 554 Digital Computer Architecture 3 cr

Computer organization, instruction set design; ALU design; control unit design; I/O and interrupt designs; memory organization; DMA; microprogramming; introduction to multi-processors; performance analysis. This course is dually listed with an equivalent undergraduate level course (EE 454) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisites: Instructor's permission. Fee

EE 555 Optoelectronics 3 cr

Wave propagation in free-space and in wave guides; optical resonators, interaction of radiation and atomic systems; laser oscillation; solid-state lasers. He-NE and Argon lasers, integrated optics including integration of emitters and detectors; optical interconnects; spatial light modulators; optoelectronic materials and devices; and applications of optoelectronics. This course is dually listed with an equivalent 400-level course (EE 455). Pre-requisite: Instructor's permission. Fee.

EE 556 Microwave Antennas 3 cr

Mathematical analysis of common reflector antennas including effects of various types of feed structures and fabrication techniques. Pre-requisite: Instructor's permission. Fee.

EE 557 Advanced Embedded Designs 3 cr

Architecture and software of 16-bit and 32-bit microprocessor hardware and software; interface design to memory and peripheral devices; multiprocessing. This course is dually listed with an equivalent undergraduate level course (EE 457). Pre-requisite: Instructor's permission for admission. Fee.

EE 558 Radar Systems 3 cr

Introduction to radar signal processing. Continuous wave and pulsed radars. Clutter and radio wave propagation. Moving target indicator, target surveillance and tracking radar systems. Side-looking, synthetic aperture, interferometric and other airborne radars. This course is dually listed with an equivalent 400-level course (EE 458). Pre-requisite: Instructor's permission. Fee.

EE 559 Optical Information Processing 3 cr

Parallel optical information processing in Fourier transform systems; nonlinear optical image processing in a linear optical processing; optical image equidensity and pseudo-color using techniques; wave-front reconstruction; on-axis and off-axis holography, effects of film MTF and nonlinearities; holographic memory, display and non-destructive testing; and optical computing. Pre-requisite: Instructor's permission. Fee.

EE 560 Advanced Computer Architecture 3 cr

Overview of software/hardware architectures of selected RISC/CISC microprocessors, advanced pipelining and instruction level parallelism, superscalar techniques, memory hierarchy design, cache coherency, introduction to multiprocessor systems and interconnection networks. Pre-requisite: EE 468 or equivalent or Instructor's permission. Fee.

EE 565 Advanced Digital Signal Processing 3 cr

Review of discrete Fourier and z-transforms; review of analog filter design; canonical digital filter forms; design of IIR and FIR digital filters. Fast Fourier Transforms (FFT) and their applications; hardware implementation and quantization effects. Advanced digital filter structures and design. DSP algorithm design and implementation. Analysis of finite wordlength effects of DSP applications. Extensive use of MatLab for analysis and design. This course is dually listed with an equivalent 400-level course (EE 465). Pre-requisite: EE 365 or Instructor's permission. Fee.

EE 566 Digital Image Processing 3 cr

Review of digital image fundamentals; different image transforms; image enhancement techniques; image restoration methods; detection of discontinuities and thresholding. Pre-requisite: EE 365 or equivalent or Instructor's permission. Fee.

EE 567 Biomedical Imaging 3 cr

Introduction to biomedical imaging, projection radiography, computer aided tomography, single photo emission computed tomography (SPECT), positron emission tomography (PET), magnetic resonance imaging (MRI and fMRI), ultrasound imaging, optical imaging techniques including confocal microscopy and optical coherence tomography (OCT). Pre-requisite: EE 566 or consent of Instructor. Fee.

EE 568 Pattern Recognition 3 cr

Introduction to pattern recognition, statistical, syntactic and neural pattern recognition; Decision procedures - Bayes decision theory, classifiers and decision surfaces, Neyman-Pearson theory, sequential decision theory, error probabilities and error bounds; Parameter estimation and supervised learning - maximum likelihood estimation, Bayes estimation, and sufficient statistics; Non-parametric techniques - density estimation, Parzen windows, nearest neighbor rule, and k-nearest neighbor rule; Feature extraction and nonlinear mapping - optimal features, eigen vector analysis, and nonlinear mapping; Fuzzy systems in pattern recognition - fuzzy sets and membership functions, fuzzy operators, reasoning and composition, fuzzy system design; Methods of testing - C, U and L methods. Pre-requisite: EE 365 and EE 322 or equivalent or Instructor's permission. Fee.

EE 569 Advanced Digital System Design 3 cr

Design techniques for high-seed digital interfaces and circuit boards; signal integrity including crosstalk and ground bounce; electromagnetic aspects of high-speed digital design; frequency-domain analysis of power-system integrity; state-of-the-art buses and standards.

This course is dually listed with an equivalent undergraduate-level course (EE 469) and requires a minimum GPA of 2.75 or the Instructor's permission for admission. Pre-requisite: EE 264, EE 268, and EE 334 or equivalent. Fee.

EE 571 Wireless Communications 3 cr
The cellular concept and system design fundamentals, propagation in mobile radio channels, large, small scale fading and multipath; diversity and diversity combining techniques. This course is dually listed with an equivalent undergraduate level course (EE 471) and requires a minimum GPA of 2.75 or the Instructor's permission for admission. Pre-requisite: EE 322, EE 372, or equivalent or Instructor's permission. Fee.

EE 573 Advanced Communication Systems 3 cr
Digital line coding; pulse shaping; partial response signaling; scrambling; Mary communication; digital carrier systems and digital multiplexing. Probability; random variables; quantization error in PCM; random processes; white noise and the behavior of analog systems in the presence of noise. Information theory; compact codes and error correcting codes. This course is dually listed with an equivalent 400-level course (EE 473). Pre-requisite: EE 372, or Instructor's permission. Fee.

EE 574 Digital Communications 3 cr
Analysis and design of digital communication systems based on probability theory; signal space representation and optimum detection principles; Digital modulation techniques and their performance in additive white Gaussian noise. Pre-requisite: EE 473 or equivalent or Instructor's permission. Fee.

EE 575 Stochastic Processes 3 cr
Introduction to estimation theory. Markov chains - finite, countable, continuous time, optimal stopping; Martingales; renewal processes, reversible Markov chains, Brownian motion and stochastic integration. Pre-requisite: EE 322 or Instructor's permission. Fee.

EE 576 Optical Communication 3 cr
Light sources, detectors, fiber components and optical systems for fiber communication; free-space inter-satellite optical networks for high-speed global communication; coding problems in optical fiber data transmission; three-dimensional optical data storage for database processing; propagation losses and fiber amplifiers; and optical free-space interconnections in future computers. Pre-requisite: Instructor's permission. Fee.

EE 577 Information Theory 3 cr
Self-information; entropy; mutual information and channel capacity; encoding; error detecting and correcting codes. Sampling theorem. Discrete and continuous channels. Band-limited channels. EE 322 or equivalent or instructor's permission. Fee.

EE 578 Error Correcting Codes 3 cr
Error correcting codes in computers and communications; introduction to groups, rings, finite fields, and vector spaces; Linear codes - generator and parity check matrices, syndrome decoding, perfect codes, Hamming codes, Golay codes, self-dual codes, dual distance and bounds; Cyclic codes-decoding algorithms and idempotent generators; Linear feedback shift register circuits; BCH and Reed-Solomon codes, Quadratic residue codes; Burst error correcting codes and error trapping; Logic circuit for finite field arithmetic operations; Concatenated and product codes, vector symbol codes, and convolutional codes; Advanced topics and applications. Pre-requisite: Instructor's permission. Fee.

EE 579 Wireless Sensor Networks 3 cr
Introduction to Wireless Sensor Networks; Network deployment; Network Topologies; Localization; Tracking; Time synchronization techniques; Wireless characteristics; Energy considerations; MAC layer protocol and sleep scheduling; Routing; Sleep-based topology control; Latest development in the field. Pre-requisite: EE 544 or consent of Instructor. Fee.

EE 582 Switch Mode Power Conversion 3 cr
Design and analysis of switch mode power converters - design of magnetic components; stability considerations; input filter interactions; performance, measurements and evaluation. This course is dually listed with an equivalent 400-level course (EE 482). Pre-requisite: Instructor's permission. Fee.

EE 585 Advanced Power Systems 3 cr
Special topics that are not covered in traditional power systems courses, such as: Optimization techniques, computer methods, unified fault (short circuit) analysis, protection and control of power systems. Pre-requisite: Instructor's permission. Fee.

EE 586 Power Electronics 3 cr
Power semiconductor diodes and thyristors; commutation techniques; rectification circuits -uncontrolled and controlled; AC voltage controllers; DC choppers; pulse-width modulated inverters; resonant pulse inverters. This course is dually listed with an equivalent undergraduate level course (EE 486) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Pre-requisite: EE 334 and EE 381, or equivalent or Instructor's permission. Fee.

EE 588 Power Semiconductor Drives 3 cr
Rectifier control of DC motors; chopper control of DC drives; closed-loop control of DC drives; induction motor speed control and multi-quadrant control; control of induction motors by AC controllers and frequency-controlled drives; slip power control of induction motors; synchronous motor drives - brushless DC and AC motor drives. Pre-requisite: Instructor's permission. Fee.

EE 589 Renewable Energy 3 cr
Introduction to renewable energy sources. Fuel cells: classification, configuration and operation. Hydrogen: production, purification and storage. Photovoltaic cells: solar cells and operational characteristics. Wind turbines: operational characteristics. Energy from water sources: hydroelectric, wave and tidal energy. This course is dually listed with an equivalent graduate course and requires a minimum GPA of 2.75 or the Instructor's permission for admission. Pre-requisite: EE 381.

EE 590 Special Topics 1-3 cr
Topics of current interest in electrical and computer engineering. Pre-requisite: Instructor's permission. Fee.

EE 592 Directed Independent Study 1-3 cr
Directed study, under the guidance of a faculty advisor, of a topic from the field of Electrical and Computer Engineering not offered in a regularly scheduled course. Pre-requisite: Instructor's permission. Fee.

EE 594 Project in Electrical and Computer Engineering 1-3 cr
An investigation of an original problem in electrical and computer engineering under the guidance of the student's major professor. Pre-requisite: Approval of the project prospectus by the student's Advisory Committee, and consent of Director of Engineering Graduate Studies. Fee.

EE 599 Thesis 1-6 cr
An investigation of an original problem in electrical and/or computer engineering under the guidance of the student's major professor. Pre-requisite: Approval of the thesis prospectus by the student's Advisory Committee, the Graduate School, and consent of the Director of Engineering Graduate Studies. Fee.

ELEMENTARY/EARLY CHILDHOOD EDUCATION (EEC)

EEC 290 Special Topics 3 cr
Guided study of selected educational tasks (e.g. curriculum revision, classroom materials development, models of learning and teaching) and teaching problems and practices for improving student achievement. No more than six semester hours may be earned in Special Topic Courses.

EEC 300 Creating Environments Through Play 3 cr
A study of environments that promote learning through play in early childhood. Emphasis on materials, activities, equipment, and effective strategies that support and encourage young children's play, learning, and creativity.

EEC 332 Teaching Language Arts 3 cr
This course presents methods of promoting meaningful language and literacy skills in early childhood and elementary school programs. Co-requisites: RED 330, RED 333, and EEC 346. Pre-requisites: Admission to Candidacy, EEC 300. This course has a required field experience.

EEC 335 Teaching Mathematics (W) 3 cr
A course which deals with effective methods of teaching mathematics to elementary school students. Emphasis will be on developing an understanding of numbers, teaching basic operations, and using various teaching aids and materials to meet the various needs of elementary age children. Pre-requisites: Candidacy, MA 201 or MA 202; RED 330 and 333, EEC 290, EEC 332, and EEC 346. Co-requisites: EEC 336, EEC 337, EEC 345; and RED 331. This course has a required field experience.

EEC 336 Teaching Social Studies 3 cr
A course using problem solving and independent investigation as means of teaching the relationship of humans to their environment.

Objectives, content, and procedures are discussed. Pre-requisites: Candidacy, RED 330 and RED 333; EEC 300, EEC 332, and EEC 346. Co-requisites: EEC 335, EEC 336, EEC 337, EEC 345; and RED 331. This course has a required field experience.

EEC 337 Teaching Science 3 cr
A course using discovery, inquiry and problem-solving approaches as a means of teaching science. Relationship of science to entire early childhood and elementary curriculum is discussed. Pre-requisites: Candidacy, RED 330 and RED 333; EEC 300, EEC 332, and EEC 346. Co-requisites: EEC 335, EEC 336, and EEC 345; and RED 331. This course has a required field experience.

EEC 345 Sequence Field Experience 1 cr
Supervised practice in teaching curriculum areas in the elementary or early childhood classroom setting during the semester in which sequence courses are taken. Pre-requisites: RED 330 and RED 333; EEC 300, EEC 332, and EEC 346. Co-requisites: EEC 335, EEC 336, and EEC 337; and RED 331.

EEC 346 Early Childhood Program (Birth-8) 3 cr
This course will introduce the roles of the teacher in working with children from birth through age 8. History, management, and parent education techniques are presented. Co-requisites: EEC 332; and RED 330 and RED 333. Pre-requisites: Admission to Candidacy, EEC 300. This course has a required field experience.

EEC 429 Opening School Laboratory Experiences 1 cr
Professional laboratory experiences of observation and participation for a two-week period at the opening of school. Pre-requisite: Candidacy.

EEC 430 Student Teaching 9 cr
Observation and supervised teaching in elementary or early childhood settings with opportunity for study and discussion of problems and issues encountered. Pre-requisite: Candidacy and permission of department.

EEC 490 Special Topics 3 cr
Guided study of selected educational tasks (e.g. curriculum revision, classroom materials development, models of learning and teaching) and teaching problems and practices for improving student achievement. No more than six semester hours may be earned in Special Topic Courses.

EEC 494 Directed Study 1, 3 cr
No more than two directed studies can be applied toward the Bachelor's Degree and Class B Certification. Pre-requisite: Candidacy and permission of the department.

EEC 496 Internship 3 -9 cr
The internship is a supervised learning experience in an approved setting similar to that in which an educator will eventually be employed. The internship provides students with an opportunity to apply theories and concepts learned during the undergraduate program. Pre-requisites: Candidacy and approval of department chair.

EEC 499 Seniors Honors Project - H 3-6 cr
Under the advice and guidance of a faculty mentor, honors students will identify and carry out a research project, relevant to the field of elementary/early childhood study, that will lead to a formal presentation at the annual Honors Student Colloquium. The senior project will be judged and graded by three faculty and chaired by the honors mentor. This course is required for Honors recognition and may be repeated for up to six credit hours. Pre-requisites: Participant in honors program and junior level status.

EEC 522 Elementary School Curriculum 3 cr
The study of curriculum with emphasis on concepts, procedures and models particular to curriculum in the elementary school. Curriculum study includes the context of and a process for planning, developing, implementing and evaluating the elementary school curriculum.

EEC 523 Instructional Planning in Elementary School 3 cr
Presents an overview of factors and procedures involved in planning, developing and evaluating the elementary school instructional process.

EEC 532 Literacy and Language Development in Elementary School 3 cr
Designed to explore the multi-dimensional theory of language development and to provide techniques and practices for development of language ability. Through correlating these related areas, the student should grow in understanding dynamics and change in language structure and development. Opportunities for oral and written communication are emphasized.

EEC 535 Trends in Teaching Mathematics 3 cr
This course emphasizes new methods of presenting mathematical content to elementary school students. Various materials will be developed to promote thinking and discovery of mathematical concepts. Opportunities are provided for developing multi-level materials appropriate to the varied abilities and interest levels in elementary school.

EEC 536 Issues and Innovations in Teaching Social Studies 3 cr
Current issues and innovations in early childhood and elementary school social studies teaching and learning are reviewed.

EEC 537 Teaching Science 3 cr
Current trends and issues in early childhood and elementary school science teaching and learning are reviewed.

EEC 550 Trends in Parent Education 3 cr
A study of current trends in parent education designed to promote better home-school communication and cooperation.

EEC 551 Seminar in Elem Education 3 cr
A seminar of topics, programs, and research in the field of elementary/early childhood education. This course provides a forum for discussion of contemporary educational issues, and practicum experiences in the teaching field in which the quality of performance in teaching is evaluated.

EEC 552 Community Services for Families and Children 3 cr
Study of agencies which provide services, types of services provided, and means of obtaining needed services.

EEC 553 Organizational Patterns and Curriculum in Early Childhood Education 3 cr
A review of organizational and curricular patterns utilized in the classroom setting for the education of young children. A study of educators and their theories concerning learning styles and developmental patterns in relation to the school setting and curriculum.

EEC 554 Language Development in Early Childhood Education 3 cr
Study of the language development of young children with an emphasis on provision of classroom environment to promote growth of language.

EEC 555 Organization and Administration in Early Childhood Education 3 cr
Managing the multiple responsibilities of administrative heads of educational programs for young children.

EEC 556 Research in Early Childhood Education 3 cr
A review of research in the field of early childhood education.

EEC 557 Practicum 1-9 cr
Experiences in a field-setting to work with children ages N-12 under the supervision of qualified personnel.

EEC 558 Teaching Spelling and Writing 3 cr
Analysis of methods of teaching spelling and the mechanics of writing, including review of pertinent research in the skill areas as well as emphasis on the relationship of spelling to the development of skills in word recognition.

EEC 560 Workshop in Elementary/ Early Childhood Education 3 cr
A topical workshop in which participants have experiences in creating, designing, constructing and using instructional materials and activities. No more than six hours of credit may be applied toward a degree program.

EEC 562 Classroom Logistics and Facilitation 3 cr
To increase teacher's competencies to facilitate learning by providing a classroom atmosphere conducive to self-discipline, participation and worthwhile learning activities.

EEC 575 Diagnosis of Learning Difficulties in Mathematics 3 cr
Analysis of diagnostic techniques for identifying children's learning difficulties in mathematics. Pre-requisite: EEC 535.

EEC 577 Children's Literature for the Gifted 3 cr
An exploration of research related to reading behavior of gifted and high-ability children with emphasis on examining criteria for selecting and utilizing literature to promote cognitive, emotional, and social development.

EEC 590 Special Topics 1-3 cr
Guided supervision in the identification and completion of educational tasks, such as curriculum revision, course and/or program design, self-study for accreditation visitation, student achievement evaluation, aesthetic experiences, consumer and career education. No more than six hours of credit may be applied toward a graduation degree.

EEC 592 Research Seminar 3 cr
Structured to assist graduate students in designing and implementing appropriate research for professional growth and writing of the thesis.

EEC 594 Directed Study and Research 1 or 3 cr
Students explore through directed individual study research problems and issues of special interest or significance in elementary or early childhood education. No more than three hours of any departmental 594 courses can be accepted toward a degree program. Pre-requisite: Permission of department chair.

EEC 595 Internship 3-9 cr
The internship is a supervised learning experience in a work setting similar to that in which the educator will eventually be employed. The internship provides the students with an opportunity to apply the theories and concepts learned during the graduate program of study. Pre-requisites: Permission of the department chair.

EEC 599 Thesis 1-9 cr
A student selects a project, study, or investigation related to his area of specialization in early childhood or elementary education. The project forms a basis for the thesis. A thesis committee will provide direction during the investigation for and writing of the thesis.

EEC 601 Advanced Seminar 3 cr
In-depth study of various curriculum areas through research reports, problem analysis and individual evaluation of promising practices and topical issues. Each seminar participant will concentrate on a curriculum area: e.g., arithmetic, career awareness, communication, consumer education, humanities, natural sciences, social sciences, early reading, and psycholinguistics.

EEC 610 Diagnostic and Prescriptive Teaching 3 cr
Designed to assist teachers and school leaders in understanding the skills and techniques necessary for diagnosing and prescribing for learners in different types of teaching-learning settings.

EEC 622 Seminar in Curriculum and Instructional Problems 3 cr
Critical study of curriculum and instructional problems in the elementary school. Research reviews and problem design problems are emphasized.

EEC 635 Seminar in Mathematics Education 3 cr
A study of current topics related to teaching mathematics in the early childhood and elementary years.

EEC 690 Special Topics 3 cr
Guided supervision in the identification and completion of educational tasks, such as curriculum revision, course and/or program design, self-study for accreditation visitation, student achievement evaluation. No more than six hours will be applied toward a degree. Pre-requisites: Permission of the department chair.

EEC 694 Directed Study and Research 1 or 3 cr
Students explore through directed study problems and issues of special interest or significance in early childhood or elementary education. No more than three hours of any departmental 694 courses can be accepted toward a degree program. Pre-requisites: Permission of the department chair.

EEC 695 Internship 3-9 cr
The internship is a supervised learning experience in a work setting similar to that in which an educator will eventually be employed. The internship provides the student with an opportunity to apply the theories and concepts learned during the graduate program. Pre-requisites: Permission of the department chair.

EEC 699 Research Project 3 cr
The Research Project, as the culminating experience in the Instructional Specialist Program, provides an opportunity for the candidate to synthesize and apply the various program components in a selected instructional setting. Suitable agreements are reached with the appropriate school systems by the candidate. Pre-requisites: EEC 601, EEC 610, EEC 622 and IDE 692 all with grade of "B" or better.

ENGINEERING, GENERAL (EG)

The courses listed below are common to two or more programs.

EG 101 Introduction to Engineering and Design 2 cr
A course for first time engineering students that assists with maximizing the student's potential to achieve academic success and to adjust responsibly to the individual and interpersonal challenges presented by college life. Introduction to engineering fundamentals through reading, homework assignments, laboratory investigations, guest lecturers and group discussions on the engineering profession. Pre-requisite: MA 113 or MA 125. Fee.

EG 201 Introduction to Engineering and Problem Solving 2 cr
A course for first-time transfer students that helps maximize the student's potential to achieve academic success and to address the transition from community college to four-year college. Introduction to engineering fundamentals and problem solving techniques through reading, homework assignments and laboratory investigations, guest lecturers and group discussions on the engineering profession. Pre-requisite: MA 126. Fee.

EG 220 Electrical Circuits 3 cr
Basic SI units. Resistive (R) networks with independent and dependent sources. Ohm's and Kirchoff's laws. Network theorems superposition, Theverin's and Norton's source transformation. Inductors (L) and capacitors (C) as energy storage elements in RLC circuits. Sinusoids and phasors and their applications in RLC circuits. RMS values of voltages and currents. Average power and power factor in AC circuits. Operational amplifiers and digital system components. Pre-requisites: MA 125, PH 202. Fee.

EG 231 Introduction to Ethics and Engineering Economics 3 cr
Introduction to ethics and use of codes of ethics in developing an ethical profession. Application of engineering economic principles to engineering problems. Pre-requisite: EG 220 or EE 220 or EG 270 or EG 283. Fee.

EG 270 Engineering Thermodynamics 3 cr
First and second law of thermodynamics and applications. Pre-requisites: MA 126, PH 201. Fee.

EG 283 Statics 3 cr
Vector algebra; forces, moments, couples; equilibrium analysis of rigid bodies, beams, trusses, frames, area and mass moments of inertia, and friction. Pre-requisites: MA 126, PH 201. Fee.

EG 284 Dynamics 3 cr
Kinematics and kinetics of particles and rigid bodies. Work/energy and momentum methods. Pre-requisites: EG 283, MA 126. Fee.

EG 290 Special Topics in Engineering 1-5 cr
Subjects of special interest in engineering. Pre-requisite: Permission of Instructor. Fee.

EG 315 Mechanics of Materials 3 cr
An introduction to the mechanics of deformable bodies. Analysis of stress and strain. Emphasis of axial, torsional and bending loads. Deflections, deformations, and column stability. Pre-requisites: EG 283, MA 227, PH 201. Fee.

EG 360 Fluid Mechanics 3 cr
Study of the properties of fluids including fluid statics, kinematics, integral and differential equations of mass, momentum and energy conservation; dimensional analysis; flows in ducts and boundary layer flows. Pre-requisites: MA 238, EG 284. Fee.

EG 480 Principles of Engineering Management and Leadership 3 cr
An examination of skills, abilities, personality, attitudes, values, interests and behaviors to increase self-awareness of management and leadership competencies. Students will also, examine the concept of Professional Improvement Process that integrates strategy, human resources and accountability. Fee.

EG 492 Honors Engineering Seminar - H 3 cr
Multidisciplinary engineering topics of contemporary issues and emerging technologies. Topics announced prior to registration. Fee.

EG 501 Professionalism, Research Integrity and Seminar 1 cr
Exposes graduate students planning to undertake a thesis or project option to a variety of issues concerning professionalism, research integrity, and inform them of current policies related to research activities and thesis development. Fee.

EG 590 Special Topics in Engineering 1-3 cr
Subjects of special interest in engineering for engineering graduate students. Pre-requisite: Permission of Instructor. Fee.

EG 620 Biomedical Engineering I 3 cr
Fundamental concepts of medical instrumentation, biomedical imaging and biological systems modeling as used in biomedical engineering. Fee.

ENGLISH (EH)

EH 101 Composition I 3 cr
Prepares students for diverse types of college writing. Covers the writing process, general criteria used to evaluate writing, collaborative writing, and rhetoric, especially audience analysis. Grading is "A", "B", "C", and "U". **Core Course**.

EH 102 Composition II 3 cr
Prepares students for college writing by focusing on argumentation, research, and the critical thinking required to argue effectively. Students must earn a "C" or higher in EH 102 to fulfill the University requirement for composition. Core Course.

NOTE: EH 101 and EH 102 are Pre-requisites for all subsequent English courses.

EH 105 Honors Composition 3 cr
This course emphasizes the types of writing that students will do in college and reflects goals of the Honors Program with advanced work in critical thinking and research. Pre-requisite: students must have been accepted in the Honors Program.

EH 207 Literature and Gender 3 cr
A variable-topics course to study gender issues in literary texts. Pre-requisites: EH 101 and EH 102.

EH 215 Survey of British Literature I 3 cr
This course introduces the student to the cultural heritage of English-speaking peoples by studying representative works from Anglo-Saxon times to Blake. Pre-requisites: EH 101 and EH 102. Core Course.

EH 216 Survey of British Literature II 3 cr
This course introduces the student to the cultural heritage of the English-speaking peoples by studying representative works from Blake to the present. Pre-requisites: EH 101 and EH 102. **Core Course**.

EH 225 Survey of American Literature I 3 cr
This course traces the development of American literature from the beginning through 1865 by studying the works of representative writers. Pre-requisites: EH 101 and EH 102. **Core Course**.

EH 226 Survey of American Literature II 3 cr
This course traces the development of American literature from 1865 to the present by studying the works of representative writers. Pre-requisites: EH 101 and EH 102. **Core Course**.

EH 235 Survey of World Literature I 3 cr
A survey of literature from the Ancient World, the Middle Ages, and the Renaissance, featuring selections in translation. Pre-requisites: EH 101 and EH 102. **Core Course**.

EH 236 Survey of World Literature II 3 cr
A survey of literature from Neoclassicism, Romanticism, Nineteenth-century Realism and Naturalism, Modernism and Postmodernism, featuring selections in translation. Pre-requisites: EH 101 and EH 102. **Core Course**.

EH 290 Special Topics 3 cr
A variable-content course treating selected topics in literature and language. May be repeated once for credit when topic varies. Pre-requisites: EH 101 and EH 102.

EH 300 Introduction to Literary Study 3 cr
An introduction to key concepts and methodologies in literary study with emphasis on critical writing. Required of al English majors and non-Professional Writing English minors prior to taking 400-level courses. Pre-requisites: EH 101 and EH 102.

EH 310 Classical Mythology 3 cr
Through the disciplines of English and Philosophy, this course will provide an introduction to myths and to the literature that recounts the myths, legends, and folktales of ancient Greece and Rome. Not only will this course offer a survey of Greek and Roman myth, but also it will look at how different writers treat the material and why their treatments vary. Pre-requisites: EH 101 and EH 102. Cross-listed with PHL 310 and REL 310. Credit cannot be received for both EH 310 and either PHL 310 or REL 310.

EH 314 Medieval Literature 3 cr
This course will introduce students to major texts of medieval literature, including narrative poetry, drama, prose, and lyric poetry. Pre-requisites: EH 101 and EH 102.

EH 315 Chaucer 3 cr
This course will introduce students to Chaucer's major works in the original language; no prior knowledge of Middle English is required. Pre-requisites: EH 101 and EH 102

EH 321 Renaissance Literature 3 cr
Non-dramatic literature of the English Renaissance through 1600. Pre-requisites: EH 101 and EH 102.

EH 322 Shakespeare's Comedies and Romances 3 cr
Study of Shakespeare's comedies and romances. Pre-requisites: EH 101 and EH 102.

EH 323 Shakespeare's Tragedies and Histories 3 cr
Study of Shakespeare's tragedies and histories. Pre-requisites: EH 101 and EH 102.

EH 324 Seventeenth-Century Literature 3 cr
Non-dramatic literature 1600-1660. Pre-requisites: EH 101 and EH 102.

EH 331 American Novel to 1900 3 cr
American novel from its beginning to 1900. Pre-requisites: EH 101 and EH 102.

EH 332 American Nonfiction Prose 3 cr
Major American nonfiction prose. Pre-requisites: EH 101 and EH 102.

EH 334 American Poetry to 1900 3 cr
American poetry from its beginning to 1900. Pre-requisites: EH 101 and EH 102.

EH 340 Restoration and Early 18th-Century Literature 3 cr
Literature of the period, including such authors as Behn, Dryden, Finch, Defoe, Pope, Montagu, Swift, and Fielding. Pre-requisites: EH 101 and EH 102.

EH 342 Later 18th-Century Literature (W) 3 cr
Literature of the period, including such authors as Gray, Boswell, Johnson, Sheridan, Radcliffe, Wollstonecraft, Blake, and Austen. Pre-requisites: EH 101 and EH 102.

EH 343 18th-Century British Novel 3 cr
Eighteenth-century British novel. Pre-requisites: EH 101 and EH 102.

EH 348 19th-Century Continental Philosophy and Literary Theory 3 cr
An examination of selected themes and issues in 19th-century Continental philosophy and literary theory. Topics may include Idealism, Romanticism, Existentialism, Marxism, Freudianism. Identical with PHL 348 and LG 348. Credit cannot be received for both EH 348 and either PHL 348 or LG 348. (For LG credit, students will be required to complete some course work in their language of concentration.) Pre-requisites: EH 101 and EH 102.

EH 349 20th-Century Continental Philosophy and Literary Theory 3 cr
An examination of selected themes and issues in 20th-century Continental philosophy and literary theory. Topics may include Phenomenology, Existentialism, Hermeneutics, Structuralism, and Post-Structuralism. Identical with PHL 349 and LG 349. Credit cannot be received for both EH 349 and either PHL 349 or LG 349. (For LG credit, students will be required to complete some course work in their language of concentration.) Pre-requisites: EH 101 and EH 102.

EH 351 British Romanticism 3 cr
The poetry and prose of Romantic-era writers, including Wordsworth, Coleridge, Byron, Keats, and Shelley. Pre-requisites: EH 101 and EH 102.

EH 352 Victorian Poetry 3 cr
A study of poetry of the Victorian period. Pre-requisites: EH 101 and EH 102.

EH 353 Victorian Prose 3 cr
A study of prose, with emphasis on non-fiction, of the Victorian period. Pre-requisites: EH 101 and EH 102.

EH 354 19th-Century British Novel 3 cr
Novels of the Romantic and Victorian periods. Pre-requisites: EH 101 and EH 102.

EH 357 Black Writers in America 3 cr
A survey of literature by major African-American authors from the early colonial period to the present. Readings will include fiction, poetry, drama, autobiography, and polemical prose. Pre-requisites: EH 101 and EH 102.

EH 360 Anglo-American Poetry Since 1900 3 cr

A study of Anglo-American poets such as D. H. Lawrence, T. S. Eliot, Ezra Pound, Robert Graves, W. H. Auden, Dylan Thomas, Derek Walcott, Paul Muldoon, Eavan Boland, Seamus Heaney, Galway Kinnell, Adrienne Rich, Robert Penn Warren, John Crowe Ransom, Margaret Walker, Elizabeth Bishop, Gwendolyn Brooks, Gary Snyder, Charles Olson, Allen Ginsberg, Anne Sexton, and Sylvia Plath. Pre-requisites: EH 101 and EH 102.

EH 362 American Novel from 1900 to 1945 3 cr

A study of the American novel from 1900 to 1945. Pre-requisites: EH 101 and EH 102.

EH 363 American Novel since 1945 3 cr

A study of the American novel since 1945. Pre-requisites: EH 101 and EH 102.

EH 364 British Novel from 1900 to 1945 3 cr

A study of the British novel from 1900 to 1945. Pre-requisites: EH 101 and EH 102.

EH 365 British Novel since 1945 3 cr

A study of the British novel since 1945. Pre-requisites: EH 101 and EH 102.

EH 366 Contemporary Fiction 3 cr

An introduction to literary fiction of the contemporary era. Pre-requisites: EH 101 and EH 102.

EH 369 The Modern Short Story 3 cr

Representative modern short story writers. Oral and written analyses and critiques required. Pre-requisites: EH 101 and EH 102.

EH 370 History of the English Language 3 cr

A study of the development from Old English through Middle English to Modern English. Pre-requisites: EH 101 and EH 102.

EH 371 Approaches to English Grammar (W) 3 cr

A course designed primarily to help education majors translate between the languages of conventional grammar and the syntactical grammar relevant to the teaching of English at pre-college levels. Consideration will also be given to the rationales basic to the formation of different grammars and to methods of presenting grammatical material in a classroom situation. Non-education majors interested in a sophisticated approach to the study of grammar might also benefit from this course. Pre-requisites: EH 101 and EH 102.

EH 372 Technical Writing (W) (C) 3 cr

The purpose of this course is to train students in the kinds of written reports required of practicing professionals, aiming to improve mastery of the whole process of report writing from conceptual stage through editing stage. Pre-requisites: EH 101 and 102.

EH 373 Writing in the Professions (W) (C) 3 cr

Practice in the kinds of writing done in such professions as speech pathology and audiology, nursing, teaching, criminal justice, and business. Assignments, which emphasize persuasive writing, may include position papers, correspondence, and reports. Pre-requisites: EH 101 and EH 102.

EH 374 The English Bible - Old Testament 3 cr

King James Version of the Bible studied with respect to literary forms, philosophical concepts, and problems of translation. Pre-requisites: EH 101 and EH 102.

EH 375 The English Bible - Apocrypha and New Testament 3 cr

King James Version of the Bible studied with respect to literary forms, philosophical concepts, and problems of translation. Pre-requisites: EH 101 and EH 102.

EH 379 Horror 3 cr

A study of the history and themes of horror from the early 19th century to the present, including representative texts, films, and critical scholarship. Pre-requisites: EH 101 and EH 102.

EH 380 Science Fiction 3 cr

A study of the history and themes of science fiction literature and film from the end of the 19th century to the present. Pre-requisites: EH 101 and EH 102.

EH 390* Special Topics 3 cr

A variable-content course addressing selected topics in literature and writing. May be repeated once for credit when course content varies.

EH 391, 392 Fiction Writing I, II 3 cr

Intensive practice in the writing of the short story. Constructive, critical discussions are conducted on each composition. Emphasis is upon creation of high-quality fiction with possible view to publication. These courses require special permission. Pre-requisites: EH 101 and EH 102.

EH 393, 394 Creative Nonfiction I, II 3 cr

Intensive study of and practice in writing creative nonfiction - nonfiction that stresses personal voice and the use of literary elements. Concentrates on genres of creative nonfiction (personal or narrative essay, travel, and nature writing, cultural criticism, memoir) with emphasis on producing high-quality writing. Pre-requisites: EH 101 and EH 102.

EH 395, 396 Poetry Writing I, II 3 cr

The English language as it may be used in embodying poetic knowledge. Readings in contemporary poetry, study of fixed and open verse forms and their metrics, and practice in producing poems and explications. Pre-requisites: EH 101 and EH 102.

EH 401 Teaching Composition (W) 3 cr

Study of theories of composition and their applications for teaching writing at the secondary school level. Pre-requisites: EH 101 and EH 102.

EH 402 Rhetoric: Ancient and Modern (W) 3 cr

Readings in rhetorical theory, ancient and modern, are applied in specific writing assignments which encourage students to adopt a point of view and address a specific audience. Pre-requisites: EH 101 and EH 102.

EH 403 Art of the Essay (W) 3 cr

Advanced expository writing. Discussion of British and American essays by such writers as Bacon, Addison, Swift, Arnold, Emerson, Chesterton, Lewis Thomas, and Joan Didion, with applications in written assignments. Student writings are discussed in class or in conference. Pre-requisites: EH 101 and EH 102.

EH 421 Literary Criticism to 1900 (W) 3 cr

Classical, Neoclassical, Romantic, and Victorian literary theory. Identical with PHL 421. Credit cannot be received for both PHL 421 and EH 421. Pre-requisites: EH 101, EH 102, and EH 300.

EH 422 Literary Criticism Since 1900 (W) 3 cr

Modern and Contemporary Literary theory. Identical with PHL 422. Credit cannot be received for both EH 422 and PHL 422. Pre-requisites: EH 101, EH 102 and EH 300.

EH 461 Tudor and Stuart Drama 3 cr

A historical and generic study of plays by authors including Kyd, Marlowe, Dekker, Jonson, Middleton, Beaumont, Fletcher, and Webster. Pre-requisites: EH 101 and EH 102.

EH 462 Restoration and 18th-Century Drama 3 cr

A historical and generic study of plays by authors such as Wycherley, Etherege, Behn, Dryden, Otway, Congreve, Steele, Goldsmith, and Sheridan. Pre-requisites: EH 101, EH 102 and EH 300.

EH 463 Drama 1890-Present 3 cr

Twentieth-century British, American and Continental drama, with major emphasis on the plays of Ibsen, Chekhov, Shaw, Pirandello, O'Neill, and Beckett. Pre-requisites: EH 101 and EH 102.

EH 465 Middle English Literature 3 cr

Major romances and dream-visions of the late Middle Ages such as Sir Gawain and the Green Knight, Troilus and Criseyde, Sir Orfeo, Pearl, Parliament of Birds, and others. Pre-requisites: EH 101, EH 102, EH 300.

EH 467 Milton 3 cr

Milton's major poems, with emphasis on Paradise Lost. Pre-requisites: EH 101, EH 102 and EH 300.

EH 468 Contemporary Black Fiction 3 cr

A close reading of selected fiction published since World War II by such authors as James Baldwin, Ralph Ellison, Alice Walker, Toni Morrison, Ernest J. Gaines, Gloria Naylor, and Julius Lester. Pre-requisites: EH 101, EH 102 and EH 300.

EH 470 Studies in Medieval Literature 3 cr

Seminar in specific topics from medieval literature. May be repeated once for credit when course content varies. Pre-requisites: EH 101, EH 102 and EH 300.

EH 471 Studies in Renaissance Literature 3 cr

Seminar in specific topics from Renaissance literature. May be repeated once for credit when course content varies. Pre-requisites: EH 101, EH 102 and EH 300.

EH 472 Studies in Shakespeare 3 cr

Seminar in specific topics from Shakespeare. May be repeated once for credit when course

content varies. Pre-requisites: EH 101, EH 102 and EH 300.

EH 474 Studies in Restoration and 18th-Century Literature 3 cr

Seminar in specific topics from Restoration and 18th-Century Literature. May be repeated once for credit when course content varies. Pre-requisites: EH 101, EH 102, and EH 300.

EH 475 Studies in 19th-Century Literature 3 cr

Seminar in specific topics from 19th-century literature. May be repeated once for credit when course content varies. Pre-requisites: EH 101, EH 102, and EH 300.

EH 476 Studies in 20th-Century Literature 3 cr

Seminar in specific topics from 20th-century literature. May be repeated once for credit when course content varies. Pre-requisites: EH 101, EH 102, and EH 300.

EH 477 Studies in Genre 3 cr

Seminar in specific topics from various genres. May be repeated once for credit when course content varies. Pre-requisites: EH 101, EH 102, and EH 300.

EH 478 Studies in Film 3 cr

Seminar in specific topics from film studies. Maybe repeated once for credit when course content varies. Pre-requisites: EH 101, EH 102, and EH 300.

EH 479 Studies in Modern/ Postmodern Poetry 3 cr

Seminar in specific topics from modern/ postmodern poetry. May be repeated once for credit when course content varies. Pre-requisites: EH 101, EH 102, and EH 300.

EH 480 Studies in Gender and Literature 3 cr

Seminar in specific topics dealing with gender issues in literature. May be repeated once for credit when course content varies. Pre-requisites: EH 101, EH 102, and EH 300.

EH 481 Studies in Composition and Rhetoric (W) 3 cr

Seminar in specific topics dealing with writing, rhetoric, or language studies. May be repeated once for credit when course content varies. Pre-requisites: EH 101, EH 102, and EH 300.

EH 482 Studies in American Literature 3 cr

Seminar in specific topics from American literature. May be repeated once for credit when course content varies. Pre-requisites: EH 101, EH 102, and EH 300.

EH 483, 484 Advanced Fiction Writing I, II 3 cr

Advanced work in writing the story and the novel, for students of exceptional talent. Pre-requisites: EH 101 and EH 102, EH 391 and EH 392 or the equivalent and junior standing. These courses require special permission.

EH 485 (C), 486 Advanced Poetry Writing I, II 3 cr

Advanced work in writing poetry, for students of exceptional talent. Pre-requisite: EH 101 and EH 102, EH 395 and EH 396 or the equivalent, and junior standing. These courses require special permission.

EH 487, 488 Screen Writing I, II 3 cr

Guided workshops in writing a dramatic narrative screenplay. Pre-requisites: EH 101, EH 102 and junior standing.

EH 490 Special Topics 3 cr

Selected topics in writing in literary studies. May be repeated once for credit when course content varies. Pre-requisites: EH 101, EH 102, and EH 300.

EH 492 Seminar 3 cr

Specific topics in literature. Can be taken twice for credit when topic varies. May be repeated once for credit. Pre-requisites: EH 101, EH 102, and EH 300.

EH 494 Directed Studies 1-3 cr

Directed individual study. Pre-requisites: EH 101, EH 102, junior standing, and permission of the directing professor and department chair.

EH 496 Professional Studies: Internship 1-3 cr

On-the-job experience which relates to the student's classroom work in the field of English; reports required. A maximum of six hours of credit may be earned in internships. Students consult with the department chair regarding internship opportunities and specific required eligibility. English majors and minors who are juniors or seniors may enroll. Pre-requisites: Permission of the department chair and the supervising professor. Pre-requisites: EH 101, EH 102 and junior standing.

EH 497, 498 Advanced Creative Nonfiction I, II 3 cr

Advanced work in writing creative non-fiction, for students of exceptional talent. Emphasis on producing high-quality writing with an eye toward publication Pre-requisites: EH 101, EH 102, EH 393, EH 394 or the equivalent, and junior standing. These courses require special permission.

EH 499 Senior Honors Project 1-3 cr

With the guidance of a faculty mentor, Honors Students will identify and carry out an independent scholarly project in English. The outcome of the project will include a formal presentation and defense before the faculty and a written senior thesis. The Honors Senior Project will be evaluated and graded by three members of the faculty, including the faculty mentor, who will serve as chair of the thesis committee. The student must complete a total of six hours of Honors Senior work, be accepted to the University Honors Program or the Department Honors Program and have an approved project prospectus. University Honors Program participants must have completed HON 301.

EH 501 Introduction to Critical Theory 3 cr

Required of all M.A. students in the literature concentration in their first year of work. Surveys current literary theory from structuralism to the present. The purpose is to introduce the conceptual lexicons and reading strategies of advanced literary analysis. Topics treated include structuralism, deconstruction, psychoanalysis, hermeneutics, Marxism, feminism, and reception theory. Pre-requisite/Co-requisite: EH 502.

EH 502 Graduate Writing in English 3 cr

A course preparing students for research and academic writing at the graduate level in English studies. Required of all M.A. students in their first year of work.

EH 505 Teaching College Writing 3 cr

A study of contemporary theories of writing and rhetoric, with an emphasis on their application in a college-level curriculum. Pre-requisite/ Co-requisite: EH 502.

EH 506 Composition Theory and Research Methodology 3 cr

Part I of this course traces the development of theoretical movements in composition over the past century; part II outlines qualitative and quantitative methodologies used in composition research. Pre-requisite/Co-requisite: EH 502.

EH 507 Rhetoric and the Postmodern Condition 3 cr

This is a course in rhetorical theory especially as this study intersects with postmodern theories of identity: feminist, postcolonial, sociolinguistics, queer theory, gender studies, deconstruction, and comparative studies. It aims to offer students entry into contemporary rhetorical study within departments of English. Pre-requisite/Co-requisite: EH 502.

EH 508 Professional Writing Theories and Applications 3 cr

Study of the theories, practices, and histories of professional writing. Pre-requisite/Co-requisite: EH 502.

EH 513 Studies in Chaucer 3 cr

A study of selections of Chaucer's Canterbury Tales and dream visions. Pre-requisite/Co-requisite: EH 502.

EH 514 Renaissance Poetry 3 cr

Examination of non-dramatic Renaissance poetic development, including the sonnet. Pre-requisite/Co-requisite: EH 502.

EH 516 Studies in Shakespeare I 3 cr

A study of Shakespeare's comedies and romances. Pre-requisite/Co-requisite: EH 502.

EH 517 Studies in Shakespeare II 3 cr

A study of Shakespeare's histories and tragedies. Pre-requisite/Co-requisite: EH 502.

EH 521 Seventeenth-Century Poetry 3 cr

A historical and formal study of the poetry of the early seventeenth century, including the works of Donne, Jonson, Herbert, Vaughan, Herrick, Marvell, Wroth, Lanyer, and Phillips. The course will emphasize the close reading of poems. Pre-requisite/Co-requisite: EH 502.

EH 525 Restoration and Early 18th-Century Literature 3 cr

A study of literature in the period, including such authors as Dryden, Rochester, Behn, Congreve, Defoe, Pope, Swift, and Gay. Pre-requisite/Co-requisite: EH 502.

EH 526 The 18th-Century Novel 3 cr

A study of prose fiction narratives from the Restoration and eighteenth century by such

authors as Behn, Defoe, Richardson, Fielding, Smollett, Sterne, and Burney, with emphasis on the establishment of the novel as a respected genre. Pre-requisite/Co-requisite: EH 502.

EH 527 The Age of Sensibility 3 cr
A study of several late eighteenth-century literary figures such as Sterne, Johnson, Boswell, Goldsmith, Sheridan, Wollstonecraft, Radcliffe, and Blake. Pre-requisite/Co-requisite: EH 502.

EH 532 Early Romantics 3 cr
A study of early Romantic poetry and prose, with emphasis on the poetry of William Wordsworth and S.T. Coleridge. Pre-requisite/ Co-requisite: EH 502.

EH 534 Late Romantics 3 cr
A study of late Romantic poetry and prose, with emphasis on the poetry of Lord Byron, Percy Shelley, and John Keats. Pre-requisite/ Co-requisite: EH 502.

EH 536 Victorian and Edwardian Poetry 3 cr
A study of poetry of the Victorian and Edwardian eras. Pre-requisite/Co-requisite: EH 502.

EH 538 Victorian and Edwardian Prose 3 cr
A study of novels and short fiction of the Victorian and Edwardian eras. Pre-requisite/ Co-requisite: EH 502.

EH 543 American Romanticism 3 cr
A study of writers of the American Romantic Movement such as Irving, Emerson, Thoreau, Douglass, Whitman, and Dickinson, focusing primarily on nonfiction prose and poetry. Pre-requisite/Co-requisite: EH 502.

EH 544 Antebellum American Fiction 3 cr
Examines the emergence and development of American fiction before the Civil War, focusing on the tale and the novel, and including such figures as Cooper, Hawthorne, Poe, Melville, and Stowe. Pre-requisite/Co-requisite: EH 502.

EH 545 American Realism 3 cr
A study of writers of the American Realist Movement such as Twain, James, Crane, Dreiser, Chopin, Chesnutt, and Jewett. Pre-requisite/ Co-requisite: EH 502.

EH 547 The Southern Renaissance 3 cr
A study of several representative figures from twentieth-century Southern literature such as Faulkner, Warren, Tate, Ransom, O'Connor, McCullers, Dickey, Hurston, Wright, and Percy. Pre-requisite/Co-requisite: EH 502.

EH 562 The 20th-Century Poetic Revolution 3 cr
A study of the key figures in the shaping of modern poetry: Yeats, Eliot, Pound, Stevens, and Frost. Pre-requisite/Co-requisite: EH 502.

EH 570 Studies in Medieval Literature 3 cr
Theme-based study of medieval texts; possible topics include late medieval chivalry, medieval sexualities, Arthurian tradition. Pre-requisite/Co-requisite: EH 502.

EH 571 Modern British Fiction 3 cr
Examination of selected works of such authors as Conrad, D.H. Lawrence, Woolf, Forster, Joyce, Greene, and Lessing. Pre-requisite/Co-requisite: EH 502.

EH 572 Modern American Fiction 3 cr
Examination of selected works of such authors as Anderson, Dickey, Faulkner, Fitzgerald, and Hemingway. Pre-requisite/Co-requisite: EH 502.

EH 573 Contemporary Fiction 3 cr
Examines significant trends in contemporary Literary fiction. Pre-requisite/Co-requisite: EH 502.

EH 577 Studies in Genre 3 cr
Seminar in specific topics from various genres. May be repeated once for credit when content varies. Pre-requisite/Co-requisite: EH 502.

EH 583 Graduate Fiction Writing Workshop I 3 cr
Special individual instruction in fiction writing. This course requires special permission. Pre-requisite/Co-requisite: EH 502.

EH 584 Graduate Fiction Writing Workshop II 3 cr
Special individual instruction in fiction writing. This course requires special permission. Pre-requisite/Co-requisite: EH 502.

EH 585 Graduate Poetry Writing Workshop I 3 cr
Special individual instruction in poetry writing. This course requires special permission. Pre-requisite/Co-requisite: EH 502.

EH 586 Graduate Poetry Writing Workshop II 3 cr
Special individual instruction in poetry writing. This course requires special permission. Pre-requisite/Co-requisite: EH 502.

EH 590 Special Topics 3 cr
A graduate seminar designed to allow close study of selected literary topic or figures. May be repeated twice for credit when the subject offerings are from different literary areas. Pre-requisite/Co-requisite: EH 502.

EH 592 Seminar 3 cr
A specific subject in American or British Literature to be assigned prior to each semester. May be repeated once for credit when the subject offerings are from different literary areas. Pre-requisite/Co-requisite: EH 502.

EH 594 Directed Studies 1-3 cr
Directed individual study on a topic not covered by a listed course. Pre-requisite: prior permission of the directing professor and the department chair. Pre-requisite/Co-requisite: EH 502.

EH 599 Thesis 1-6 cr
One to six credits per semester with a maximum of six hours of credit.

ENGLISH LANGUAGE TEACHING (ELT)

ELT 525 Foundations of Teaching English as a Second Language 3 cr
A comprehensive survey of current research, methodology and materials in the field of English as a Second Language and historical, philosophical, political, legal, social, and educational issues that have contributed to policy regarding public school services for language minority populations.

ELT 530 Methods and Materials of Teaching ESL 3 cr
Techniques of teaching English as a second language will be introduced and applications explored. Acquaints students with methodology and materials, with instruction on the preparation of audio and visual teaching aids, lesson plans, and the use of educational technology, behavioral objectives, state ESOL objectives, and teaching strategies for the ELL student in the ESL or mainstream classroom.

ELT 545 Cross-Cultural Understanding of Teaching ELL's 3 cr
Investigates the roles of language and culture in education. Addresses the social processes involved in the second language acquisition, including developmental influences, influences of home language and culture, cultural variation, home vs. school cultural differences, and working with parents/family of ELL students.

ELT 553 Language Assessment and Evaluations of ELL Students 3 cr
Selection, administration, and interpretation of measurement instruments. Includes entry and placement procedures, language proficiency/ achievement testing, linguistic and cultural aspects of intelligence testing, multiple intelligence assessment, ELL student assessment in the mainstream classroom, and application of testing to instruction.

ELT 558 Applied Linguistics for the Teachers of ELL's 3 cr
This course provides knowledge of linguistics including English syntax, semantics, pragmatics, morphology, phonemics, and phonology as applied to teaching English Language Learners. Students will review theories in first and second language acquisition. Students will apply linguistic theory, issues in sociolinguistics, psycholinguistics, and neurolinguistics, to teach English to ELLs with emphasis on pronunciation, intonation, and structural analysis of English and contrastive analysis of English and non-English linguistic systems.

ELT 595 Internship in ESOL 3 cr
300 hours of supervised on-the-job experience in teaching English to speakers of other languages (ESOL) in P-12 settings. Interns are engaged in the full scope of teaching activities including planning, delivering lessons, evaluating students, and conducting managerial tasks related to teaching English as a Second Language. Teaching experience will be accompanied by scheduled observations and discussions to analyze and evaluate each student's internship experience.

EMERGENCY MEDICAL SERVICES (EMS)

EMS 100 Cardiopulmonary Resuscitation (CPR) 1 cr
Cardiopulmonary Resuscitation (CPR) emphasizes the scope and magnitude of cardiovascular disease causes of sudden death, and the effects of prudent heart living as a tool to reduce risk factors associated with cardiovascular disease.

The skills component identifies and measures competence in one-person CPR, two person CPR, infant and child CPR, and management of airway obstruction. Course completion cards are issued by the American Heart Association. Special fee.

EMS 104 First Aid/CPR 1 cr

This American Heart Association course includes the basics of First Aid and Cardiopulmonary Resuscitation (CPR) for adults, children and infants. Course content includes instruction on recognition and management of medical and trauma emergencies including environmental emergencies. The skills component includes competence in one-person CPR, infant and child CPR and management of airway obstruction as well as skills associated with trauma and medical emergencies. Course completion cards are issued by the American Heart Association. Special fee.

EMS 110 Emergency Medical Responder 3 cr

A skills approach in helping the student to intervene in any medical or traumatic emergency situation before the emergency personnel arrive. Emphasis is placed on care of the airway, CPR, control of bleeding, splinting and bandaging, and overall management. Clinical rotations include emergency department and ambulance. American Heart Association Healthcare Provider CPR certification will be awarded. Successful completion of this course permits the student to sit for the National Registry exam for Emergency Medical Responder. Upon successful completion of the National Registry exam, the student may apply for a license with the Alabama Department of Public Health as an Emergency Medical Responder. Special fee.

EMS 112 EMT Emergency Care 6 cr

Includes all required modules of the 2009 National EMS Education Standards Curriculum. Topics include pathophysiology, patient assessment, airway management, hemorrhage control, management of fractures and trauma, care of individuals with special needs, emergency childbirth, care of infants and children, medical emergencies, environmental emergencies, transportation of the sick and injured, operations and radio communications. Pre-requisite: AHA BLS for Healthcare Providers. Co-requisite: EMS 113 and 115.

EMS 113 EMT Skills Lab 1 cr

Emergency Medical Technician skill practicum. Designed to allow EMT students extensive practice of required psychomotor skills. Co-requisite: EMS 112 and EMS 115. Special fee.

EMS 115 EMT Clinical Internship 1 cr

Prehospital care and transportation of the sick and injured using principles of basic life support, correlated with emergency department experience. Clinical time is distributed between emergency departments and ambulances. Co-requisite: EMS 112 and EMS 113. Special fee.

EMS 140 Advanced EMT 6 cr

This course includes theoretical concepts and competencies outlined in the National EMS Education Standards for Advanced EMT's. Major topical areas include EMS Operations, Airway Management, Assessment and Management of the Medical and Trauma Patient, Pharmacology for the A-EMT, Public Health and Life Span Development, among others. Co-requisite: EMS 141 and EMS 143.

EMS 141 Advanced EMT Skills Lab 1 cr

This course is designed to integrate previously learned theory on advanced pre-hospital assessment, treatment and documentation of the medical and traumatic emergency patient. The course includes psychomotor skills and competencies outlined in the DOT's National EMS Education Standards for Advanced EMTs. Co-requisite: EMS 140 and EMS 143. Special fee.

EMS 143 Advanced EMT Internship 2 cr

Supervised clinical and field experiences emphasizing patient care in the hospital and out-of-hospital environments. Time distributed between hospital emergency departments, fire rescue departments, and ambulance services, among others. Co-requisite: EMS 140 and EMS 141. Special fee.

EMS 200 Human Systems and Pathophysiology 3 cr

An overview of the human body systems and disease processes. Emphasis is placed on the functions of human systems and subsystems relative to pathophysiology. Includes concepts of pathophysiology included in the National Standard Curriculum for the Paramedic and the requirements set forth by the Alabama Department of Public Health.

EMS 210 Medical Terminology 3 cr

Medical vocabulary including prefixes, suffixes and their etymological derivation. Proper pronunciation stressed as well as logic, grammar, and spelling. Course includes an overview of human anatomy and physiology.

EMS 212 Paramedic Foundations 3 cr

This course introduces issues related to the practice of pre-hospital advanced life support as a career, with a focus on issues common to all health care professions. Content areas include: paramedic roles and responsibilities, well-being of the paramedic, illness and injury prevention, medical-legal-ethical issues, therapeutic communication, pharmacology and advance airway management. Upon course completion, student will have met the objectives as outlined in the National Standard Curriculum for the Paramedic.

EMS 214 Introduction to EMS Cardiology 3 cr

Rhythm interpretation in Lead II EKG. Rapid recognition, defibrillation and/or therapeutic management of potentially lethal rhythms and myocardial infarction. Objectives include twelve lead placement and basic rhythm recognition. Pre-requisites: AEMT and EMS 200 or BMD 114 and 115.

EMS 216 Patient Assessment/ Management and EMS Operations 3 cr

Includes history taking, physical examination, clinical decision making, communications, documentation, assessment-based management of medical and trauma patients, ambulance operations, incident command rescue, Hazmat and crime scene awareness.

EMS 217 Paramedic Clinical I 3 cr

Supervised clinical experiences emphasizing patient care in the hospital and outpatient clinical settings as outlined in the National Standard Curriculum for the Paramedic. Pre-requisites: AEMT, EMS 200 or BMD 114 and 115. Special fee.

EMS 240 EMS Response to Special Populations 3 cr

This course relates pathophysiology and assessment findings to the formation of field impressions and treatment plans specific to special populations. Subject matter will include gynecology, obstetrics, abuse and assault, neonatology, pediatrics, special needs and the geriatric community. Upon course completion, students will have met the objectives for special populations as outlined in the National Standard Curriculum for the Paramedic.

EMS 242 Paramedic Emergency Care I 3 cr

Includes pathophysiology, assessment and management of patients suffering from pulmonary and cardiovascular diseases. Additional modules may be added in accordance to standards and guidelines in the National Standard Curriculum for the Paramedic and the American Heart Association. Student will receive an ACLS provider certification upon successful completion.

EMS 244 Paramedic Emergency Care II 3 cr

Includes pathophysiology, assessment and management of patients suffering from medical emergencies not included in EMS 240 and EMS 242 in accordance to the National Standard Curriculum for the Paramedic.

EMS 245 Paramedic Skills Lab 1 cr

Advanced out-of-hospital practicum. Designed to integrate all previously learned theory, management concepts and behavioral objectives as outlined in the National Standard Curriculum for the Paramedic. Special fee.

EMS 247 Paramedic Clinical II 2 cr

Supervised clinical experiences emphasizing patient care in the hospital and outpatient clinical settings as outlined in the National Standard Curriculum for the Paramedic. Special fee.

EMS 270 Pediatric Advanced Life Support 3 cr

Course based on American Heart Association's Emergency Cardiovascular Care program. Includes assessment and management of pediatric cardiovascular and respiratory emergencies. Upon successful completion, the student will receive PALS provider certification. Recommended for health care providers and health care provider students. Pre-requisite: EMT 100 or equivalent (BLS-HCP). Special fee.

EMS 280 Advanced Cardiac Life Support 3 cr

Course based on American Heart Association's Emergency Cardiovascular Care program. Includes in depth review of all cases required for a full ACLS course. Recommended for health care providers and health care provider students. Upon successful completion, the student will receive ACLS certification. Pre-requisite: EMS 100 or equivalent (BLS-HCP). Special fee.

EMS 295 Paramedic Field Internship 6 cr
Supervised field experiences with an out-of-hospital advanced life support service emphasizing patient care and team leadership skills as outlined in the National Standard Curriculum for the Paramedic. Special fee.

EMS 296 Special Topics in EMS 1-3 cr
Selected topics in Emergency Medical Services and Emergency Response Training. Topics will vary according to needs and interest of students. Course may be repeated for credit when content varies.

EMS 297 Comprehensive Review and Exams 1 cr
Culmination of paramedic education. Includes practical skills lab designed to prepare the student for state licensure exams. A final practical and written exam will be administered as a final evaluation of student progress. Special fee.

EMS 298 Directed Studies in EMS 1-3 cr
Selected topics in Emergency Medical Services and Emergency Response Training. Topics will vary according to needs and interest of students. Course may be repeated for credit when content varies.

EMS 310 Introduction to EMS Systems 3 cr
This course provides students with an introduction to Emergency Medical Services (EMS) Systems. Theoretical concepts and issues will be discussed and examined in order to provide students with a conceptual basis for understanding and analyzing EMS systems and organizations. Particular emphasis will be placed on system components, system integration and the roles and responsibilities of management and leadership in EMS organizations.

EMS 315 EMS Administration 3 cr
This course provides a general overview of management and administrative functions required of EMS managers today including planning, directing, budgeting, staffing and evaluation. Particular emphasis will be placed on issues relating to human resources, EMS operations, and organizational planning.

EMS 320 EMS Law and Legal Issues (W) 3 cr
This course will provide a general overview of the origins of law in the United States with particular emphasis on health laws and regulations affecting pre-hospital providers. Topics include issues relating to malpractice, litigation, consent and refusal of medical treatment, advanced directives, patient confidentiality, and expert witness preparation, among others.

EMS 325 EMS Instructional Methods in EMS 3 cr
This course presents theoretical and practical foundations necessary for entry level EMS instructors and coordinators. Topics include instructor roles and responsibilities, learning theory, lesson plan development, test writing and validation, and program evaluation. Additional emphasis will be placed on instructional techniques for the adult learner.

EMS 340 Disaster Management and Event Planning 3 cr
Considerations of the theoretical and practical foundations necessary to manage incidents involving multiple casualties and multiple agencies as well as the pre-planning and management of other large scale events. Topics include disaster planning, incident command, WMD, response issues, and scene control, among others.

EMS 350 Critical Care Paramedic 3 cr
This course provides paramedics with advanced skills and knowledge in critical care medicine. Students successfully completing this course and its subsequent internship (EMS 375) will be eligible to sit for national certification as a Critical Care Paramedic.

EMS 375 Critical Care Paramedic Internship 3 cr
An advanced clinical internship course for licensed paramedics who have successfully completed EMS 350. Internship is conducted in an approved critical care setting or facility. Successful completion of this course allows the student to sit for national certification examination as a Critical Care Paramedic.

EMS 401 Seminars in Health Professions 3 cr
This course is designed to provide students with an overview of different health professions, their scope of practice and also to provide information about health administration.

EMS 410 Concepts of Professional Paramedic Practice 6 cr
This bridge course is designed for licensed (or nationally certified) paramedics who are admitted to the Department's Paramedic to BS in EMS Track. This course provides critical updates and information related to paramedic practice and enhances the student's overall patient assessment and critical thinking skills. Focus of the course is on selected theories and concepts integrated throughout the curriculum. Additional emphasis is on the professional roles of Paramedics. Pre-requisite: Acceptance into the Paramedic to BS in EMS Track.

EMS 440 Health Insurance and Managed Care in EMS 3 cr
This course provides an overview of the basic concepts and principles in the health insurance and managed care environments. Particular emphasis will be placed on issues relating to the costs, quality and access to emergency medical services. Topics include Medicare and Medicaid reimbursement, Managed Care contracting, and EMS Quality Management, among others.

EMS 445 EMS Research (W) 3 cr
An introduction to basic research methods and basic statistical procedures used in Emergency Medical Services research. Students will use this information to assist them with reading, interpreting and evaluating articles in the pre-hospital healthcare literature.

EMS 460 Issues and Trends in EMS 3 cr
Explores issues and trends at the federal, state and local levels facing EMS leaders and EMS organization. Particular emphasis is on new and proposed programs and policies which affect pre-hospital healthcare providers.

EMS 475 EMS Internship 3 cr
Structured field experience in an EMS administration, management or educational environment; observation of leadership processes within an EMS organization; application of EMS leadership theory and techniques.

EMS 494 EMS Directed Studies 1-3 cr
Student completes an individual project in a specific EMS area under the guidance and supervision of an EMS faculty member.

EMS 495 EMS Comprehensive Review and Exam 1 cr
The comprehensive examination is the capstone of the Emergency Medical Services degree program. A written examination based on the program objectives of the EMS degree program will be administered as a final evaluation for the student's progress.

EDUCATIONAL PSYCHOLOGY (EPY)

EPY 251 Human Growth and Development 3 cr
A study of the physical, mental, social, and emotional development of young people from conception to late adolescence.

EPY 315 The Adolescent in the School 3 cr
Assists future educators to understand adolescent development and behavior of students in the middle and high schools. Issues and problems include: The school's role in the social, emotional, and intellectual development of middle and secondary school students from diverse, multicultural backgrounds; student-teacher and peer relationships; and the academic and vocational planning process.

EPY 351 Human Growth and Development 3 cr
A study of the physical, mental, social, and emotional development of young people from conception to late adolescence. Includes a school-based field experience component. Co-requisite: EDF 315. Requires clear background check.

EPY 355 Evaluation of Teaching and Learning 3 cr
The application of formative and summative evaluative concepts in building and interpreting tests in the educational setting.

EPY 455* Evaluation of Teaching and Learning (W) 3 cr
The application of formative and summative evaluative concepts in building and interpreting tests in the educational setting.

EPY 490 Special Topics 3 cr
Study of a significant topic, theory, model, or problem in behavioral studies. May be repeated once for credit when the content varies.

EPY 494 Directed Study 1-3 cr
Directed individual study and research. Pre-requisite: Consent of department chair (No more than two directed studies can be counted toward the Bachelor's degree and Class B Certificate.)

EPY 502 Psychological Principles of Learning 3 cr
Psychology of learning as it pertains to education. Emphasis is on both the practical application of learning principles in educational and training classroom situations and theories of learning.

EPY 521 Human Development and Behavior 3 cr

A study of the crucial developmental principles of human development and behavior focusing on: developmental tasks over the life span; growth patterns of the diverse subcultures emphasizing attitudes, values, and learning styles: family, school, and community impact on people of all ages living and growing in a multicultural society.

EPY 525 Assessment and Research in Education 3 cr

This course presents the basic concepts for teachers-in-training, in the areas of research and assessment. The research skills should enable course participants to read and interpret scholarly works in their field, so that they can apply concepts and insights in their professional work. The assessment skills enable the teachers-in-training to construct valid and reliable assessment instruments, to interpret standardized test scores of their students, and to use disaggregated data to improve instruction and assessment.

EPY 555 Tests, Measurement, and Evaluation 3 cr

Understanding and interpreting the meaning of test scores. Technical qualities desired in a test. Techniques for obtaining information about clients and/or students. Using this information in counseling, consulting, and teaching. Cultural bias in tests. Problems of testing and obtaining information about clients and/or students with diverse backgrounds.

EPY 556 Individual Intelligence Testing: The Wechsler Intelligence Scales 3 cr

Includes basic theories of intelligence, basic concepts and principles of intelligence testing, and extensive practice in administering, scoring, and interpreting the Wechsler Adult Intelligence Scale, the Wechsler Intelligence Scale for Children, and the Wechsler Preschool and Primary Scales of Intelligence in a wide variety of educational settings. Competencies in consulting with other professional personnel and parents will be emphasized. Pre-requisite: A grade of "B" or above in EPY 555.

EPY 557 Individual Intelligence Testing: The Stanford-Binet Scale 3 cr

Includes basic theories of intelligence, basic concepts and principles of intelligence testing, and extensive practice in administering, scoring, and interpreting the Stanford-Binet Scale in a wide variety of educational settings. Competencies in consulting with other professional personnel and with parents will be emphasized. Pre-requisite: A grade of "B" or above in EPY 555.

EPY 558 Individual Intelligence Testing: The Kaufman Scales 3 cr

The Kaufman Assessment Battery for Children and the Kaufman Adolescent and Adult Scale are the basic instruments used for extensive practice in administering, scoring, and the interpretation of intelligence. The various theories of intelligence, especially those of Horn and Cattell, Luria, Sperry and Neisser are emphasized. Pre-requisite: EPY 555.

EPY 590 Special Topics 3 cr

Guided supervision in the completion of learning tasks in educational psychology such as program design and revision, study of a significant topic, theory, model, and supervision of selected learning activities to acquire specific counseling and testing skills.

EPY 594 Directed Study and Research 1-3 cr

Students explore through directed study problems and issues of special interest or significance in Educational Psychology. No more than three semester hours of any departmental 594 courses can be accepted toward a degree program. Pre-requisite: Consent of the Department Chair.

EPY 602 Advanced Theories of Learning 3 cr

A study of the major psychological theories, models, research, and principles that apply to the teaching and learning process. Special attention will be given to cognitive approaches. Pre-requisite: A grade of "B" or above in EPY 502 or equivalent.

EPY 610 Individual Differences Among Learners 3 cr

Examination of individual and developmental differences as related to learning, performance, and behavior. Intelligence, attitudes, cognitive and learning styles, anxiety, prior knowledge, and locus of control are among the topics discussed. Models and methods for using learner characteristics in instructional design, teaching practices, and research are considered.

***Only for students admitted to teacher candidacy.**

EARTH SCIENCES (ES)

ES 492 Honors Earth Sciences Seminar - H 3-4 cr

Multidisciplinary (Geography, Geology, Meteorology) topics not covered in current Department of Earth Sciences courses. Topic announced prior to registration. Pre-requisites: Acceptance into the University Honors Program, the Earth Sciences Departmental Honors Program, or by permission of the Chair of Earth Sciences. (Completion of this course is required for Earth Sciences Departmental Honors students.)

ES 497 Senior Thesis Prospectus - H 2 cr

With the guidance and advice of a Senior Thesis Committee, students will identify a suitable research project in Earth Sciences (Geography, Geology, Meteorology) and develop a thesis prospectus to conduct this research during their senior year. The Senior Thesis prospectus will be evaluated by the committee which must pass it before thesis research can formally begin. Pre-requisites: establishment of a senior thesis committee; acceptance into the Departmental Honors Program.

ES 499 Senior Honors Thesis-H 3 cr

With the guidance and advice of a Senior Thesis Committee, students will carry out an in-depth research project in Earth Sciences (Geography, Geology, Meteorology) according to an accepted Thesis Prospectus during their senior year. This course will be repeated for up to six (6) credits. Pre-requisites: Geography, Geology, Meteorology major, senior status; acceptance into the Departmental or University Honors Program; satisfactory completion of ES 497 or HON 301.

ENGLISH AS A SECOND LANGUAGE (ESL)

ESL 014 Advanced ESL Structure 3 cr

An in-depth study of syntax and grammar.

ESL 015 Advanced ESL Reading and Vocabulary 3 cr

Emphasis on developing speed, comprehension and vocabulary through reading of a variety of texts.

ESL 016 Advanced ESL Composition 3 cr

Designed to give a foundation in composition and to serve as a preparatory course for English 101. It consists of three areas of concentration: sentence-level problems, paragraph organization and essay organization and development.

ESL 017 English for Academic Success 3 cr

Emphasis is on classroom oral presentations using PowerPoint. Library research skills, note-taking, lecture comprehension and other skills that international students need for academic success are also taught.

ESL 018 Advanced ESL Oral Skills 3 cr

Emphasis is placed on communication, both oral and aural, in a variety of situations. Designed to enhance fluency in listening and speaking, and includes note-taking on recorded lectures and making class presentations.

ESL 019 ESL Pronunciation 3 cr

Concentration is on improving pronunciation through the study of American English phonemes, stress, rhythm and intonation.

ESL 022 U.S. Culture 3 cr

Students are sensitized to the difficulties inherent in cross-culture encounters, and they are provided with information about American life to help them in their cultural adjustment.

ESL 029 Business English 3 cr

The focus is primarily on acquisition of English business vocabulary through an examination of American business procedures and practices. Students also practice composing resumes, memos, reports, business letters and other business writing.

ENVIRONMENTAL TOXICOLOGY (EXT)

EXT 515 Environmental Toxicology 3 cr

Introduction to the scientific and technical principles of toxicological processes in the context of the ecosystem. Students will understand both the types of major environmental toxicants and how to properly evaluate their toxicity and factors that influence toxicity. Students will recognize and coherently formulate risk assessment and by using the tools and techniques acquired, develop and communicate proposals for remedy.

EXT 583 Entrepreneurship in Science 3 cr

This course will blend a variety of subjects from technical writing to patent law to laboratory

development in an effort to provide a mechanism for scientists to transistion technology from bench top to commercialization by providing information regarding financial resources coupled with research and laboratory development.

EXT 594 Directed Studies in Environmental Toxicology 1-3 cr

Students pursue a research project under the direction of a graduate faculty member. The course requires special permission from the program director or the Advisory Committee, to ensure that the study is in line with the curriculum that the student is pursuing.

EXT 599 Research Thesis in Environmental Toxicology 1-6 cr

Students are responsible for an original research project under the direction of a member of the graduate faculty. Prerequisite: Approval of research prospectus by the Advisory Committee.

FINANCE (FIN)

FIN 300 Personal Finance 3 cr

General principles and techniques of finance as applied to personal business transactions and the management of personal funds. Finance majors may not count this course as a finance elective.

FIN 305 Introduction to Finance 3 cr

A survey course covering corporate financial management. Basic concepts such as interest rates, time value of money, cost of capital, and risk are discussed and applied to stock, bond and long-term investment valuation. The course also considers working capital management, short-tem financial management, and financial planning. This course is for non-business majors only. Pre-requisites: ACC 212, ECO 215, BUS 245.

FIN 315 Business Finance 3 cr

A survey course covering corporate financial management. Basic concepts such as interest rates, time value of money, cost of capital, and risk are discussed and applied to stock, bond and long-term investment valuation. Guidelines are developed for corporate financial decision-making in the areas of capital structure policy, dividend policy, long-term financing, corporate control, and working capital management. The impact of ethical considerations and global financial markets are discussed. Pre-requisites: ACC 212, ECO 215, MA 120, BUS 245.

FIN 332 Multinational Finance 3 cr

Analysis of financial management of multinational firms. Introduces the environment of international capital and foreign exchange markets and examines the effects of the international business environment on risk, capital budgeting, working capital management, and capital structure decisions of the firm. Pre-requisite: FIN 315.

FIN 343 Money Markets and Financial Institutions 3 cr

An examination of the major financial institutions operating in our economy, and the environment in which they operate. In light of the changing environment of the financial institutions area, the changing roles of the various financial markets, major legislation, and the regulatory agencies are also studied in this course. Pre-requisite: FIN 315 or consent of instructor.

FIN 345 Principles of Insurance 3 cr

Examines risks facing the individual and business organizations and applications of public and private insurance to reduce or eliminate such risks. This is a survey course involving all classes of insurance.

FIN 350 Financial Statement Analysis 3 cr

In-depth coverage of the principles and practices of effective analysis of the financial statements of firms for the purpose of understanding (1) the economic and financial characteristics and current conditions of the firm, (2) particular strategies the firm may select with which to compete, and (3) the accounting principles and procedures underlying the financial statements. The course integrates concepts form accounting, economics, finance, and management. Pre-requisite: FIN 315.

FIN 410 Intermediate Business Finance 3 cr

In-depth coverage of financial planning and management, including capital budgeting, financial structure decisions, working capital management, valuation, dividend policy and other topics. Pre-requisites: FIN 315, BUS 255.

FIN 411 Problems in Business Finance (W) 3 cr

Actual and simulated cases in finance from business and industry; includes businesses of all sizes. Pre-requisites: EH 101 and EH 102 with a minimum grade of "C" and FIN 343, FIN 350, FIN 410, FIN 420.

FIN 420 Investments 3 cr

Survey of the characteristics of investment alternatives and the investment environment, including market operations and regulations, sources and uses of information, and an introduction to capital market theory. Pre-requisites: FIN 315, BUS 245.

FIN 421 Security Analysis and Portfolio Management 3 cr

The development of the theory and practice of security analysis and portfolio management. Security analysis involves the fundamental determination of security values through economic, industry, and firm analysis. Portfolio management addresses asset selection and allocation for the construction and maintenance of portfolios that meet specific investment objectives in a risk-return context. Pre-requisite: FIN 420.

FIN 430 Derivative Securities 3 cr

Covers principles of Options and Futures contracts and their economic functions. Options: basic strategies; combinations and spreads; pricing; and the various types of contracts. Futures: fundamentals of the market; contract specifications and their uses. Program trading and portfolio insurance. Pre-requisite: FIN 315.

FIN 445 Life and Disability Insurance 3 cr

Principles and practices of insurance used for family and income protection against premature death and disability; retirement and pension plans including group insurance and social security. Pre-requisite: FIN 315.

FIN 470 Depository Institutions Management I 3 cr

Analysis of depository institution management processes focusing on management of capital, assets, and liabilities with emphasis on the regulatory environment in which depository institutions operate. Pre-requisites: FIN 315

FIN 471 Depository Institutions Management II 3 cr

In-depth analysis of consumer, real estate, commercial, and agricultural lending areas of depository institutions. Pre-requisite: FIN 315.

FIN 490 Special Topics 3 cr

Designed to provide senior students an opportunity to study selected topics of particular interest. Pre-requisites: FIN 315 and approval of department chair.

FIN 492 Seminar: Finance 3 cr

Oral reports on readings of various aspects of business finance. Pre-requisites: FIN 315 and Finance major.

FIN 494 Directed Study in Finance 3 cr

Primarily designed to give superior students an opportunity to study selected topics of particular interest. Grades are awarded on a satisfactory/unsatisfactory basis. Pre-requisites: FIN 315, FIN 343, FIN 350, FIN 410, FIN 420. Cumulative GPA of at least 2.5 and approval of department chair.

FIN 496 Finance Internship 3 cr

The internship program is designed to give students practical experience in their field of study. Students complete directed projects under the supervision of Department Chair. No more than three hours of internship credit may be counted toward a degree in the Mitchell College of Business. Pre-requisites: Junior or Senior standing, declared major in Finance, overall GPA of at least 2.5, and Internship Agreement signed by Department Chair.

FIN 508 Introduction to Corporate Finance 3 cr

Coverage of fundamental finance concepts and techniques. Major topics include time value of money, risk, asset valuation including fixed income securities and stock, financial markets, term structure of interest rates, risk management (derivatives), and multinational financial management issues. Cases will be used as appropriate.

FIN 509 Intermediate Corporate Finance 3 cr

Theory and practice of assembling, investing, and managing capital. Major topics include estimating a firm's cost of funds, basic and advanced capital budgeting techniques including payback period, NPV, IRR, and MIRR, capital structure analysis, dividend policy and practice, financial statement analysis, financial planning and forecasting, and short-term financial management. Cases will be used as appropriate.

FIN 590 Special Topics 3 cr

Designed to provide graduate students an opportunity to study selected topics. (A student may count no more than 3 hours of Special Topics in the M.B.A. degree program). Pre-requisite: Approval of the department chair.

FIN 594 Independent Study in Finance 3 cr

Reading and research on selected topics. Conference and formal research report required. Pre-requisite: Approval of the department chair.

GEOGRAPHY (GEO)

GEO 101 Atmospheric Processes and Patterns 3 cr

Introduces students to the natural science branch of geography. Emphasizes Earth-Sun relationships, weather and climate. **Core Course**. Co-requisite: GEO 101L.

GEO 101L Atmospheric Processes and Patterns Laboratory 1 cr

Laboratory exercises associated with GEO 101. GEO 101 must be taken concurrently. Together, GEO 101 and GEO 101L count as one laboratory science course, partially fulfilling general education requirements. Fee.

GEO 102 Landscape Processes and Patterns 3 cr

Introduces students to the natural science branch of geography. Emphasizes spatial patterns and processes related to natural landscape regions and landforms. **Core Course**. Co-requisite: GEO 102L.

GEO 102L Landscape Processes and Patterns Laboratory 1 cr

Laboratory exercises associated with GEO 102. GEO 102 must be taken concurrently. Together, GEO 102 and GEO 102L count as one laboratory science course, partially fulfilling general education requirements. Fee.

GEO 114 Introduction to Human Geography 3 cr

This course introduces students to the social sciences branch of geography. Emphasis is placed on the location, spatial arrangement, and spatial interaction of the human environment which includes: population, culture, geopolitics, economic activity, and settlements. **Core Course**.

GEO 115 World Regional Geography 3 cr

A survey of the major regions of the world, excluding North America, and the interrelationship of environmental, cultural, economic and political factors that characterize each. **Core Course**.

GEO 201 Geography Orientation 1 cr

This 1 credit hour course will cover topics that are important to geography students, such as: which geography courses to choose, the major sub-disciplines of geography, and career choices available for geography majors. You will meet the Geography faculty as they give brief overviews of the courses they teach and their research interests. Field trips, which will generally take place during the class time, are included in the course and will showcase examples of the research interests of faculty members. Pre-requisite: GEO 101, GEO 102, or GEO 114. Core Course.

GEO 310 Environmental Earth Science 3 cr

A spatial perspective on major global environmental problems. Topics include population pressure; loss of biodiversity; ozone depletion; global warming; water, energy and mineral resources, food supplies, waste disposal, geologic hazards, and political/economic forces (identical to GY 310). Pre-requisite: At least one of the following - GY 111, GEO 101, GEO 102, permission of instructor.

GEO 312 World Economic Geography (W) 3 cr

Emphasis is placed on the location, spatial distribution, and spatial interaction of economic activities within a global context. Topics covered include population, natural resources, primary, secondary, and tertiary activities, development and international trade and aid. Students will write technical reports using word processing and spreadsheet software. Pre-requisites: GEO 114 and EH 102 or EH 105.

GEO 313 Geography of U.S. and Canada 3 cr

An analysis of the environmental, historical, cultural and economic factors that create the spatial patterns, development processes and distinctiveness of Canada and the United States.

GEO 314 Geography of Europe 3 cr

An analysis of the environmental, historical, social and economic factors that create the diversity of countries and their unique spatial characteristics on the subcontinent of Europe. Pre-requisite: At least one of the following - GEO 101, GEO 102, GEO 114, or GEO 115.

GEO 315 Geography of Latin America 3 cr

A systematic survey of Latin American landscapes. Attention is directed to natural resources, human activities, and regional differentiation. Pre-requisite: At least one of the following - GEO 101, GEO 102, GEO 114, or GEO 115.

GEO 320 Alabama Geography (W) 3 cr

Spatial study of physical and human features in Alabama. Includes geomorphology, climate, vegetation, agriculture, development, population, and environmental issues within the state. Pre-requisites: EH 102 or EH 105 and at least one of the following - GEO 101, GEO 102, GEO 114, or GEO 115, or permission of instructor.

GEO 321 National Parks Conservation (W) 3 cr

An analysis of the motives and processes for establishing national parks and nature reserves, the primary conservation and preservation issues they have, and the influences of ecology, politics, and culture on their planning and management. U.S. national parks are emphasized. Pre-requisites: EH 102 or EH 105 and at least one of the following - GEO 101, GEO 102, GEO 114 or GEO 115.

GEO 331 Computer Graphs and Maps - C 4 cr

Introductory review of the application of computers to the production of graphs and thematic maps for geographical analysis. Pre-requisites: GEO 102 and GEO 102L, and CIS 150, or permission of instructor. Fee. **Core Course**. Meets computer proficiency requirement for Geography majors.

GEO 332 Remote Sensing I 4 cr

Interpretation of maps, air photos and satellite images (identical to GY 332). Pre-requisite: GEO 102 and GEO 102L or permission of instructor. Fee. **Core Course**.

GEO 341 Climatology (W) 3 cr

Analysis of global climate as aggregate weather. Component elements, factors controlling distribution, resulting area patterns, and climatic classification are studied (identical to MET 341). Pre-requisite: GEO 353 or MET 353. Minimum grade of "C" needed in course Pre-requisite. Fee.

GEO 365 Urban Geography 3 cr

Concentrates upon the evolution, and function of the urban spatial system and upon the internal spatial structure of an urban area's residential, commercial and industrial land use. This course also introduces basic concepts and strategies of urban and regional planning with a focus on the domestic realm. Pre-requisite: GEO 114 or GEO 115, or special permission.

GEO 370 International Tourism 3 cr

The study of the components of the tourism industry, their spatial distribution, the environmental and cultural effects of tourism, and the requisites and techniques for planning tourism development. Pre-requisite: At least one of the following - GEO 101, GEO 102, GEO 114, GEO 115.

GEO 405 Natural Hazards and Disasters 3 cr

This 3 credit hour lecture course presents an overview of natural hazards and disasters from a scientific perspective. The course will focus on the occurrence and impact of environmental hazards, such as volcanoes, earthquakes, tsunamis, floods, mass movements, and coastal hazards. Mitigation techniques used to make the human environment more resilient against natural hazards are also covered. In addition, the viewpoint of hazard and emergency managers toward natural disasters will be studied. Pre-requisites: GEO 102 or GY 111.

GEO 410 Biogeography 3 cr

Analysis of spatial patterns of life on Earth. Biogeography emphasizes the influence of the physical environment, paleogeography, and past and possible future climate change on biomes and biogeographic realms. Pre-requisite: GEO 101 or permission of instructor.

GEO 411 Soils 3 cr

A review of soil formation, processes and properties (identical to GY 411). Pre-requisite: GEO 102 or permission of the instructor.

GEO 412 Physiographic Regions of North America (W) 3 cr

The study of the major and minor natural regions of the North American continent, from Alaska to the Mexican border, including the Caribbean area. The course will focus on the different physically defined regions of North America, studying the homogenous variables that make each region distinct, including the topography, vegetation, soils, surface features, and past climates. Pre-requisites: EH 102 or EH 105 and GEO 102 and GEO 102L or GY 111 and GY 111L.

GEO 435 Research Methods in Geography (C) 3 cr

This course serves as an introduction to geography as a research discipline. Emphasis is placed on geographic problem solving, data collection, data analysis, and reporting. Micro computer oriented statistical and mapping packages will be used to analyze geographic data. Pre-requisites: Junior Standing, CIS 150, ST 210. Fee. **Core Course**.

GEO 440 Coastal Zone Management 2 cr
A review of ecological features and of management policies for coastal communities with a description of relevant federal and state programs. Taught only at Dauphin Island Sea Lab.

GEO 441 Coastal Climatology 2 cr
Study of the controlling factors and features of the world's climates, with particular attention to coastal areas, and application and interpretation of climate data. Taught only at Dauphin Island Sea Lab.

GEO 480 Field Work in Geography (W) 3 cr
This course trains students in the collection and interpretation of field data. Information collected by measurements, observations, and interviews is integrated into a final written project report dealing with a specific local environmental problem. Pre-requisites: EH 102 or EH 105 and Senior standing. Fee. **Core Course**. This course serves as a capstone class for Geography majors.

GEO 490 Special Topics 2-4 cr
Geographic topics not covered in current geography courses. May be repeated when content varies for a maximum of 8 credit hours.

GEO 492 Seminar 1-3 cr
Departmental seminar investigating a selected field of geography. May be repeated when content varies for a maximum of 3 credit hours.

GEO 494 Directed Studies 1-4 cr
Independent research under the direction of a member of the geography faculty. No more than 8 hours of Directed Studies is allowed.

GEO 496 Internship in Geography 1-4 cr
On-the-job learning through occupational or professional work with an approved firm or agency. Open only to geography majors. No more than 4 hours of Internship credit is allowed.

GEO 590 Special Topics 1-6 cr
An in-depth course for advanced students in geography. Topics and titles will be selected to examine the subject matter in an area of current interest to students and in an area of particular faculty expertise. Includes specialized topics not currently listed in the **Bulletin** course offerings.

GEO 594 Graduate Directed Study Geography 1-4 cr
Independent research in Geography at the graduate level. May be used to learn new techniques or explore research questions of special interest under the direction of a member of the Geography graduate faculty. May be repeated, no more than 8 hours of directed studies is allowed.

GRADUATE INTERDISCIPLINARY STUDIES (GIS)

GIS 501 Responsible Conduct of Research 1 cr
This course is designed to expose future professionals to a variety of topics concerning Responsible Conduct in Research including issues concerning Research Integrity as well as standards and policies affecting research and life in Academia. The weekly sessions include lectures, open discussions, and analyses of case studies.

GERONTOLOGY (GRN)

GRN 290 Special Topics 3 cr
This designation is used for interdisciplinary courses on aging on a variety of subjects. This course does not replace any course in a single discipline. May be repeated as long as the topic changes, up to a maximum of six semester hours.

GRN 435 Health Inequalities Life Span 3 cr
This course examines differences in health status across the life span. The course will focus heavily on racial/ethnic and socioeconomic disparities in health applying a social determinants' of health framework. Issues that will be considered include how income, education, neighborhood conditions, access to health care, and other community factors shape opportunities to be healthy. The course is cross-listed as SY 435 and GRN 435 and has been approved as an elective for the Undergraduate Certificate in Gerontology and the interdisciplinary minor in Gerontology.

GRN 490 Special Topics 3 cr
This course is designated for upper division students and graduate students, particularly those pursuing studies for the Certificate in Gerontology. The course content focuses on interdisciplinary treatments of various topics on aging. This course does not replace any course in a single discipline. (Examples of Special Topics: Trends and Issues in Gerontology; Leadership and Advocacy in Gerontology; Housing and Lifestyle Changes over the Life Course). May be repeated as long as the topic changes, up to a maximum of six semester hours. Pre-requisite: SY 372.

GRN 494 Directed Studies 1-3 cr
Under the guidance of a faculty member, the student will pursue directed research or readings of an approved topic in Gerontology. May be repeated as long as the topic changes, to maximum of six semester hours. Requires permission of the Director of Gerontology. Pre-requisite: SY 372.

GRN 496 Internship: Gerontology 3 or 6 cr
This course is to provide a practicum experience in gerontology in a setting selected by the student and approved by the Program Director. The course emphasis is on the experiential learning process and outcomes. The undergraduate student will apply theoretical concepts in specific areas of interest related to aging and intergenerational relations. Interns will meet as a group three times during the semester for orientation, professional development, and evaluation activities. Pre-requisites: Completion of Core Courses in Gerontology Certificate Program (undergraduate) or Minor. Permission of Director of Gerontology. Proof of insurance is required. The 3 hour internship requires 100 contact hours; the 6 hour internship requires 200 contact hours.

GRN 535 Health Inequalities Life Span 3 cr
The main purpose of this seminar is to provide students with an understanding of how social factors contribute to racial/ethnic, socioeconomic and gender disparities in health and health care. We will examine how dyadic relationships such as interpersonal forms of discrimination, marriage, and social ties may contribute to health disparities. We will also examine the ways in which neighborhood and community context, as well as inequalities in socioeconomic stats materially shape health and access to health care services. The course is cross-listed as GRN 435/535 and SY 435/535 and has been approved as an elective for the Undergraduate/Graduate Certificate in Gerontology and the interdisciplinary minor in Gerontology.

GRN 594 Directed Studies in Gerontology 1-3 cr
Under the guidance of a faculty member, the student will pursue directed research or readings on an approved topic in Gerontology. May be repeated as long as the topic changes, up to a maximum of six credit hours. Requires permission of the Director of Gerontology.

GRN 596 Internship - Gerontology 3 or 6 cr
The course is to provide a practicum experience in gerontology in the setting selected by the student and approved by the Program Director. The course emphasis is on the experiential learning process and outcomes. The graduate student will apply theoretical concepts to leadership roles, conducting research and influencing social and health care policies related to aging and intergenerational relationships. Interns will meet as a group three times during the semester for orientation, professional development, and evaluation activities. Pre-requisites: Completion of at least two graduate courses in Gerontology. Proof of insurance is required. The 3 hour internship requires 100 contact hours; the 6 hour internship requires 200 contact hours.

GRN 597 Gerontology Teaching Apprenticeship 1-3 cr
Directed Studies/Apprenticeship that focuses on teaching Gerontology. The student will work directly with a member of the Gerontology graduate faculty to learn pedagogy, innovation in teaching, and course content that will equip the student for future teaching assignments. Many Ph.D. programs offer both Teaching Assistantships and Research Assistantships. Gerontology students need to show evidence that they have had some teaching-related experience to compete strongly for the TA position. This course is also appropriate for students who anticipate careers in teaching within the field of Gerontology (aging or intergenerational studies). Arrangements must be made prior to registration. Permission of the Program Director is required.

GENDER STUDIES (GS)

GS 101 Introduction to Gender Studies 3 cr
This course provides an interdisciplinary, multicultural overview of the concept of gender and gender roles in patriarchal society. The course examines the social construction of gender in our society and how that construction has shaped such areas as economics, politics, cultural/social values, and the impact upon women in historical and contemporary terms.

GS 290 Special Topics 3 cr
Study of selected topics with an area in gender studies. May be repeated for credit with content varies.

GS 390 Special Topics 3 cr
Advanced study of selected topics with an area in gender studies. May be repeated for credit when content varies.

GS 490 Special Topics 3 cr
Advanced study of selected topics with an area in gender studies. May be repeated for credit when content varies.

GS 492 Seminar 3 cr
Advanced study of selected topics in gender studies. May be repeated for credit when content varies.

GS 494 Directed Studies 1-4 cr
Directed research under the guidance of a Gender Studies faculty member. Special permission required.

GS 496 Internship 1-4 cr
Practical learning through occupational or community work with an approved agency dealing with gender-related issues. Readings and final report supervised by gender studies faculty. Special permission required.

GEOLOGY (GY)

GY 111 Physical Geology 3 cr
Materials that make up the Earth as well as the properties and geological processes that operate in the Earth. Special topics include plate tectonics, mineral chemistry, the rock cycle, sedimentary processes, metamorphism and geological map reading. **Core Course**. Co-requisite: GY 111L.

GY 111L Physical Geology Lab 1 cr
Laboratory course for Physical Geology. Co-requisite: GY 111. Fee.

GY 112 Earth History 3 cr
The origin and history of the Earth as seen in the rocks and their contained life record. Fee. **Core Course**. Co-requisite: GY 112L.

GY 112L Earth History Lab 1 cr
Laboratory course for Earth History. Co-requisite: GY 112. Fee.

GY 113 Honors Geoscience Field Work - H 3 cr
A two-week field course emphasizing the recognition and understanding of geologic processes in the field environment. The course is based in the Taos Ski Valley, New Mexico, with field trips ranging across northern New Mexico and southern Colorado during the interim session. Pre-requisites: GY 111, GY 112, or permission of instructor.

GY 301 Geomorphology 3 cr
Principles of landform development as it relates to specific processes (fluvial erosion, glacial erosion, etc.), construction of topographic base maps with Alidade/Total Station, GPS navigation and surveying, and rock/mineral resource evaluation. Pre-requisite: GY 111, or permission of instructor. Fee.

GY 302 Crystallography and Mineralogy 4 cr
Introduction to elementary crystallography, crystal chemistry, and atomic structure of minerals, as well as the identification, characterization, and use of common rock-forming minerals and important ore minerals. Pre-requisites: GY 111, GY 112, and CH 100 or CH 131, or permission of instructor. Fee.

GY 303 Igneous and Metamorphic Petrology 4 cr
The study of the formation and classification of igneous and metamorphic rocks. Pre-requisites: GY 111 and GY 302, or permission of instructor. Fee.

GY 304 Stratigraphy (W) 3 cr
The development of the stratigraphic column; correlation and field procedures. Pre-requisite: GY 112 and EH 102. Fee.

GY 305 Geophysics (C) 4 cr
Application of classical physics to the study of the Earth and the solution of problems in Earth sciences, including analysis of geomagnetics, the Earth's gravitational field, seismic analysis, sequence stratigraphy, well log interpretation, and applications to petroleum exploration. Pre-requisites: GY 111 and PH 114 or PH 201, or permission of instructor. Fee.

GY 310 Environmental Earth Sciences 3 cr
A spatial perspective on major global environmental problems. Topics include population pressure; loss of biodiversity; ozone depletion; global warming; water, energy and mineral resources; food supplies; waste disposal; geologic hazards and political/economic forces (identical to GEO 310). Pre-requisite: GY 111 or GEO 101 or GEO 102 or permission of instructor.

GY 332 Remote Sensing I 4 cr
Interpretation of maps, air photos and satellite images (identical to GEO 332). Pre-requisites: GEO 102 and GEO 102L or GY 301 or permission of instructor. Fee.

GY 401 Paleontology 3 cr
Major invertebrate fossil groups, their identification, and their geologic distribution. Pre-requisites: GY 112 and GY 112L, or permission of instructor. Fee.

GY 402 Sedimentary Petrology (W) 3 cr
A study of sediments and their classification, as well as sedimentary processes, petrography and diagenesis. Pre-requisites: GY 111, GY 112, EH 102, and GY 304 or permission of instructor. Fee.

GY 403 Structural Geology 4 cr
Study of the deformation of the internal Earth and the structures that result. Pre-requisites: GY 111, GY 301, and PH 114 or PH 201, or permission of instructor. Fee.

GY 411 Soils 3 cr
A review of soil formation, processes and properties (identical to GEO 411). Pre-requisite: GEO 102 or GY 301 or permission of the instructor.

GY 413 Coastal Geomorphology 2 cr
An introduction to coastal sediment processes and their applied coastal geomorphology with emphasis on waves, tides, sediments and their interactions including the impacts of anthropogenic influences. Taught only at Dauphin Island Sea Lab.

GY 420 Geostatistics 3 cr
Applied bivariate and multivariate statistics to problems in Geography, Geology and Meteorology; parametric and non-parametric procedures in correlation, regression, analysis of variance, etc. Time series analysis, trend surface analysis, kriging and analysis of spatial (map) data. Identical to GEO 420. Pre-requisite: MA 125 or ST 210. Fee.

GY 421 Applied Environmental Geology (W) 3 cr
A geological applications course designed to familiarize students with techniques used by environmental and engineering geologists in their studies of land use, land development and assessment of geological hazards. Material is illustrated with case studies from the Mobile area. Pre-requisite: GY 111 and EH 102. Fee.

GY 422 Sedimentary Geology 3 cr
A course examining sedimentation with emphasis on environments of deposition, sea-level and other controls on sedimentation in the rock record, and petroleum exploration. Pre-requisite: GY 111 and GY 112. Credit for both GY 422 and GY 544 will not be allowed. Fee.

GY 425 Hydrology 4 cr
Principles of sources, occurrences, and movement of ground-water. Surface and subsurface investigations of groundwater and elementary groundwater hydrology and chemistry. Pre-requisite: GY 111, or permission of the instructor. Credit for both GY 425 and GY 575 will not be allowed. Fee.

GY 426 Contaminant Hydrogeology 3 cr
Flow systems, mass transport in the vadose and saturated zones; advection and dispersion; transformation, retardation and attenuation of solutes; low temperature geochemical processes and kinetics of chemical reactions; contaminant modeling using finite difference-finite element methods. Pre-requisite: GY 425. Credit for both GY 426 and GY 576 will not be allowed. Fee.

GY 431 Optical Mineralogy and Crystallography 4 cr
Theory and use of the petrographic microscope in the recognition and identification of crystallographic and optical properties in non-opaque minerals. Pre-requisite: GY 302 or permission of instructor. Fee.

GY 433 X-Ray Analytical Methods 4 cr
Theory and use of X-ray diffraction systems as applied to crystallography, mineralogy, chemistry, and metallurgy. Pre-requisite: GY 302 or permission of instructor. Fee.

GY 446 Marine Geology 4 cr
A study of the geology of the ocean basins, with special emphasis on the continental shelves, their sediments, and sedimentary processes at work there. Pre-requisites: GY 111 and GY 112.

GY 450 Thin-Section Techniques 1 cr
A laboratory based course illustrating techniques employed by geologists to prepare thin-sections from geological materials. Students will

produce thin-sections and write up reports detaining the petrography of the samples examined. Pre-requisites: GY 302, GY 303 and GY 402 or permission of the instructor. Fee.

GY 480 Field Geology 6 cr

A six-week, summer field course on the methods of geologic surveying, the nature and construction of geologic maps and cross-sections, measurements of stratigraphic sections, and preparation of geologic reports. Pre-requisites: GY 303, GY 402, GY 403, and HS 170 or equivalent first aid course or permission of instructor. This course serves as a capstone class for Geology majors.

GY 490 Special Topic 1-4 cr

Geological topics not covered in current geology courses. Pre-requisite: Junior or Senior standing.

GY 492 Seminar 1-3 cr

Departmental seminar investigating a selected field of geology (Topic announced prior to registration.) May be repeated when content varies for a maximum of 3 credits.

GY 494 Directed Studies 1-4 cr

Independent research in the field or laboratory under the direction of a member of the Geology faculty. Students must have an acceptable project approved before registering for this course. Pre-requisites: Permission of the Chair; Junior or Senior standing. No more than 8 hours of directed study is allowed.

GY 496 Internship in Geology 1-3 cr

On-the-Job training through occupational or professional work through an approved geological organization. Only open to geology majors. Pre-requisites: Permission of chair; Junior or senior standing. No more than 3 hours of internship is allowed.

GY 520 Geostatistics (C) 4 cr

Applied bivariate and multivariate statistics to problems in Geography, Geology, and Meteorology; parametric and non-parametric procedures in correlation, regression, analysis of variance, etc. Time series analysis, trend surface analysis, kriging and analysis of spatial (map) data. Identical to GY 420 or GEO 420. Pre-requisite: MA 125 or ST 210.

GY 531 Optical Mineralogy and Crystallography 4 cr

Theory and use of the petrographic microscope in the recognition and identification of crystallographic and optical properties in non-opaque minerals. Graduate credit will require an additional project specified by the instructor: Credit for both GY 431 and GY 531 will not be allowed. Pre-requisite: GY 302 or permission of the instructor. Fee.

GY 533 X-ray Analytical Methods 4 cr

Theory and use of X-ray diffraction systems as applied to crystallography, mineralogy, chemistry, and metallurgy. Pre-requisite: GY 302 or permission of instructor. Fee.

GY 544 Sedimentary Geology 3 cr

A study examining sedimentation with emphasis on environments of deposition, sea-level and other controls on sedimentation in the rock record, and petroleum exploration. Pre-requisites: MAS 603, GY 402 or permission of the instructor. Credit for both GY 422 and GY 544 will not be allowed. Fee.

GY 575 Hydrology 4 cr

Principles of sources, occurrences and movement of groundwater. Surface and subsurface investigations of groundwater and elementary groundwater hydrology and chemistry. Credit for both GY 575 and GY 425 is not allowed. Fee.

GY 576 Contaminant Hydrogeology 4 cr

Flow systems, mass transport in the vadose and saturated zones; advection and dispersion; transformation, retardation and attenuation of solutes; low temperature geochemical processes and kinetics of chemical reactions; contaminant modeling using finite difference-finite element methods. Pre-requisite: GY 425 or GY 575. Credit for both GY 426 and GY 576 is not allowed. Fee.

GY 590 Special Topic 1-6 cr

An in-depth course for advanced students in geology. Topics and titles will be selected to examine the subject matter in an area of current interest to students and in an area of particular faculty expertise. To include specialized topics not currently listed in Bulletin course offerings.

GY 592 Seminar 1-6 cr

Students and faculty meet weekly in an interactive discussion of current literature in geological sciences. The focus will be on "state-of-the-art" theories and methodologies as they occur in the primary geology literature. Student presentation is required to receive credit.

GY 594 Directed Research 1-6 cr

Independent research, not related to the dissertation, under the direction of a member of the graduate faculty. May be used to learn new techniques or explore research questions of special interest. A maximum of 6 hours may be earned for this course toward the graduate degree in Marine Sciences. On-the-job training through occupational or professional work through an approved geological organization. Only open to geology and marine sciences majors. Pre-requisite: Permission of chair.

HEALTH INFORMATICS (HI)

All Pre-requisites must be passed with a minimum grade of C.

HI 300 Health Informatics Clinical Environment 3 cr

This course provides an overview of concepts, terms, organization, and processes associated with patient care and clinical environments as they pertain to health informatics. The entire process of how a person accesses, moves within, and exits the system both as an inpatient and outpatient to obtain care. Students will observe and report on a variety of clinical settings and healthcare specializations throughout the semester. This course is designed for students with no prior clinical experience. No Pre-requisites.

HI 410 Health Informatics 3 cr

This course provides an overview of the concepts, terms, tools, and architectures associated with health informatics as applied to healthcare delivery. Topics include: electronic record systems, computerized physician order entry, health system standards, terminologies, workflow modeling, security and privacy of clinical data, clinical reporting, and the impact of information technology use on the quality and efficiency of health care delivery and outcomes. No Pre-requisites.

HI 450 Health Data Security and Compliance 3 cr

This course involves a thorough examination of the security and privacy requirements of the Health Insurance Portability and Accountability Act (HIPAA) and the implementation of these requirements in the clinical environment. Students will learn how to address security issues from system development all the way through post-implementation, how to evaluate systems for vulnerabilities, and how to identify protected health information and covered entities. Pre-requisite: HI 410.

HI 455 Health Data Management and Decision Support 3 cr

This course focuses on the design and management of electronic medical record systems and clinical decision support systems. Course content related to electronic medical record systems includes architectural components, technical design issues, and management; and, content related to clinical decision support systems includes decision support roles, extracting useful information from data, and legal and regulatory restrictions. Laboratory assignments will provide students with opportunities to interact with these systems. Pre-requisite: HI 300 and HI 410.

ISC 550 Health Data Security and Compliance 3 cr

This course involves a thorough examination of the analysis and design of healthcare information systems from the informatics specialist's view. This course covers the entire life cycle of a system using an established systems development methodology including workflow analysis. At each step in the development life cycle, both the methodologies used and the documentation required will be examined. A brief overview of networking technologies and their use in healthcare systems is provided. A significant portion of this course will involve hands-on assignments with a mid-range EHR system.

ISC 555 Health Data Management and Decision 3 cr

This course focuses on the design and management of electronic medical record systems and clinical decision support systems. Course content related to electronic medical record systems includes architectural components, technical design issues, and management; and, content related to clinical decision support systems includes decision support roles, extracting useful information from data, and legal and regulatory restrictions. Laboratory assignments will provide students with opportunities to interact with these systems.

HONORS (HON)

HON 101 Honors Freshman Experience 1 cr

This course is designed to introduce freshmen in the University of South Alabama Honors Program to strategies and programs that assist students in maximizing their potential for academic success and in adjusting responsibly to individual and interpersonal challenges of college life. Reading and writing assignments relevant to the students' first year experience are required.

HON 201 Honors Sophomore Experience 1 cr

This course is designed to introduce sophomores in the University of South Alabama Honors Program to meaningful research opportunities at USA and to introduce students to national and international scholarship opportunities. Reading and writing assignments relevant to the students' research and scholarship interests are required.

HON 301 Introduction to Honors Senior Project 1 cr

This course is designed to introduce juniors in the USA Honors Program to scholarly research and creative activities in diverse disciplines. The primary graded assignment of the course is the guided development of an approved Prospectus for the Honors Senior Project. This course is a Pre-requisite for all Honors Senior Project Credit.

HEALTH, PHYSICAL EDUCATION (HPE)

HPE 500 Administration and Health and Physical Education Supervision 3 cr

A study of the principles, techniques, and methods used in administration and supervision of health and physical education in schools and colleges.

HPE 505 Critical Reading and Writing in Content Field 3 cr

Discussion of critical issues and outstanding research in the fields of Health, Physical Education, and Leisure Studies, with opportunity for class interaction and critical examination of ideas.

HPE 506 The Physical Education Curriculum 3 cr

An overview of the physical education curriculum, its foundations, critical issues, and modern trends. It explores curriculum content areas of scheduling, administration, teaching methods, and various standards and procedures for evaluation.

HPE 516 Physiology of Exercise 3 cr

Advanced study of the theories, current research and underlying principles of the physiological responses and adaptations of the human body to exercise and training.

HPE 521 Motor Learning 3 cr

Theories and applications of the foundations of learning motor skills are presented.

HPE 530 Seminar in Health and Physical Education 3 cr

Professional growth through in-depth experiences in the presentation of problems and formal papers, with emphasis on guided discussions and research criticism.

HPE 540 Administrative Issues in Exercise Science 3 cr

This course examines the planning and administration of cardiopulmonary rehabilitation and preventive health promotion/fitness programs.

HPE 550 Perceptual and Motor Development in Children 3 cr

Designed to give the classroom teacher, special educator, and physical educator a background in perceptual-motor development and training in infants and children.

HPE 570 Stress Testing and Exercise Prescription 3 cr

The development of competencies necessary to administer graded exercise tests and prescribe appropriate exercise programs for various populations based upon clinical observations and physiological data.

HPE 571 Exercise Management of Chronic Diseases and Disabilities 3 cr

This course is designed to provide a problem-oriented approach to exercise and testing and prescription/programming for special needs populations.

HPE 572 Application of Biomechanical Concepts 3 cr

An examination of the relationship of fundamental anatomical and mechanical principles of human movement as applied to sport performance, fitness, and injury prevention through observation of common activities.

HPE 574 Application Sport and Fitness Conditioning 3 cr

Advanced study of the scientific theory, principles, methods, and techniques in the development, implementation, and evaluation of carious strength and conditioning programs designed to enhance athletic performance.

HPE 579 Fitness Assessment-Exer Prescription 3 cr

Fitness Assessment and Exercise Prescription reviews the advanced principles of exercise testing and prescription for at risk and health adult populations including health appraisal, risk assessment, and interpretation of data. Assessment results are utilized in designing training programs and recommending lifestyle changes for enhancing health, fitness and performance. The ACSM Exercise Guidelines are emphasized.

HPE 594 Directed Study and Research 3 cr

Students explore, through directed study and research, problems and issues of special interest or significance in Health and Physical Education. Not more than three semester hours of any departmental 594 courses can be accepted toward a degree program. HPELS advisor approval required.

HPE 595 Internship in Health and Physical Education 3-9 cr

A supervised learning experience in a health and physical education work setting. Provides the students with an opportunity to apply the theories and concepts learned during the graduate program. Not more than nine semester hours may be taken. HPELS advisor approval required.

HPE 599 Thesis 1-9 cr

A student selects a project, study, or investigation in Health or Physical Education. Such project forms the basis for the thesis. A Thesis Committee will give guidance during the investigation and during the writing of the thesis. HPELS advisor approval required.

HPE 601 Biomechanical Foundations in Human Movement 3 cr

Teachers develop competence in applying basic laws of physics and cinematographical techniques to the analyses of human motion.

HPE 603 Advanced Movement and Evaluation in HPE 3 cr

Measurement and evaluation in the areas of strength, body composition, flexibility, endurance, general motor capacity, perceptual motor-functions, and anthropometrics.

HPE 694 Directed Study and Research 3 cr

Through directed study and research, problems and issues of special interest or significance in health and physical education are explored. Not more than three semester hours of any departmental 694 courses can be accepted toward a degree program.

HPE 699 Research Project 3 cr

A supervised research project or investigation in instructional development. The student will conduct an investigation, apply concepts and skills learned during the Sixth-Year Program. May be taken more than one semester; total cannot exceed six semester hours.

HEALTH AND SAFETY (HS)

HS 170 First Aid 1 cr

The scope, needs, and limitations of first aid with laboratory training in the techniques and methods of injury care. Opportunity for American Red Cross first-aid and CPR certification.

HS 262 Personal Health 3 cr

Current health problems as related to the individual with emphasis on sociological, psychological, and economic factors.

HS 263 Nutrition and Hunger 3 cr

An introduction to digestion, absorption, transportation, and utilization of nutrients. Other topics include: nutrition across the life span, population dynamics and world hunger.

HS 351 Safety Education 3 cr

Traffic safety and safety at home, work, school, and play. Organization of safety education programs in school and community. Methods and materials for teaching safety.

HS 361 School and Community Health-Implications for Curriculum 3 cr

Contemporary school health and public health issues. Epidemiological concepts and methods. Governmental and volunteer health agencies. Curriculum development based upon epidemiological data.

HS 362 Drug Education 3 cr

A survey of substance abuse issues. Attention

is given to specific drug classifications, use and abuse patterns, prevention, treatment, and future implications.

HS 363 Individualized Nutrition 3 cr
Basic nutritional principles are covered. Includes assessment of individual and/or group diets. The course is designed around individualized programmed instruction.

HS 365 HPE Curr/Methods- Elem Teachers 3 cr
The development and implementation of appropriate health and physical education curriculum for elementary teachers. Content knowledge and the application of methodological and assessment strategies are adapted for appropriate learning environment.

HS 429* School Laboratory Experiences - Health 0-3 cr
Professional laboratory observation and participation in health settings at local public schools. Co-Requisite: HS 460.

HS 460* Methods in Health Education (W) 3 cr
Topic selection and teaching unit preparation. Presentation and classroom practice of teaching methodologies. Practical mini-teaching experiences in local school or other pertinent agencies. [HE 6-12 and PE P-12 majors only. Field experiences required]. Admission to teacher candidacy or permission of instructor. Co-Requisite: HS 429.

HS 462 Public Health 3 cr
A study of public health organizations and available community health resources, including the official and non-official health agencies at various levels. An examination of causative community factors in disease, community diagnosis of and programs to combat these conditions.

HS 463 Human Sexuality: Some Health Education Perspectives 3 cr
An exploration of human sexuality with implications for health education.

HS 473 Problems in Health Education 3 cr
Special problems are assigned to individuals and to groups of students.

HS 490 Special Topics 3 cr
A varying content course treating several aspects of health education. May be repeated for credit when course content varies.

HS 494 Directed Study 3 cr
Directed research. Pre-requisite: Permission of Department. No more than two directed studies can be counted toward the bachelor's degree and Class B Certification. HPELS advisor approval required.

HS 510 Current Health Problems 3 cr
Identification, exploration, and definition of current health problems such as drug abuse, mental health, aging, death and dying, human sexuality, chronic and communicable disease.

HS 520 Special Methods in Health Education 3 cr
Development, selection, and implementation of classroom teaching strategies and classroom techniques in the health sciences area.

HS 560 School Health Curriculum 3 cr
Designed to develop the prospective teacher's or the in service teacher's competencies in curriculum planning and development applied to the health area.

HS 562 Drug Use and Abuse 3 cr
A study of the drug spectrum including legal and illegal drug use and abuse. Discussion of education and preventive strategies.

HS 563 Nutrition 3 cr
An in-depth study of educational concepts related to digestion, absorption, transportation and utilization of nutrients.

HS 565 Community Health 3 cr
An introductory course in community health. Includes a survey of contemporary health problems of both communities and schools. A review of school and community health programs.

HS 567 Aging and Health: Biologic and Social Perspectives 3 cr
An overview of the normal aging process, including physical, psychological and social changes, myths, diseases, related community resources, and the team approach to meeting needs.

***Only for students admitted to candidacy.**

HEALTH SCIENCES NURSING (HSC)-OPEN TO MAJORS IN OTHER DISCIPLINES

HSC 324 Death and Dying (W) 2 cr
Provides the student an opportunity to analyze theories, concepts, socioethical issues, and research related to dying and death. Focus is on assisting students to explore their feelings regarding death as well as developing self-awareness of the feelings of patients and families. Emphasis is on the acceptance of the process of mourning and death and applicable nursing interventions. Elective.

HSC 332 Diet Therapy 2 cr
The purpose of this course is to provide students the opportunity to explore the therapeutic use of nutrients and diets in the hospital and community settings. Emphasis is on the development of skills associated with dietary management for individuals across a wellness-illness continuum and all age and cultural groups. Pre-requisite: Admission to Professional Component or special permission of instructor. Pre-requisites: NU 325, NU 327, HSC 342, HSC 343, NU 311. Corequsites: NU 300, NU 301.

HSC 342 Administration of Medication 1 cr
The purpose of this course is to prepare the student to accurately calculate medication dosages. Mathematical and metric-apothcary concepts are stressed.

HSC 343 Clinical Pharmacology 3 cr
The purpose of the course is to provide the student with the opportunity to acquire information related to the clinical application of drug therapy and the concepts relating to the mechanisms of drug actions, interactions, and adverse reactions, including the immunologic-idiosyncratic-allergic responses. Emphasis is on the current evidence related to pharmacokinetics, dosage, methods of administration, and adverse effects of major classifications of drugs to inform nursing care. Pre-requisites: Admission to Professional Component or special permission of instructor.

HSC 450 Ethical Considerations in the Care of the Aging 3 cr
Interdisciplinary course on a critical investigation of ethical issues affecting the elderly and on application of principles, concepts, theories, and decision models as a framework for ethical decision-making. Elective.

HSC 457 Gerontological Concepts 3 cr
Focuses on a multidisciplinary approach to meeting the diverse needs of the aging population. Physiological, psychological, and sociocultural aspects of aging are explored. Emphasis is on attitudes toward the elderly, health programs for older Americans, health policy, ethical/legal issues, and the needs of family caregivers. Elective.

HSC 524 Death and Dying 3 cr
Provides the student an opportunity to analyze theories, concepts, socioethical issues, and research related to dying and death. Focus is on assisting students to explore their feelings regarding death as well as developing self-awareness of the feelings of patients and families. Emphasis is on the acceptance of the process of mourning and death and applicable nursing interventions. Content includes the role of leaders as a facilitator of professional groups during bereavement experiences. Elective.

HSC 540 Epidemiology 2 cr
The purpose of this course is to examine the concepts and methods of epidemiological analysis as applied in advanced nursing practice and public health practice. The focus is on applying epidemiological principles to evaluate the health concerns of specific populations in the community. The emphasis is on the application of specific public health interventions that address the health concerns within a cultural context.

HSC 541 Disaster Management 2 cr
The purpose of this course is to examine the principals of disaster management and the implications for interdisciplinary health care. The focus is on the application of techniques and interventions in a variety of natural and man-made disasters or bioterrorism events. The emphasis is on critical thinking, management of resources, terrorism, environmental safety, and personal well-being.

HSC 542 Biostatistics and Informatics 3 cr
The purpose of this course is to provide the biostatistical and informatics framework for advanced practice nursing in public health. The focus is on the concepts and methods of biostatistical and informatics analysis as it is applied in the health sciences. The emphasis is on the application of appropriate biostatistical methods and technological tools to specific studies in public health.

HSC 550 Ethical Consideration in the Care of the Aging 3 cr
Interdisciplinary course on critical investigation of ethical issues affecting the elderly and on application of principles, concepts, theories, and decision models as a framework for ethical decision making. Elective.

HSC 570 Transcultural Health Care 1-3 cr
Emphasis is on appreciation of the attitudes, customs, and values of people in a variety of cultures and on utilization of this knowledge in planning health care for people in multiple settings.

HSC 571 Managing Health Care Personnel 3 cr
The purpose of this course is to analyze frameworks for managing health care personnel. Emphasis is on current legal and governmental directives regulating human resource management,

employee relations, recruitment and retention, ethics and motivational issues in health care management.

HSC 590 Special Topics 1-6 cr
Study of topics significant to the health professions. Content varies and may be repeated.

HOSPITALITY AND TOURISM MANAGEMENT (HTM)

HTM 215 Ecotourism 3 cr
Students in this course will examine the interaction of ecotourism with social, natural and cultural environments as well as the impacts of ecotourism on the environment and global societies.

HTM 315 Hospitality and Tourism Marketing 3 cr
This course is designed to provide a broad overview of essential marketing, promotion, and sales principles currently applied in the tourism and hospitality industries. It provides an introduction to marketing theories, principles, and concepts, and an exploration of the role of marketing within a globalized hospitality organization. Students will identify marketing strategies, differentiate services marketing, explain the role of customer expectation, analyze market segments, evaluate target marketing, and demonstrate the ability to effectively communicate using audio visual materials. The focus is on achieving a competitive advantage in a global market. Students will also examine the trends, issues and problems influencing tourism and hospitality marketing in a dynamic intercultural environment.

HTM 350 Introduction to Hospitality Management 3 cr
This course is an introduction to hospitality management, including an overview of management in the hospitality industry and professional opportunities. The concepts and practices of hospitality organizations (e.g. food and lodging, resorts, tourism enterprises, conventions, events, attractions, etc.) are reviewed, as well as local and global trends within these organizations.

HISTORY (HY)

HY 101 History of Western Civilization I 3 cr
History of humankind, emphasizing the development of the West to c. 1600 CE. **Core Course**.

HY 102 History of Western Civilization II 3 cr
History of humankind, emphasizing the rise of the West from c. 1600 CE. **Core Course**.
NOTE: History 101 and 102 are related courses but do not need to be taken in order.

HY 103 History of Asian Civilization I 3 cr
A survey of traditional cultures, values, ideas, and institutions of East, South, and Southeast Asia to 1800.

HY 104 History of Asian Civilization II 3 cr
The responses of East, South, Southeast Asia to the impact of Western challenges; their roles in the modern world, their economic and political structures; the emergence of China and Japan as major world political and economic powers.
NOTE: History 103 and 104 are related courses but do not need to be taken in order.

HY 135 United States History to 1877 3 cr
An introductory course in United States history to 1877. **Core Course**.

HY 136 United States History Since 1877 3 cr
An introductory course in United States history since 1877. **Core Course**.
NOTE: HY 135 and 136 are related courses but do not need to be taken in order.

HY 210 United States during the 1960's 3 cr
A history of the United States during the 1960's.

HY 215 Military History of the U.S. Civil War 3 cr
Examines the military aspects of the U.S. Civil War, paying particular attention to strategy, tactics, technology, leadership, and minority participation.

HY 228 Latin America 3 cr
An introductory survey of Latin American history from the time of European conquest to the present.

HY 283 Chinese History in Film and Literature 3 cr
This course will introduce students to major topics in Chinese history, covering both ancient periods, such as the Three Kingdoms period, and twentieth-century events such as the war with Japan and the Cultural Revolution. Post-Tiananmen Chinese society will also be stressed. Students will explore these themes through Chinese film and literature, and will thus become familiar with major directors, including Zhang Yimou and Jia Zhangke and writers such as Yu Hua.

HY 284 Japanese History in Film and Literature 3 cr
This course will introduce students to major themes in recent Japanese history, including samurai culture and other issues pertaining to social class, Westernization, the postwar family, sixties radicalism, and recent popular culture. Student will explore these themes through Japanese film and literature, and thus become familiar with major directors, including Akira Kurosawa, Yasujiro Ozo, and Juzo Itami, and novelists such as Junichiro Tanizaki and Yukio Mishima.

HY 288 History of Mass Media 3 cr
The role of journalism in American society from the Revolution to the present. This course is also listed as CA 288. (Previously HY 388. Students cannot receive credit for HY 388 and HY 288).

HY 303 Warfare and Society in the Modern World 3 cr
Examines the mutual interrelationships between warfare and society in western civilization since the 14th century.

HY 305 History of Military Thought (W) 3 cr
An intellectual history of the place of armed conflict in society from the Renaissance to the Nuclear Age. Pre-requisite: Grade of "C" or above in EH 102.

HY 310 American Environmental History (W) 3 cr
A textually based analysis of the role of the environment in America's history from the pre-Columbian era through the present, this course considers the interactions between human society and its surroundings across North America. In particular, this course explores the ideas, activities, technologies and institutions that have influenced our national interaction with the natural world.

HY 321 The Caribbean 3 cr
Explores the history of the island Caribbean from the onset of European rule to the present.

HY 323 Central America 3 cr
Explores the history of Central America from Spanish conquest to the present.

HY 325 Mexico 3 cr
Surveys the history of Mexico from Spanish conquest to the present.

HY 326 Brazil 3 cr
Surveys the history of Brazil from Portuguese conquest to the present.

HY 331 History of England to 1603 3 cr
The history of England from the Roman occupation to the Age of the Tudors.

HY 332 Great Britain: 1603 to 1815 3 cr
Great Britain from the accession of James I to the defeat of Napoleon.

HY 333 Great Britain: Since 1815 3 cr
The British at home and abroad. Constitution and culture, identity and empire, since Waterloo.

HY 334 Modern Ireland 3 cr
The history of Ireland from the early 1600's; themes include: domestic history, national identities, relations with England, the independence movement, and "the Troubles."

HY 335 History of Modern France 3 cr
France since the Revolution.

HY 336 Germany Since 1848 3 cr
Germany from the era of liberalism and nationalism to the present.

HY 337 History of Eastern Europe 3 cr
History of Eastern Europe Since 1914.

HY 338 History of Russia 3 cr
History of Russia from Kyivan Rus to the Present.

HY 343 Witchcraft and Magic in Medieval and Early Modern Europe 3 cr
The history of beliefs and practices concerning witches, magic, and witch-hunting in Medieval and Early Modern Europe.

HY 345 The First World War 3 cr
A History of the First World War, its background, and its aftermath.

HY 346 The Second World War 3 cr
A History of the Second World War, its background, and its aftermath.

HY 347 The Holocaust 3 cr
The history of the systematic mass murder of Europe's Jews and other groups by Nazi Germany during World War II.

HY 348 Hitler and Nazi Germany 3 cr
The rise of Adolf Hitler and the Nazi Party to power in Germany and the history of National Socialist Germany from 1933 to 1945.

HY 351 Medieval Civilization, 950-1300 3 cr
The development of European civilization in the High Middle Ages.

HY 352 Renaissance Europe, 1300-1520 3 cr
The history of Europe during an age of great crisis and creativity.

HY 353 Reformation Europe 3 cr
The role of religious change in the 16th and 17th centuries.

HY 354 Ancient Régime Europe 3 cr
Social, economic, political, and cultural life of Old Régime Europe.

HY 355 Europe in the Era of the French Revolution and Napoleon 3 cr
Political, cultural, and social revolution of the late eighteenth and early nineteenth centuries, emphasizing the French Revolution.

HY 356 Europe 1815-1918 3 cr
History of European civilization from 1815-1918.

HY 357 Europe Since 1945 3 cr
The history of Europe from the end of the Second World War to the present.

HY 362 History of Africa Since 1500 3 cr
A survey of the last five centuries of Africa's history moving from before European contact to the slave trade, colonial experience, and independence movements. Africa's cultural patterns and its peoples' distinctive historical experience will be the focus of the course.

HY 364 Islamic Civilization to 1453 3 cr
This course will cover the political, social, and cultural history of Islamic Civilization from its beginnings in the Arabian Peninsula in the sixth century to the Ottoman conquest of Constantinople in 1453. Pre-requisite: Junior or Senior status.

HY 365 Islamic Civilization from 1453 3 cr
This course will cover the political, social, and cultural history of Islamic Civilization from the Ottoman conquest of Constantinople in 1453 to the present day. Pre-requisite: Junior or Senior status.

HY 366 Traditional China 3 cr
Historical development of China from prehistoric times to the arrival of Western influences in the 1800s.

HY 367 Modern China (W) 3 cr
A study of Modern China from the arrival of Western influence in the 1800s to the present. Pre-requisite: Grade of "C" or above in EH 102.

HY 368 Japan 3 cr
Japanese history from antiquity to the present and the emergence of Japan as a major world political and economic power.

HY 371 The Social History of Early America 3 cr
Patterns of frontier, agrarian, and urban society to 1865.

HY 373 Religion in American History (W) 3 cr
Examines the role of religion in United States history from the colonial era to the present. Pre-requisite: Grade of "C" or above in EH 102.

HY 374 History of American Culture (W) 3 cr
Surveys American values, ideas, beliefs, and social institutions from c. 1770 to the mid-twentieth century. Pre-requisite: Grade of "C" or above in EH 102.

HY 376 History of Alabama 3 cr
A survey of the state's history since the days of the Native Americans, examining state and local issues against the broader backdrop of American history.

HY 377 African-American Experiences 3 cr
Examines the role of African-Americans in United States History with an emphasis on social, political, economic, intellectual and cultural developments.

HY 390 Special Topics 3 cr
Special topics and their development, illustrating historical methodology. May be repeated twice for credit when content varies.

HY 401 Colloquium in History 3 cr
A course which discusses various issues in history. Limited to twenty-two students. May be repeated when content varies. Pre-requisite: Junior or senior standing.

HY 405 History of Warfare and Society in the 20th Century 3 cr
A seminar which studies major themes in the interaction of warfare and society in the 20th century.

HY 415 Studies in Military History 3 cr
This course will deal with different topics in military history. May be repeated for credit when content varies. Pre-requisite: Junior or senior standing.

HY 429 Studies in Latin American History (W) 3 cr
A seminar devoted to the exploration of a specific topic in Latin American history. May be repeated when content varies.

HY 431 Studies in U.S. History 3 cr
This course will deal with different topics in U.S. History. May be repeated for credit when content varies. Pre-requisite: Junior or senior standing.

HY 432 Colonial America 3 cr
Colonial period to the Revolution.

HY 433 The American Revolution 3 cr
This course emphasizes changes occurring in American society ca. 1750-1800.

HY 434 The Early Republic (W) 3 cr
The early Republic from 1789-1840.

HY 435 Civil War and Reconstruction 3 cr
The United States from 1840-1877.

HY 436 Modern U.S. I, 1877-1945 (W) 3 cr
History of urban industrialization, war, peace, prosperity, and depression.

HY 437 Modern U.S. II, Since 1945 (W) 3 cr
History of the U.S. in global perspective.

HY 441 Research Seminar - U.S. History 3 cr
Research in topics in U.S. History. Limited to 15 students. Pre-requisite: History major, Junior or Senior standing, permission from the Chair.

HY 442 Research Seminar - European History 3 cr
Research in topics in European History. Limited to 15 students. Pre-requisite: History major, Junior or Senior standing, permission from the Chair.

HY 443 Research Seminar - World History 3 cr
Research in topics in Asian, African, or Latin American History, or in the History of Islamic Civilization. Limited to 15 students. Pre-requisite: History major, Junior or Senior standing, permission from the Chair.

HY 450 States, Nations, and Nationalism (W) 3 cr
This course examines the rise of nationalism in modern Europe, Caucasus and Central Asia.

HY 454 The History of the British Empire 3 cr
This course examines the rise, fall and legacy of the British Empire. Pre-requisites: Junior and Senior standing.

HY 455 The History of Travel and Tourism 3 cr
This course examines the history of British and American travel and tourism from the eighteenth century to the present. Pre-requisites: Junior or Senior standing.

HY 457 Studies in European History 3 cr
This course will deal with different topics in European history. May be repeated for credit when the content varies. Pre-requisite: Junior or senior standing.

HY 461 Studies in Asian History 3 cr
This course will deal with different topics in Asian history. May be repeated when the subject matter varies.

HY 465 Studies in the History of Islamic Civilization 3 cr
This course will cover specific topics in the history of Islamic Civilization. May be repeated for credit when content varies. Pre-requisite: Junior or Senior status.

HY 471 Atlantic World (W) 3 cr
This course examines the interactions among Europeans, Native Americans and Africans in the Americas.

HY 475 The History of Mobile 3 cr
The History of Mobile from its foundings to its Tercentenary.

HY 477 The Old South 3 cr
History of the South to the Civil War.

HY 478 The New South 3 cr
History of the South from Reconstruction to the 1920's.

HY 479 The Modern South 3 cr
Social, economic, political, intellectual, and cultural history of the U.S. South from 1920-1990.

HY 482 Southern Autobiography 3 cr
Southern identity as revealed in 20th century autobiography and fiction.

HY 485 History of American Feminist Movements, 1620-Present 3 cr
This course examines the history of American feminist movements from the colonial period through the present.

HY 488 The American West 3 cr
This course examines Manifest Destiny, imperialism, the "frontier," and the place of Native Americans in the History of the American West.

HY 494 Directed Studies 1-3 cr
Directed individual study. Pre-requisite: Approval of instructor.

HY 496 Public History 3 cr
This course will introduce advanced undergraduate and graduate students to Public History both as an academic field and as a possible career.

HY 498 Internship in History 3 cr
Directed individual field research at the undergraduate level. Occupational and professional experiences under faculty direction in a defined field of interest, primarily for but not limited to archival, museum, library or other public history projects. Written reports required. Special permission of instructor required. Maximum hours: 6.

HY 499* Senior Honors Paper 1-6 cr
The research and writing of a major historical paper. Pre-requisite: permission of the chair.

HY 501 Colloquium in History 3 cr
A course which discusses various issues in history. May be repeated when content varies. Students cannot receive credit for both this course and HY 401.

HY 505 History of Warfare and Society in the 20th Century 3 cr
A seminar which studies major themes in the interaction of warfare and society in the 20th century. Students cannot receive credit for both this course and HY 405.

HY 515 Studies in Military History 3 cr
This course will deal with different topics in military history. May be repeated for credit when content varies. Students cannot receive credit for both this course and HY 415.

HY 529 Studies in Latin American History 3 cr
A seminar devoted to the exploration of a specific topic in Latin American History. May be repeated for credit when content varies. Students cannot receive credit for both this course and HY 429.

HY 530 American Historiography 3 cr
Examination of major American historians; study of techniques, styles, ideas, interpretations, and critical evaluations.

HY 531 Studies in U.S. History 3 cr
A seminar devoted to different topics in U.S. History. May be repeated for credit when content varies. Students cannot receive credit for both this course and HY 431.

HY 532 Colonial America 3 cr
Colonial period to the Revolution. Students cannot receive credit for both this course and HY 432.

HY 533 The American Revolution 3 cr
This course emphasizes changes occurring in American society ca. 1750-1800. Students cannot receive credit for both this course and HY 433.

HY 534 The Early Republic 3 cr
The Early Republic from 1789-1849. Students cannot receive credit for both this course and HY 434.

HY 535 Civil War and Reconstruction 3 cr
The United States from 1840-1877. Students cannot receive credit for both this course and HY 435.

HY 536 Modern U.S. I, 1877-1945 3 cr
History of urban industrialization, war, peace, prosperity, and depression. Students cannot receive credit for both this course and HY 436.

HY 537 Modern U.S. II, Since 1945 3 cr
History of U.S. in global perspective. Students cannot receive credit for both this course and HY 437.

HY 538 20th-Century US History 3 cr
This course emphasizes interpretations of twentieth-century history.

HY 540 Modern European Historiography 3 cr
A study of the development of European historical literature and its theoretical and methodological bases.

HY 541 Major European Thinkers 3 cr
Seminar devoted to the writings of leading European thinkers of the past five hundred years, including such figures as Luther, Rousseau, Darwin, Marx, Freud and de Beauvoir.

HY 542 World Historiography 3 cr
Study of the development of World historical literature and its theoretical and methodological bases.

HY 546 Research in Soviet Social History 3 cr
A study of the relationship between political and social development in Soviet Russia from 1917-1941.

HY 550 States, Nations, and Nationalism 3 cr
This course examines the rise of nationalism in Modern Europe. Students cannot receive credit for both this course and HY 450.

HY 551 Medieval Europe 3 cr
Seminar that explores the history of Western Europe between 950 and 1500, with emphasis on changes in government, economy, society, religion, thought, war and diplomacy.

HY 552 Renaissance Europe 3 cr
Seminar that explores intellectual and cultural developments in Western Europe between 1350 and 1600.

HY 553 Religious Reform in Europe 3 cr
Seminar that considers religious reform movements within the Catholic Church before the beginning of Protestantism, the development of major Protestant tendencies, and the continuing development of reform within the Catholic Church after the Protestant break.

HY 554 The History of the British Empire 3 cr
This course examines the rise, fall and legacy of the British Empire. Students cannot receive credit for this course and HY 454.

HY 555 The History of Travel and Tourism 3 cr
This course examines the history of British and American travel and tourism from the eighteenth century to the present. Students cannot receive credit for this course and HY 555.

HY 557 Studies in European History 3 cr
This course will deal with different topics in European History. May be repeated for credit when content varies. Students cannot receive credit for both this course and HY 457.

HY 559 Modern European History 3 cr
Examination of major interpretive and methodological problems in European history from 1740 to the present. May be repeated under a different instructor.

HY 561 Studies in Asian History 3 cr
This course will deal with different topics in Asian History. May be repeated when the subject matter varies. Student cannot receive credit for both this course and HY 461.

HY 564 Classical and Medieval Islamic History 3 cr
Seminar that explores the history of Islamic Civilization during the classical and medieval periods from the sixth to the thirteenth centuries.

HY 565 Studies in Islamic Civilization 3 cr
This course will cover specific topics in the history of Islamic Civilization. May be repeated for credit when content varies. Students cannot receive credit for both this course and HY 465.

HY 570 American Biography 3 cr
A study of American biography, autobiography, and methodology.

HY 571 Atlantic World 3 cr
This course examines the interactions among Europeans, Native Americans and Africans in the Americas. Students cannot receive credit for both this course and HY 471.

HY 573 The American West in the Nineteenth Century 3 cr
Seminar that explores the history of the American West in the nineteenth century, focusing on Manifest Destiny, imperialism, Mormonism, the environment, and the place of Native Americans in U.S. society.

HY 575 History of Mobile 3 cr
History of Mobile from its founding to its Tercentenary. Students cannot receive credit for both this course and HY 475.

HY 577 The Old South 3 cr
History of the South of the Civil War. Students cannot receive credit for both this course and HY 477.

HY 578 The New South 3 cr
History of the South from Reconstruction to the 1920s. Students cannot receive credit for both this course and HY 478.

HY 579 The Modern South 3 cr
Social, economic, political, intellectual, and cultural history of the U.S. South from 1920 -1990. Students cannot receive credit for both this course and HY 479.

HY 580 Research in Southern History 3 cr
History of the southern United States, from the colonial era to the present. Students will write a research paper involving interpretation of primary documents.

HY 581 Research in American History 3 cr
This is a variable content seminar course. Students will write a research paper involving interpretation of primary sources.

HY 582 Southern Autobiography 3 cr
Southern identity as revealed in 20th century autobiography and fiction. Students cannot receive credit for both this course and HY 482.

HY 585 History of American Feminist Movements, 1620-Present 3 cr
This course examines the history of American feminist movements from the colonial period through the present. Students cannot receive credit for both this course and HY 485.

HY 586 Research in European History 3 cr
This is a variable content seminar course. Students will write a research paper involving interpretation of primary sources.

HY 590 Special Topics 3 cr
A colloquium of selected subjects and readings to be arranged by the department. Limited to fifteen students. May be repeated once for credit when content varies.

HY 592 The Teaching of History 3 cr
This course is an introduction to the problems and principles of the teaching of history in secondary and higher education settings. It will combine instructor lecture, class presentations, and class discussions of assigned readings.

HY 593 Research, Comprehensive Exam and Thesis Preparation 1 cr
This course seeks to provide M.A. students with a practical introduction to the research techniques and bibliographic knowledge that will facilitate the timely completion of a master's level program. Required for all incoming History M.A. students.

HY 594 Directed Studies 1-3 cr
Directed individual study. May only be used in unusual cases to build on regular graduate course work. A maximum of six credit hours of HY 594 may count toward degree requirements. Pre-requisites: Special permission of instructor required.

HY 595 Archival Practice 3 cr
Introduces graduate students to archival theory and practice.

HY 596 Public History 3 cr
This course will introduce graduate students to Public History both as an academic field and as a possible career. Students cannot receive credit for both this course and HY 496.

HY 597 Professional Studies: Directed Field Research 3 cr
Directed individual field research. Occupational and professional experiences under faculty direction in a defined field of interest, including but not limited to archival, museum, library, or other public history projects. Written reports required. Special permission of instructor required.

HY 598 Comprehensive Exam and Thesis Preparation Seminar 0 cr
This zero credit hour course will provide continuous enrollment while engaged in comprehensive exam preparation, or for thesis preparation beyond thesis hours. Special permission of History Graduate Coordinator is required.

HY 599 Thesis 1-3 cr
Six hours required of student in the thesis track. May not be taken for credit toward a degree by students in the non-thesis track. Pre-requisite: Completion of a research seminar and nine hours of graduate level-history, including one 500-level course, in the field relevant to the thesis. Special permission of department chair.

INTERDEPARTMENTAL EDUCATION (IDE)

IDE 010 Reading Exam 0 cr
IDE 010 is a one hour reading exam that tests students current proficiency in communication skills. Failure to complete the exam as scheduled, with a passing score, will require the students to re-register for IDE 010.

IDE 101 Freshman Seminar - Education 2 cr
A course for first-time students that assists with maximizing the student's potential to achieve academic success and adjust responsibly to the individual and interpersonal challenges presented by college life. It provides an introduction to the nature of higher education and a general orientation to the functions and resources of the University.

IDE 400 Positive Classroom Management 3 cr
Emphasis is placed on ways to create a class and school environment that encourages responsible student behavior. William Glasser's concept of Reality Therapy as a process for successful teacher-student involvement is examined.

IDE 510 Educational Research and Evaluation 3 cr
Course will examine research and evaluation methodology, its application to questions in education, and the application of research findings to problems in education. The student will read and evaluate research in education.

IDE 525 Foundations of Teaching English as a Second Language 3 cr
A comprehensive survey of current research, methodology and materials in the field of English as a Second Language.

IDE 540 Foundations of Career Education 3 cr
The underlying philosophies behind the career education movement and various approaches to career education are discussed. Ways to increase the career options available to individuals and to facilitate more rational and valid career planning and preparation are explored through the career education phases: career awareness, career exploration, and career preparation.

IDE 590 Special Topics 1-3 cr
Current topics of special concern to educators. Not more than six hours may be earned in Special Topics courses.

IDE 594 Directed Study and Research 1-3 cr
Exploration of problems and issues of special interest or significance in education. Not more than three hours can be accepted for a degree.

IDE 597 Student Teaching 3, 6 cr
Observation and supervised teaching in selected schools with opportunity for study and discussion of problems and issues encountered. Pre-requisite: Permission of advisor.

IDE 615 Assessment and Evaluation for Leaders 3 cr
This course will focus on the assessment and evaluation skills needed by educational leaders. The course will provide students with the knowledge and skills to carry out, and utilize effectively, the evaluations of programs, organizations, personnel, and students. The course will also cover how to create, interpret, and evaluate the reliability and validity of assessments.

IDE 620 Quantitative Methods I 3 cr
Basic quantitative methods for decision making in the educational environment. Computer application of basic descriptive and inferential statistics. Pre-requisite: IDE 510 with grade of "B" or better.

IDE 621 Quantitative Methods II 3 cr
Basic research designs, with appropriate statistical analysis. The course will consider strategies needed for, but not limited to, the following: N-of-One research surveys and needs assessments; ex post-facto designs, and true experimental designs. Pre-requisite: IDE 620 or equivalent.

IDE 630 Quantitative Methods III 3 cr
An extensive examination of the nature and character of experimental design in educational research. Includes the development of appropriate analytical techniques. Pre-requisite: IDE 510 and IDE 621 or equivalent.

IDE 631 Introduction to Qualitative and Mixed Methods Research 3 cr
Introduces students to the major kinds of qualitative research and mixed methods research. Attention is given to underlying philosophies, methods of data collection, theoretical perspectives, research design, sampling, data analysis and interpretation, validity types and strategies, and writing research reports. Prerequisite: IDE 510.

IDE 635 Advanced Measurement and Evaluation 3 cr
Nature and function of measurement in instructional design and development environments. Approaches to reducing test error, including establishing validity and reliability estimates. Item analysis and discrimination. Test development procedures for norm-based and criterion-referenced tests. Knowledge of descriptive statistics required. Pre-requisite: IDE 620.

IDE 640 Instructional Development 3 cr
Preparation of a modular program of instruction which incorporates all elements of the instructional-design process.

IDE 645 Advanced Human Performance Improvement 3 cr
This course provides students with knowledge and skills related to human performance improvement in relation to instructional design profession. It provides an overview of foundational theories of industrial-organizational psychology, organizational psychology, organizational behavior, and organizational development and change in relation to instructional design and performance improvement practices.

IDE 650 Instructional Techniques 3 cr
This course assists teachers in becoming more professional in instructional skills through the use of micro-teaching techniques and analysis of research in teaching.

IDE 660 Program Research and Evaluation 3 cr
Course strives to increase the effectiveness of instructional personnel in their use of research and evaluative techniques in instructional environments. Three major areas of focus are: the conceptualization of research and evaluative models appropriate for the population; the application of basic assessment concepts to the teaching-learning environment, and the analysis of basic and applied research in evaluation. Pre-requisite: IDE 510 or equivalent with a grade of "B" or better.

IDE 665 Interaction Techniques in Instructional Environments 3 cr
This course concentrates on developing three major areas: the examination of psychological underpinning of various communicative models and concepts; the practicing of interactional skills, such as active listening, congruent sending, and conflict resolution; the building of a communication model for the student's instructional environment.

IDE 685 Educational Simulation and Games 3 cr
Teaches the role and function of simulation and games as effective instructional and learning devices.

IDE 690 Special Topics 3 cr
Current topics of special concern to educators. Not more than six hours may be earned in Special Topics courses.

IDE 692 Research Project Seminar 3 cr
Survey of both current and classic research in education. Students will identify a research problem of significance in their area of specialization and develop a strategy or research design to solve this problem. Pre-requisite: IDE 510 or equivalent.

IDE 694 Directed Study and Research 1, 3 cr
Exploration of problems and issues of special interest or significance in education. Not more than three hours can be accepted for a degree.

IDE 700 AU/USA Doctoral Program 1 cr
Provides an opportunity for advanced graduate students and professors to pursue cooperative selected concepts and theoretical formulations. May be repeated as necessary.

IDE 710 Research Seminar I 3 cr
Students examine various research models and designs, complete literature reviews in assigned areas, and rotate among selected faculty to become familiar with research methods used to study instructional development. Data from the rotations are presented for critique. Admission to doctoral program is required.

IDE 711 Research Seminar II 1 cr
Students continue to examine various research models and designs, complete reviews in assigned areas, and rotate among selected faculty to become familiar with research methods used to study instructional development. Data from the rotations are presented for critique. Admission to doctoral program is required. Pre-requisites: 3 credit hours of IDE 710 and faculty advisor approval.

IDE 790 Special Topics 1, 3 cr
Current topics of special concern to educators. Not more than six hours may be earned in Special Topics courses.

IDE 794 Directed Study and Research 1, 3 cr
Exploration of problems and issues of special interest or significance in education. Not more than three hours can be accepted for a degree.

IDE 799 Research/Dissertation 1-9 cr
Independent research by the student under the sponsorship of the graduate faculty. Students are required to achieve doctoral candidacy before enrolling in the course. Pre-requisite: Doctoral candidacy. Faculty Advisor approval.

INTERDISCIPLINARY BASIC MEDICAL SCIENCE (IDL)

IDL 560 Cancer Biology 3 cr
This course provides a comprehensive coverage of molecular and cellular aspects of carcinogenesis as well as clinical issues related to human cancer. This course will specifically cover areas of histology, pathology, epidemiology, genetics, viruses, oncogenes and tumor suppressor genes. Additionally, topics to be covered include cellular and molecular basis of chemotherapy, pharmacology of anti-cancer drugs, molecular and cellular basis of radiotherapy, and biological therapy of cancer and clinical trial design.

IDL 566 Topics in Cancer Biology 1 cr
Students and faculty participate in a supervised reading of current literature and meet once a week to interact in a discussion of the selected article. The goal of this course is to maintain the student's level of information at a "state of the art" in both methods and theory in the discipline and to develop critical skills in reviewing the literature.

IDL 567 Directed Studies in Cancer Biology 1-6 cr
Students participate in research under the direction of a graduate faculty member. The student may pursue independent research or participate in a literature project.

IDL 576 Interdisciplinary Literature Reports 1 cr
Students and faculty participate in a supervised reading of the current literature and meet periodically (usually once a week) to interact in a discussion of the selected article or topic. The goal of this course is to maintain the faculty's and students' level of information at a "state-of-the-art" in both methods and theory in the discipline and to develop critical skills in reviewing the literature.

IDL 577 Introduction to Research Methods 3 cr
Theoretical and practical training in basic skills utilized in basic medical science research laboratories, for students entering the first year interdisciplinary curriculum. Discussion of regulatory issues in biomedical research will be interwoven with theoretical training. Offered concurrently with IDL 580. Pre-requisite: Graduate level IDL 580 Minimum Grade of "B".

IDL 580 Fundamentals of Basic Medical Sciences I 8 cr
First of a two-semester sequence designed for students in the first year interdisciplinary curriculum. In-depth exploration of the fundamentals of biochemistry, cell biology and molecular biology Pre-requisite to advanced study of basic medical sciences. Didactic lectures will be complemented with discussions of the literature.

IDL 581 Fundamentals of Basic Medical Sciences II 8 cr
Second of a two-semester sequence designed for students in the first year interdisciplinary curriculum. Detailed exploration of the fundamentals of microbiology and immunology, developmental biology, integrative systems physiology, and mechanisms of drug action Pre-requisite to advanced study of basic medical sciences. Didactic lectures will be complemented with discussions of the literature. Pre-requisite: Fundamentals of Basic Medical Science I IDL 580 Minimum Grade of "C".

IDL 590 Interdisciplinary Special Topics 1-3 cr
In depth tutorial exposure to specific interdisciplinary topics in Basic Medical Sciences.

IDL 594 Interdisciplinary Directed Studies 1-6 cr
Directed research study under the supervision of a member of the graduate faculty. This course should be taken by students who have not yet identified a major professor in Basic Medical Sciences.

IDL 595 Distinguished Scientist Seminar 0 cr
A seminar course in which outside speakers are brought in to discuss their research. Students will attend the seminar and have an opportunity to meet informally with the speaker. Attendance will be required, and the material will be testable during each student's qualifying exam.

IDL 620 Biomedical Engineering I 4 cr
Fundamental concepts of medical instrumentation, biomedical imaging and biological systems modeling as used in biomedical engineering. Course is cross-listed with EG 620. Fee.

IDL 621 Biomedical Engineering II 4 cr
Fundamental concepts of transport phenomena, cellular and tissue mechanics, and materials as used in biomedical engineering. Course is cross-listed with EG 621. Fee.

IDL 630 Lung Biology 4 cr
This course introduces an advanced level of lung physiology. An understanding of fundamental lung development, anatomy, and cell and organ physiology is emphasized. The course consists of lectures and written assignments and essay exams. Reading assignments are from the primary literature. Pre-requisites: Graduate level IDL 580 Minimum Grade of "C" and Graduate level IDL 581 Minimum Grade of "C".

IDL 631 Lung Pathobiology 4 cr
This course builds on an in-depth understanding of normal lung biochemistry, cell biology, pharmacology, and physiology to examine lung disease. Emphasis is given on understanding mechanism(s) underlying the genetic, cell biology, anatomy and physiology of disease development and progression. Current therapeutic interventions are discussed. Clinical correlations are utilized to track signs and symptoms of specified diseases, and provide a framework for treatment options. The course consists of lectures and written assignments and essay exams. Reading assignments are exclusively from the primary literature. Pre-requisite: Graduate level IDL 630 Minimum Grade of "C".

IDL 635 Advanced Signal Transduction 4 cr
This course builds on signal transduction topics discussed in the Fundamentals courses (IDL 580, 581). The mechanisms of more generalized signaling pathways (e.g., G-protein coupled pathways) to specific signaling pathways (e.g., TGF/BMP family) will be discussed. Signal transduction pathways will be examined using classic literature references, from the molecular details of pathway components to the effects on the organ system. The course consists of lectures, student presentations, and essay/problem solving examinations. Pre-requisites: Graduate level IDL 580 Minimum Grade of "C" and Graduate level IDL 581 Minimum Grade of "C".

IDL 640 Statistics and Experimental Design in Biomedical Research 2 cr
This course covers statistical analysis, logic and hypothesis-driven experimental design in biomedical research, utilizing a combination of lectures, weekly practical data sets or written assignments, and student presentation.

IDL 641 Effective Scientific Writing 1 cr
This course provides strategies to improve communication skills via construction of logical scientific arguments and effective writing. Course format will include lecture/discussion, in class practical exercises, and writing assignments. In addition, participants will be introduced to the Turnitin software, reference databases, and other electronic resources useful in preparation of proposals and manuscripts.

IDL 645 Research in Progress in Smooth Muscle/Vascular Biology 1 cr
Students meet on alternate weeks for 2 hours with faculty and other research professionals to discuss on-going research projects in the field of smooth muscle and vascular biology. Signal transduction pathways, pathophysiological mechanisms in vascular disorders associated with smooth muscle, and other topics of interest will be discussed. Emphasis will be on up-to-date research results from laboratories as well as newly published literature findings. Students will be expected to present the results of their own laboratory research at least once a year to the group.

IDL 650 Topics in Lung Biology 1 cr
In-depth exposure to selected topics in lung biology or pathobiology. Course may be repeated for credit when course content varies.

IDL 656 Research Seminar in Lung Biology 1 cr
Students and faculty present a research topic for discussion before members of the Center for Lung Biology. The presentations are usually scheduled on a rotational basis. The student may present research data for critique by the faculty.

IDL 667 Cancer Biology Research Seminar 1 cr
Students and faculty present a research topic for discussion before members of the department. The presentations are usually scheduled on a rotational basis. The student may present research data for critique by the faculty.

IDL 676 Literature Reports in Lung Biology 1 cr
Students and faculty participate in a supervised reading of the current literature and meet once a week to discuss the selected article or topic and its relation to ongoing research. The goal of this course is to maintain the faculty's and students' level of information at a "state of the art" in both methods and theory in the discipline and to develop critical skills in reviewing the literature of lung biology.

IDL 799 Research-Dissertation 1-6 cr
Independent research by the student under the sponsorship of the graduate faculty in individual departments in the Basic Medical Sciences. Pre-requisite: Approved formal research proposal.

INTERDISCIPLINARY STUDIES (IDS)

IDS 290 Special Topics in Interdisciplinary Studies 1-3 cr
A study of selected topics of an interdisciplinary nature. May be repeated when content varies. Pre-requisites: Permission of instructor and the Associate Dean.

IDS 490 Special Topics in Interdisciplinary Studies 1-3 cr
Advanced study of selected topics of an interdisciplinary nature. May be repeated when content varies. Pre-requisite: Permission of instructor and the Associate Dean.

IDS 590 Special Topics in Interdisciplinary Studies 1-9 cr
Specialized topics not generally listed in the course offerings.

INTERNATIONAL STUDIES (IS)

IS 100 Global Issues 3 cr
This course introduces students to the basic structural components of the global system, including the nation-state system and world economy, and explores the major schools of thoughts in such areas as security, economic prosperity and development, international law, gender, and environmental studies. The course helps students understand the complex and interlinked issues facing global society and view the U.S. within a broader context.

IS 200 People and Nations of the World 3 cr
Variable content course focusing on a particular nation or region of the world. Course offers a multidisciplinary introduction into the people, society and politics.

IS 290 Special Topics 3 cr
Study of selected topics within a particular Area Studies Concentration. May be repeated for credit when content varies. Pre-requisite: IS 100.

IS 391 Study Abroad 0 cr
International exchange programs for University of South Alabama students. Grading is S/U. Pre-requisite: Permission of the IS Director.

IS 473 International Law 3 cr
This course covers major issues, cases and topics in public and private international law. Topics covered include individuals and corporations, diplomatic relations, extraterritorial jurisdiction, human rights, economic relations, treaty systems, environmental law, arbitration and adjudication, and the use of force (Identical to CJ 473 and PSC 473).

IS 475 International Political Economy 3 cr
An integrative course that combines material from political science, economics, international relations, and general business studies. Topics covered include public policy towards multinational corporations, issues of globalization, theoretical issues about international political economy, trade and finance, and the like. (Identical to PSC 475).

IS 490 Special Topics 3 cr
Advanced study of selected topics within a particular Area Studies Concentration. May be repeated for credit when content varies. Pre-requisite: IS 100.

IS 492 Seminar 3 cr
Advanced study of selected topics in international studies from a comparative perspective. May be repeated for credit when content varies. Pre-requisite: IS 100.

IS 494 Directed Studies 1-3 cr
Directed research in the field of international studies. Pre-requisite: Permission of the International Studies Director.

IS 495 Senior Research Seminar 3 cr
The course seeks to provide an interdisciplinary and cross-regional overview of the fields and research opportunities within international studies. Pre-requisites: Completion of all core courses, substantial fulfillment of other requirements in the program and senior standing.

IS 496 Professional Studies: Internship 3-9 cr

Practical learning experiences through occupational or professional work with an approved international organization, governmental agency, or international business. Pre-requisite: Permission of the International Studies Director.

IS 591 Study Abroad 0 cr

International exchange programs for University of South Alabama students. Grading is S/U. Pre-requisite: Permission of the IS Director.

INFORMATION SYSTEMS (ISC)

All Pre-requisites must be passed with a minimum grade of "C".

ISC 175 Professional Productivity Applications 3 cr

This course provides a foundation in the use of office productivity computer applications as used by students and computing professionals throughout their careers. Topic coverage includes the use of graphical user interface, word processing, spreadsheet analysis, visual graphics-based presentation, and database management software. Students will be required to complete computer-based labs in these areas. No Pre-requisites.

ISC 190 Information Systems Special Topics 1 cr

Selected topics in information systems. Pre-requisite: Permission of the ISC Coordinator.

ISC 245 Information Systems in Organizations 3 cr

An overview of information systems topics from an organizational and managerial perspective. Topics include current information technology and systems, such as the Internet and its organizational impacts; the emergence of global economy and digital firms; and the ethical and social impacts of information systems, such as privacy, intellectual property rights, and liability. Issues and strategies regarding information systems planning, systems development, decision-making, and using IT for competitive advantage are discussed. Throughout the course, students will investigate the strategic uses of information technology in current industry-specific situations through individual and team assignments. No Pre-requisites.

ISC 272 Systems Architecture 3 cr

This course introduces students to the Information Technology (IT) hardware and systems software concepts. Topics include: computer hardware, operating systems, system software, hardware and software integration, operating procedures, system performance, security/safety, and compatibility. Student labs and hands-on activities will include: Windows, Unix, and Linux systems, system utilities and software tools. Credit cannot be received for both ITE 272 and ISC 272. Pre-requisite: CIS 115

ISC 285 Intermediate Programming 3 cr

A second course in visual, event-driven programming that builds on the CIS 115. Topics include sequential files, structured exception handling, debugging, and additional controls and objects. Programming projects are required. Credit cannot be received for both ITE 285 and ISC 285. Pre-requisite: CIS 115.

ISC 300 Health Informatics Clinical Environment 3 cr

This course provides an overview of concepts, terms, organization, and processes associated with patient care and clinical environments as they pertain to health informatics. The entire process of how a person accesses, moves within, and exits the system both as an inpatient and outpatient to obtain care. Students will observe and report on a variety of clinical settings and healthcare specializations throughout the semester. This course is designed for students with no prior clinical experience. No Pre-requisites.

ISC 305 Information Systems and Technology 3 cr

The analysis, design, and implementation of information systems. Analysis of the functional areas of business and integration of computer tools to satisfy information requirements. Current developments in business computer systems, including surveys of current systems and the Internet. Computer classrooms are utilized to provide students with "hands on" experience. Pre-requisite: CIS 250.

ISC 353 Information Systems Applications Development 3 cr

This course provides an accelerated approach to programming in a high-level, object-oriented language, especially for information systems. Coverage includes algorithmic problem solving, fundamentals of programming, procedures, decisions, repetition, arrays, files, exception handling, and object-oriented programming. The format for this course is lecture/lab. The instructor will demonstrate in class, and students will learn by doing homework problems and programming assignments. This course does not count towards a graduate degree in CIS. Pre-requisite: Some prior programming experience is desired and permission of Coordinator. Pre-requisite: MTH 100, MA 112 or higher, or math placement score of 66 or higher.

ISC 360 Information Systems Analysis and Design (W) 3 cr

A thorough examination of the analysis and design of computer information systems from the systems analyst's view. The course will use an established software development methodology. At each step in the software development life cycle, both the methodologies used and the documentation required will be examined. Pre-requisite: EH 102 and ISC 245

ISC 361 Database for Information Systems 3 cr

The course builds on relational database and programming concepts by exploring the analysis, design, and implementation of more complex database systems. Topics include advanced data modeling, advanced query design, and application development in a database programming environment. Pre-requisites: CIS 324 and ISC 285.

ISC 362 Information Systems Object-Oriented Analysis and Design 3 cr

This course provides an introduction to an object-oriented analysis and design (OOAD) methodology as well as the tools and techniques for supplementing this methodology. The course will also cover the use of notational meta-languages such as Unified Modeling Language (UML) and OOAD computer-assisted software engineering (CASE) tools. Pre-requisite: ISC 245.

ISC 410 Health Informatics 3 cr

This course provides an overview of the concepts, terms, tools, and architectures associated with health informatics as applied to healthcare delivery. Topics include: electronic record systems, computerized physician order entry, health system standards, terminologies, work-flow modeling, security and privacy of clinical data, clinical reporting, and the impact of information technology use on the quality and efficiency of health care delivery and outcomes. No Pre-requisites.

ISC 450 Health Systems Analysis and Design 3 cr

This course involves a thorough examination of the analysis and design of healthcare information systems from the informatics specialist's view. This course covers the entire life cycle of a system using an established systems development methodology including workflow analysis. At each step in the development life cycle, both the methodologies used and the documentation required will be examined. A brief overview of networking technologies and their use in healthcare systems is provided. A significant portion of this course will involve hands-on assignments with a mid-range EHR system. Pre-requisite: ISC 410.

ISC 455 Health Decision Support Systems 3 cr

This course focuses on the design and management of electronic medical record systems and clinical decision support systems. Course content related to electronic medical record systems includes architectural components, technical design issues, and management; and, content related to clinical decision support systems includes decision support roles, extracting useful information from data, and legal and regulatory restrictions. Laboratory assignments will provide students with opportunities to interact with these systems. Pre-requisite: ISC 410.

ISC 459 Information Systems Application Design and Implementation 3 cr

Analysis and design of information systems to support multiple locations via Intranet/ Internet access. Additional and supporting topics, such as corporate privacy and security are also covered. Pre-requisite: CIS 324.

ISC 462 Information Systems Strategy and Policy 3 cr

This course provides the top management, strategic perspective for aligning competitive strategy with information systems. Issues include the development and implementation of policies and plans to achieve organizational goals, including defining IS projects that support the operational, administrative, and strategic needs of the organization, including internal and external stakeholders. Pre-requisite: CIS 324.

ISC 463 Information Systems Database Administration and Security 3 cr

An examination of the issues and activities associated with the administrator function for databases. This course will cover installation,

implementation, user management, backup, and security. Pre-requisite: CIS 324.

ISC 464 IS Security and Risk Management 3 cr

This course provides an introduction to the fundamental principles and topics of information security and risk management at the organizational level. This course views information security as a management issue that incorporates technical and management solutions. Topics include risk management, security policy, disaster planning, security law and ethics, and security education, training, and awareness. Pre-requisites: MGT 300 and CIS 321.

ISC 467 Enterprise Information Systems 3 cr

This course provides an introduction to enterprise information systems and to business process modeling. Key concepts and techniques for identifying, designing, and documenting business processes will be presented. The way information technology can be used to manage, transform business processes is discussed. Successful organizational change strategies will be reviewed. Pre-requisites: MGT 300 and CIS 321. Pre-requisites: MGT 300 and CIS 324.

ISC 472 Advanced Data Management 3 cr

This course provides an introduction to the concepts and technologies of business intelligence. Key concepts and techniques allow organizations to analyze data/information collected from transaction processing systems. The ultimate purpose of business intelligence, or business analytics, to support high quality decision support for executives and managers is presented. Concepts of data warehouses, data mining, including text and web mining, and considerations of new and emerging technologies are described in detail. Pre-requisites: CIS 324 and ISC 360.

ISC 475 Information Systems Project Management 3 cr

This course examines the principles and techniques of project management from an information technology perspective. Topics included are: project planning, scheduling, resource allocation, and project management software tools. There is a specific focus on management of software projects, integrating the principles of information systems/needs analysis, software engineering, risk management, and change management. Both the technical and behavioral aspects of project management are covered. Credit cannot be received for both ITE 475 and ISC 475. Pre-requisite: CIS 324.

ISC 490 Information Systems Special Topics 3 cr

Advanced selected topics in information systems. Pre-requisites: Permission of the ISC Coordinator.

ISC 510 Health Informatics 3 cr

This course provides an overview of the concepts, terms, tools, and architectures associated with health informatics as applied to healthcare delivery. Selected research topics are introduced and independently studied. Topics include: electronic record systems, computerized physician order entry, health system standards, terminologies, workflow modeling, security and privacy of clinical data, clinical reporting, and the impact of information technology use on the quality and efficiency of health care delivery and outcomes. Pre-requisite: Permission of the Director of SoC Graduate Studies.

ISC 545 Management Information Systems 3 cr

This course provides an overview of information systems from an organizational, managerial, and technical perspective. The topics covered will focus on the strategic role of information systems and information technology in business processes, change and knowledge management, group and individual decision-making, and electronic commerce. Specific topics include current hardware, infrastructure and connectivity technologies, software and systems development methodologies, Internet-based applications, management challenges and opportunities created by information systems and global connectivity such as privacy, data and systems security and control, intellectual property, ethical and social consequences of information technology, and the impact of digital integration on an organization's competitiveness, products, services, procedures, and management structures. Pre-requisite: Permission of the Director of SoC Graduate Studies.

ISC 550 Health Systems Analysis and Design 3 cr

This course involves a thorough examination of the analysis and design of healthcare information systems from the informatics specialist's view. This course covers the entire life cycle of a system using an established systems development methodology including workflow analysis. At each step in the development life cycle, both the methodologies used and the documentation required will be examined. A brief overview of networking technologies and their use in healthcare systems is provided. A significant portion of this course will involve hands-on assignments with a mid-range EHR system.

ISC 551 Human/Computer Interface Design 3 cr

The course covers principles, guidelines, and methods in human computer interface design. Students complete a project involving the development, evaluation, and demonstration of a user interface. The interface is designed around a user and task analysis performed on a given problem. Students plan and conduct a usability study of a working prototype and report on results and recommendations. Pre-requisite: CIS Graduate Foundation Courses or equivalent.

ISC 553 Information Systems Web Site Management 3 cr

This course addresses the design, development, and management of a web server. Topics include the selection, installation, and configuration of an operating system and web server software, web server security and monitoring, and web site maintenance. Pre-requisite: SoC Graduate Professional Component.

ISC 555 Health Data Management and Decision Support 3 cr

This course focuses on the design and management of electronic medical record systems and clinical decision support systems. Course content related to electronic medical record systems includes architectural components, technical design issues, and management; and, content related to clinical decision support systems includes decision support roles, extracting useful information from data, and legal and regulatory restrictions. Laboratory assignments will provide students with opportunities to interact with these systems..

ISC 559 Information Systems Applications Design and Implementation 3 cr

Analysis and design of information systems infrastructures to support multiple locations, Intranet/Internet access, corporate privacy, and security. Capacity analysis and planning, installation, performance monitoring, and problem solving strategies. Pre-requisite: SoC Graduate Professional Component.

ISC 560 Information Systems Analysis - Design 3 cr

This course will include an introduction to the systems development life cycle as well as a survey of analysis and design technique. Detail topics will include information systems planning and project identification and selection, requirements collection and structuring, process modeling, data modeling, design of interface and data management, system implementation and operation, system maintenance, and change management implications of systems. Globalization issues in systems will also be discussed. Students will use current methods and tools such as rapid application development, prototyping, and visual development. Pre-requisite: SoC Graduate Professional Component.

ISC 561 Information Systems Database Management 3 cr

An introduction to database management systems. The data environment, basic technical concepts and systems resources, database concepts, including use and management of databases. Classical and current DBMS models will be presented. Laboratory project activity will involve definition, creation, and development of a database. Pre-requisite: SoC Graduate Professional Component.

ISC 562 Information Systems Policy and Strategy 3 cr

This course provides the top management strategic perspective for aligning competitive strategy, core competencies, and information systems. Issues include the development and implementation of policies and plans to achieve organizational goals, including defining systems that support the operational, administrative, and strategic needs of the organization, its business units, and individual employees. Pre-requisite: SoC Graduate Professional Component.

ISC 563 Information Systems Database Administration 3 cr

This course examines issues and activities associated with the administrator function for organizational databases. Topics include storage and indexing, query evaluation, physical database design, crash recovery, and security. Pre-requisite: SoC Graduate Professional Component.

ISC 565 Information Systems Project and Change Management 3 cr

A study of the concepts and techniques of project management from an information systems perspective. The course provides an overview of project lifecycle activities, and a focus on managerial, behavioral, and process issues that surround the dynamic context of systems development. The issue of managing the change brought about by the introduction or modification of information systems in organizations will be discussed. Students will be instructed in the use of software tools for project management. Pre-requisite: SoC Graduate Professional Component.

ISC 567 IS Function Integration 3 cr

The tactical/operational responsibilities of the CIO. Governance considerations that link the IS-business organizations. Current/emerging issues in creating and coordinating the key activities necessary to manage the day-to-day operations of the IS function. Coordinating skills and organizational IS infrastructure. Pre-requisites: ISC 560 and ISC 561.

ISC 568 IS Enterprise Integration 3 cr

Information systems' role in transforming organizations and industries. An integrated view of the organization from an external and internal perspective. IS's internal role in integrating the enterprise through a cohesive set of business processes and functional applications to meet business needs. Enterprise resource planning and enterprise functionality. Collaborative systems. Consideration of external relations with suppliers, outsourcers, and customers. Pre-requisite: ISC 567.

ISC 572 Advanced Data Management 3 cr

The focus of this is on the management of data and the technologies which specifically targets mass data storage with a view to on-line and after-the-fact examination of data to acquire new insights. The major topics include: data warehouse planning, data warehouse models, and supporting software, data mining concepts and tools, creation of data mining models for the tools and matching the tool to the task. Pre-requisite: SoC Graduate Professional Component.

ISC 590 Information Systems Special Topics 3 cr

Advanced selected topics in information systems. Pre-requisite: SoC Graduate Professional Component and Permission of the ISC Coordinator.

INSTRUCTIONAL DESIGN AND DEVELOPMENT PROGRAM (ISD)

ISD 581 Hypermedia Tools 3 cr

This course provides students with the skills and knowledge necessary to develop interactive, animated hypermedia modules for use in instructional design projects, presentations, lectures, and multi-media events.

ISD 582 Advanced Hypermedia Tools 3 cr

An advanced course in the development and use of interactive, animated hypermedia products for use in multimedia projects, instructional design projects, presentations, lectures, presentations, etc.

ISD 583 Interactive Video 3 cr

This course involves digital video editing and includes basic instruction in shooting, lighting and composing video sequences.

ISD 584 Animation 3 cr

An introductory course that provides students with an opportunity to acquire the skills necessary to develop animated interactive modules for use in lectures.

ISD 585 Integration of Technology in Teaching 3 cr

The purpose of this course is to enable students who have some technology background in computing to focus the use of a variety of technologies onto a specific content area of instruction. Students will demonstrate cognitive competency of curriculum integration, instructional design, and production techniques. Specific attention will be given to videodisc technology, AV and computer technology.

ISD 590 Special Topics 3 cr

Topics of contemporary interest in the area of Education Media will be presented, discussed, and investigated.

ISD 594 Directed Study and Research 1-3 cr

Students explore problems and issues of special interest or significance in Instructional Design and Development. Not more than three semester hours may be accepted toward degree programs.

ISD 595 Internship (Masters) 3 or 6 cr

The internship is a supervised learning experience in an actual or similar setting to that in which instructional designers or medial administrators are employed.

ISD 598 Research and Development Project 3-6 cr

A supervised field project, study, or investigation on a topic related to Instructional Design and Development. Students will conduct an investigation which applies skills learned during the Instructional Design and Development Masters program.

ISD 599 Thesis 1-3 cr

A student selects a project, study, or investigation related to the area of specialization in Instructional Design and Development. The project forms a basis for the thesis. A thesis committee provides direction during the investigation and during the writing of the thesis.

ISD 600 Learning Tools 1 cr

This one-hour course is designed to introduce students to some of the basic media tools that will help them with their coursework and in the work place. The course will typically be a series of two-hour class periods scheduled at somewhat regular intervals.

ISD 601 Seminar in Instructional Design and Development 3 cr

Discussion and investigation of particular topics related to Instructional Design and Development.

ISD 602 Writing for Instruction 3 cr

Course serves as an overview and review of essential written communication skills needed by instructional design professionals.

ISD 610 Trends and Issues in Instructional Design and Development 3 cr

Discussion and investigation of history, current trends, and issues in instructional design and their implications for education and training.

ISD 611 Macro-Level Training Systems 3 cr

Course focuses on macro-level design and development of large-scale instructional systems. Course emphasizes needs assessment, proposal writing, methods of analyzing organizational dynamics, and diffusion of institutional innovations. Students identify a problem in a large instructional system, propose a solution, and develop a detailed plan for solving the problem.

ISD 612 Alternate Instructional Models 3 cr

This course affords students the opportunity to apply a variety of well-established and emerging instructional design and development models. Pre-requisites: ISD 621.

ISD 613 Instructional and Learning Strategies 3 cr

In this course, students explore the use of an assortment of instructional strategies to meet diverse learning needs.

ISD 614 Human Cognition for Instructional Design and Development 3 cr

A survey course of the cognitive science literature that is especially relevant for instructional designers and human performance technologist. The course covers major theoretical perspectives in cognitive science and has students read original empirical research. The goal is to enable IDD students to utilize the cognitive science literature in their careers. Pre-requisite: A grade of "B" or above in EPY 502 or permission of instructor.

ISD 620 Research in Instructional Technology 3 cr

Students collaborate with a graduate faculty member who is conducting research in the area of instructional design and development. May be repeated for credit. Requires permission of instructor.

ISD 621 Instructional Design 3 cr

Introductory course that focuses on a recognized model of instructional design. Includes emphasis on instructional analysis, instructional objective, performance assessment, instructional strategies and sequences, and formative evaluation.

ISD 622 Advanced Instructional Design 3 cr

Application of advanced instructional design models and procedures for needs assessment, instructional development, and evaluation in various instructional and learning environments using current learning tools.

ISD 623 Advanced Research Design for IDD 3 cr

A comprehensive course detailing advanced research methods and research. This course is especially geared toward advanced IDD students who wish to develop the skills to properly design, propose, carry out and critique scholarly research. The course covers the specifics of advanced research design and methods through a thorough analysis of empirical research. The goal is to equip IDD students

with the research design skills to become successful scholars and researchers in their field. Pre-requisites: A grade of "B" or above in IDE 510, a grade of "B" or above in IDE 620 or permission of the instructor.

ISD 640 Needs Assessment 3 cr
Analysis of needs assessment procedures related to the development of instructional systems. Considers a variety of needs assessment models. Students apply needs assessment models in selected settings.

ISD 641 Performance Systems Technology 3 cr
Provides students with practical methods of analyzing and solving human performance problems. Emphasis is placed on development of both noninstructional and instructional interventions.

ISD 642 Project Coordination 3 cr
This course will develop knowledge and competencies in the coordination of large instructional projects. It is designed to enhance skills in the basic functions of instructional project coordination: planning, organizing, controlling, and directing.

ISD 650 Computer-Based Training 3 cr
A course for persons interested in the use of the computer to present instructional materials to students. Current learning theory as it pertains to authoring will be discussed. Pre-requisite: ISD 621.

ISD 651 Learning Theory and Technology 3 cr
This course will present techniques for the integration of instructional design theory and practice into the newer delivery systems including those using video and digitized media.

ISD 652 Technology-Based Instruction 3 cr
This course is a continuation of ISD 651. It concentrates on the additional skills and software necessary to develop and produce an original interactive instructional product.

ISD 653 Developing Online Instruction 3 cr
Developing online instruction using course management tools, multimedia technologies, and instructional design principles. Pre-requisite: ISD 621.

ISD 656 Training Interventions 3 cr
Practical experience in designing and implementing facilitator-led training in various large-scale organizations.

ISD 657 Teaching in Higher Education 3 cr
Theory and practice of pedagogy in higher education. Principles of the analysis, design, development, implementation, and evaluation of instruction will be addressed and then applied in a practical setting with a mentor instructor. Pre-requisites: Permission of instructor. Doctoral student status.

ISD 680 Emerging Technologies 3 cr
Course introduces students to emerging technological breakthroughs in education and training settings especially emphasizing the effects of future technologies.

ISD 682 Impact of Emerging Technologies 3 cr
This course examines the impact of new digital technologies in education and training and prepares educators to use digital approaches in their institutions.

ISD 694 Directed Study and Research 3 cr
Students explore problems and issues of special interest or significance in Instruction Design. Not more than three semester hours may be accepted toward degree program.

ISD 695 Internship (Doctoral) 3-6 cr
A supervised learning experience in an actual or similar setting to that which instructional designers or media administrators are employed.

INTERDISCIPLINARY STUDIES TRADITIONAL (IST)

IST 210 Introduction to Disability 3 cr
This course will provide students from any discipline the opportunity to develop the knowledge and skills needed to effectively work with people with disabilities in a variety of settings. Disability is examined as a type of diversity. Topics include: the history and sociological context of disability; the impact of disability on the individual and family; advocacy and civil rights; current trends in services and supports for children and adults with disabilities; and respectful language and interaction. Students will actively engage in readings, discussions, and writing on disability issues.

IST 302 Introduction to Interdisciplinary Studies - IDP 3 cr
Provides students an introduction to the field of interdisciplinary studies and an opportunity to critically reflect on the experience of self, education, and career, and the relationship among these three phenomena. IST 302 is required of all IDP students and must be taken before IST 496 or AIS 380. Pre-requisite: junior or senior standing.

IST 310 Global Leadership for the 21st Century 3 cr
This course helps prepare students to assume global leadership roles in their careers and the community at large. Students explore leadership theories and principles as well as investigate leadership qualities among historical and contemporary individuals. In addition, students confront present-day global issues and argue viewpoints orally, as well as through persuasive and technical papers. Students are expected to complete an interdisciplinary project based on global issues.

IST 495 Professional Leadership Development 3 cr
Students will examine their skills, abilities, personality, attitudes, values, interests and behaviors within the context of current scholarship on leadership to increase awareness of their leadership competencies.

IST 496 Professional Studies: Internship 3 cr
The purpose of the internship is to give the interdisciplinary studies student supervised practical experience in a setting related to the student's concentration. Pre-requisites: Completion of IST 302 or AIS 301 with a grade of C or better, an approved graduation plan, and approved internship application signed by the IST internship coordinator; concurrent Pre-requisite: AIS 300.

IST 498 Internship II: Capstone Experience (W) 3 cr
This post-internship course provides the student an opportunity to reflect on and critically evaluate the internship experience, particularly as it relates to the interdisciplinary course of study. Students will prepare reports, write papers, make presentations, and engage in group discussion that critically considers the internship of the previous semester. Pre-requisite: AIS 300, AIS 350, IST 496.

INFORMATION TECHNOLOGY (ITE)

All Prerequisites must be passed with a minimum grade of "C".

ITE 190 Information Technology Special Topics 1 cr
Selected topics in information technology. Pre-requisite: Permission of the ITE Coordinator.

ITE 271 Introduction to Information Technology 3 cr
This course introduces students to the Information Technology (IT) concepts and the software that facilitates IT solutions. Topics include: data, information, and knowledge concepts, productivity software tools, role of networking and communication, the "digital phenomena", and the benefits of IT. Also, included are IT program concepts such as: ethics, the importance of effective written and oral communication, continuous learning and technology monitoring/ evaluation. Pre-requisite: None.

ITE 272 Systems Architecture 3 cr
This course introduces students to the Information Technology (IT) hardware and systems software concepts. Topics include: computer hardware, operating systems, system software, hardware and software integration, operating procedures, system performance, security/safety, and compatibility. Student labs and hands-on activities will include: Windows, Unix, and Linux systems, system utilities and software tools. Pre-requisite: CIS 115.

ITE 285 Intermediate Programming 3 cr
A second course in visual, event-driven programming that builds on CIS 115. Topics include sequential files, structured exception handling, debugging, and additional controls and objects. Programming projects are required. Credit cannot be received for both ISC 285 and ITE 285. Pre-requisite: CIS 115

ITE 370 Advanced Application Development 3 cr
This course explores advanced topics in visual applications development. Emphasis is placed upon developing increased program functionality and connectivity with local and remote databases. Other topics: integrating programming components and libraries, application development and testing methodologies, and using existing Windows DLL and DDE

components. Programming projects are required. Pre-requisites: ITE 285 and CIS 324.

ITE 372 Advanced Operating Systems 3 cr

This course introduces students to advanced Operating Systems techniques and related system architecture concepts. Students will examine how Operating Systems retain parameters set during installation and customization as well as the basic strategies used in Operating System security. Students will use advanced command-line tools to discover and modify settings within the Operating System and will use advanced scripting techniques to parse data within Operating System's files. Pre-requisite: ISC 272 or ITE 272, and ISC 285 or ITE 285.

ITE 373 File Systems for Digital Forensics 3 cr

This course introduces students to advanced file system techniques used in Forensic Analysis. Students will examine the current principles in drive storage hardware and file systems, including Windows and Linux-based systems and evaluate possible data hiding techniques which can be employed within these systems. Students will be required to perform imaging of hard drives for analysis of possible hidden data using techniques covered in this course. Pre-requisite: ISC 272 or ITE 272.

ITE 375 Publishing for the World Wide Web 3 cr

This course is an introduction to the models and tools used to develop documents for the World Wide Web. Course topics include web site planning and design, markup and styling languages, graphics, multimedia utilization, typography, and scripting. Web site design issues such as ethics, copyright and intellectual property rights are also covered. Pre-requisites: CIS 321 and either ISC 272 or ITE 272.

ITE 380 Multimedia Production 3 cr

This course covers the models and tools of multimedia development and production. Development models include: message analysis, audience analysis, and media formats. Technical issues include: data formats, data interoperability, and hardware concepts. From a practical perspective, students will develop a multimedia project. Pre-requisite: ISC 272 or ITE 272.

ITE 382 Network Administration 3 cr

This course examines the network and database administrator functions in an organization. Students study the functions required of an administrator to facilitate the use of the environment while securing the resources. Various methods and software products will demonstrate the areas of access and security. Pre-requisites: CIS 321 and either ISC 272 or ITE 272.

ITE 384 Network Infrastructure Systems 3 cr

This course focuses upon the concepts of network hardware systems that provide interconnection of communication devices. Topics include: network architectures and technologies, concepts such as routing, addressing, and network protocols (TCP/IP and others). Students will be required to setup, configure, and manage wired and wireless network equipment such as switches, routers, access points, and gateways. Pre-requisites: CIS 321 and either ISC 272 or ITE 272.

ITE 453 Web Site Management 3 cr

This course addresses the design, establishment, and implementation of a World Wide web site. Issues addressed are: definition of the site, establishment of a physical site, choice of a Web server, determination of software requirements, implementation details, security, management, and monitoring of the site. Pre-requisites: CIS 321 and either ISC 272 or ITE 272.

ITE 473 Digital Forensics Analysis 3 cr

This course introduces students to acceptable methodologies of securing, collecting, analyzing and reporting data of a computer forensics investigation. Topics include: Ethics, introduction to computer investigations, evidence control, forensics tools, data acquisition, data recovery, data analysis and presenting the results. Students will be required to perform several forensics analyses in a controlled lab environment. Pre-requisite: ITE 372 and ITE 373.

ITE 474 Human Computer Interface 3 cr

Students will study the concepts of human-computer interaction and interface design. Topics include: detailed human-computer interaction concepts, modern graphical user interface (GUI) design conventions, interface design models, and interface usability testing. Students will use rapid-prototyping tools to develop and test a typical user interface. Pre-requisite: EH 372 or 373 and either ISC 285 or ITE 285.

ITE 475 Information Technology Project Management 3 cr

This course examines the principles and techniques of project management from an information technology perspective. Topics included are: project planning, scheduling, resource allocation, and project management software tools. There is a specific focus on management of software projects, integrating the principles of information systems/needs analysis, software engineering, risk management, and change management. Both the technical and behavioral aspects of project management are covered. Credit cannot be received for both ISC 475 and ITE 475. Pre-requisite: CIS 324.

ITE 476 Network Security Management 3 cr

This course examines network and web security issues including: risks and threats, system access points, hardware and software defense methods, and organizational security polices. Labs will require students to analyze systems for potential threats, implement security procedures, monitor systems for security breaches, and institute recovery or repairs. Pre-requisite: ITE 384.

ITE 480 Needs Assessment and Technology Evaluation (W) 3 cr

This course presents methodologies for assessing technological needs in support of organizational information requirements. Students learn the next logical step is a formal means of evaluating a given technology. Major topics of the course are specifying organizational needs, identifying potential technologies, evaluating potential benefits, and assessing the organization's ability to utilize the technology. Students will examine planning for technological change and strategic implementation of the change. Pre-requisites: ITE 271 and either EH 372 or EH 373.

ITE 482 Advanced Web Development 3 cr

This is an advanced course in web programming and development. This course provides a hands-on approach using high-level development tools to learn advanced web programming concepts including server-side and database processing. Students will implement usability and security features into the development of modern web applications. Pre-requisites: CIS 324 and ITE 375.

ITE 484 Advanced Network Management 3 cr

This course explores advanced network management issues including: developing/designing network implementation strategies, managing users and data, providing operational support and help-desk, developing network use polices, developing network recovery procedures. Labs will require that students manage an operational network that provides typical network services and experience the day-to-day problems that network administrators encounter. Pre-requisites: ITE 382.

ITE 485 ITE Senior Demonstration Project 3 cr

A senior capstone project course that utilizes teams and/or individuals working from problem requirements and specifications to produce a solution. This requires exploration of suitable information technologies to produce a solution that improves the problem situation. Students/teams will analyze, plan, and report on the project and implement a prototype. Pre-requisites: ITE 370 and permission of ITE coordinator.

ITE 490 Information Technology Special Topics 3 cr

Advanced selected topics in information technology. Pre-requisite: Permission of the ITE Coordinator.

LANGUAGE ARTS AND SKILLS (LAS)

LAS 100 Language Arts and Skills 3 cr

This course reinforces several related skills: reading, critical thinking, and writing. Students will examine sample essays, analyze them in terms of rhetorical strategies, and demonstrate these concepts in their own writing. Within this context, advanced grammatical concepts, punctuation, and sentence style will be emphasized. Logical idea development, organization, and style will also be emphasized. Designed to improve success in English 101. This is a web enhanced course.

LANGUAGES FOREIGN (LG)

LG 110 World Languages 3 cr

The general aim of this introductory-level course is to ground students in a basic understanding of the social, political, economic and cultural realities of language around the globe, including the importance of mastering one or more languages other than one's native tongue. Students taking the course will profit from an understanding of language value in the global marketplace and will gain new insight into their own native language through a brief examination

of the structures of several of the world's major languages. The course may feature guest presenters and will also discuss techniques of language acquisition.

LG 190 Special Topics 1-3 cr
Topics to be determined by student need and interest. Course may be repeated when content varies.

LG 205 Foreign Literatures in Translation (W) 3 cr
A varying-content course designed to introduce the student to selected major works of one language other than English. Works from English-speaking countries may occasionally be used for the purpose of cross-cultural comparison. The student may choose from a number of specific topics that will be designated prior to each semester. All readings and discussions are in English. May be repeated for credit when course content varies. Foreign Language majors wishing to have one or several of these courses count toward their major must seek prior approval from their advisor. Pre-requisite: EH 102.

LG 284 Japanese History in Film and Literature 3 cr
This course will introduce students to major themes in recent Japanese history, including samurai culture and other issues pertaining to social class, Westernization, the postwar family, sixties radicalism, and recent popular culture. Students will explore these themes through Japanese film and literature, and will thus become familiar with major directors, including Akira Kurosawa, Yasujiro Ozo, and Juzo Itami and novelists such as Junchiro Tanizaki and Yukio Mishima. Identical to HY 284 and CA 284. Credit cannot be received for both LG 284 and HY 284 or CA 284.

LG 290 Special Topics 1-3 cr
Topics to be determined by student need and interest. Course may be repeated when content varies.

LG 305 Studies in Gender and Writing 3 cr
A varying-content course that provides an in-depth study of gender-related questions in a literary and cross-cultural context. Unless otherwise indicated, all readings and discussions are in English. May be repeated for credit when course content varies. Foreign Language majors wishing to have one or several of these courses count toward their major must seek prior approval from their advisor. Pre-requisite: EH 102.

LG 348 19th Century Philosophy and Literary Theory 3 cr
An examination of selected themes and issues in 19th Century Continental Philosophy and Literary Theory. Topics may include Idealism, Romanticism, Existentialism, Marxism, and Freudianism. Identical with PHL 348 and EH 348. Credit cannot be received for both LG 348 and PHL 348 or EH 348. (For LG credit, students will be required to do some course work in their language of concentration).

LG 349 20th Century Philosophy and Literary Theory 3 cr
An examination of selected themes and issues in 20th Century Continental Philosophy and Literary Theory. Topics may include Phenomenology, Existentialism, Hermeneutics, Structuralism, and Poststructuralism. Identical with PHL 349 and EH 349. Credit cannot be received for both LG 349 and PHL 349 or EH 349. (For LG credit, students will be required to do some course work in their language of concentration).

LG 390 Special Topics 1-3 cr
Topics to be determined by student need and interest. Course may be repeated up to three times when content varies for a total of 12 hours. A subtitle identifying the topic will be noted on the student's record.

LG 394 Directed Studies: Pre-Study Abroad 1 cr
Working under the direction of their faculty advisor, language majors will prepare for their required study abroad experience through an examination of selected country-specific readings as well as cross-cultural orientation materials. Pre-requisite: completion of intermediate sequence in student's concentration or equivalent.

LG 480 Senior Seminar (C) 3 cr
This course is designed to broaden and enhance the study-abroad experience and to serve as a capstone to their foreign-language major. Building on the study-abroad experience, students will (1) contextualize their experience through readings, (2) continue their experience by maintaining consistent contact with the target culture, and (3) communicate their experience and their enhanced understanding of topics such as culture shock, culture stereotypes, cultural metaphors, and cross cultural comparisons of behavior and mind-set. Classes will consist of lectures, discussions of readings, an important research and technical component in order to insure that students have attained the appropriate computing, Internet, research, and multimedia skills for the discipline. Offered in fall semester only. Pre-requisite: completion of the Study Abroad requirement. This course satisfies computer requirement.

LG 490 Special Topics 1-6 cr
Topics to be determined by student need and interest. Course may be repeated up to four times when content varies for a total of 16 hours. A subtitle identifying the topic will be noted on the student's record.

LG 492 Seminar 1-3 cr
A course designed for advanced students to pursue a special topic in depth through readings, critical discussions, and delivery of a seminar paper. This course may be repeated for a maximum of six credits. Pre-requisite: Normally limited to juniors and seniors.

LG 494 Directed Studies 1-3 cr
Directed study under the supervision of a member of the Foreign Language faculty. This course may be repeated for a maximum of six credits. Pre-requisite: Permission of the department chair.

LG 496 Internship 1 - 3 cr
Supervised professional work with mandatory reading list and written report. This course may be repeated for a maximum of six credits. Pre-requisite: Permission of the Department Chair.

LG 499 Senior Honors Project 3-6 cr
Under the advice and guidance of a faculty mentor honors students will identify and carry out a research project, relevant to the field of foreign language study, that will lead to a formal presentation at the annual Honors Student Colloquium. The senior project will be judged and graded by three faculty chaired by the honors mentor.

LG 590 Special Topics 1-3 cr
Topics to be determined by student need and interest. Content will vary. A subtitle identifying the topic will be entered on the student's record.

LG 592 Seminar 1-3 cr
A course designed for graduate students to pursue a special topic in depth through readings, critical discussions, and delivery of a seminar paper.

LG 594 Directed Studies 1-3 cr
Directed study under the supervision of a member of the Foreign Languages and Literatures faculty having Graduate Faculty status. This course may be repeated for a maximum of six credits. Pre-requisite: Permission of department chair.

FRENCH

LG 111 Introductory French I 3 cr
The first of a two-semester sequence in introductory French. The goal of the two-semester sequence is to achieve a basic proficiency in understanding, speaking, reading, and writing French, and to acquire basic knowledge of French-speaking cultures. Fee. **Core Course**.

LG 112 Introductory French II 3 cr
The second semester of the introductory course. Pre-requisite: LG 111 or equivalent. Fee. **Core Course**.

LG 113 Accelerated Introductory French (Honors) 6 cr
A one-semester intensive first-year course for highly motivated students with prior instruction in the language, i.e., students who have recently completed a minimum of two years of high school French with a "B" average or better. This course covers the material taught in LG 111 and LG 112 and satisfies the Arts and Sciences foreign language requirement. By permission of the instructor. Usually taught in the fall semester. Fee.

LG 211 Intermediate French I 3 cr
The first of a two-semester sequence in intermediate French. A continuation of the training necessary to achieve fluency in understanding, speaking, reading and writing French. A comprehensive grammar review is complemented by elaboration of grammatical topics and lexical development beyond the scope of Introductory French I and II. Readings of literary and cultural texts treating French-speaking areas of the world. Emphasis on fluency in conversation and cultural fluency through class discussion of both written and recorded texts from the Francophone world. Pre-requisite: LG 112 or equivalent. Fee. **Core Course**.

LG 212 Intermediate French II 3 cr
The second semester of the intermediate sequence. Pre-requisite: LG 211 or equivalent. Fee. **Core Course**.

LG 213 Accelerated Intermediate French (Honors) 4 cr
A one-semester intensive intermediate course for students who have successfully completed LG 113 (Accelerated Introductory French-Honors), or the equivalent. This course covers material taught in LG 211 and LG 212. Usually taught in the spring semester. By permission of instructor. Pre-requisites: LG 112, LG 113, or equivalent. Fee.

LG 311 Survey of French Literature and Culture I 3 cr
The first part of a two-semester course that deals with the major periods of French culture. Readings of representative works from the Middle Ages through the Eighteenth Century. In French. Pre-requisites: LG 212, LG 213 or equivalent.

LG 312 Survey of French Literature and Culture II 3 cr
The second of a two-semester course that deals with the major periods of French culture. Readings of representative works from the Nineteenth and Twentieth Centuries. In French. Pre-requisites: LG 212, LG 213 or equivalent.

LG 314 Advanced French Conversation 1 cr
Intensive conversation with practice using various levels of the spoken language from slang to formal speech. Emphasis on the sounds and idioms of French. The course meets one hour per week with the instructor and one hour per week for a lab session, often with a native speaker. The content of this course will vary over four consecutive semesters. This course may be repeated for a maximum of four credits. Pre-requisite: LG 212, LG 213 or equivalent.

LG 326 Advanced French Grammar and Conversation 3 cr
Comprehensive review of French grammar coupled with weekly practice in conversation using various levels of the spoken language from slang to formal speech. Emphasis on vocabulary acquisition and mastering the more complex features of French grammar. Pre-requisites: LG 212, LG 213 or equivalent.

LG 327 Advanced French Composition and Conversation (W) 3 cr
Intensive course in writing French coupled with oral presentations and activities designed to enhance the student's command of the language. Pre-requisites: LG 212, LG 213 or equivalent.

LG 412 Readings in Francophone Literature 3 cr
Study of the literature of the Francophone world, including West and North Africa, the Caribbean and Quebec, in their cultural and historical context. In French. Pre-requisites: LG 311, LG 312 or equivalent.

LG 415 Readings in the French Novel 3 cr
Study of the development of the novel in French from the romantic period through the contemporary novel. In French. Pre-requisites: LG 311, LG 312 or equivalent.

LG 416 Identities Françaises 3 cr
Study of how different minority groups have been represented and have represented themselves in Nineteenth and Twentieth Century French and Francophone literature, essays, and film. Pre-requisites: LG 311, LG 312 or equivalent.

GERMAN

LG 151 Introductory German I 3 cr
The first of a two-semester sequence in introductory German. The goal of the two-semester course is to achieve a basic proficiency in understanding, speaking, reading, and writing German, and to acquire basic knowledge of German-speaking cultures. Fee. **Core Course**.

LG 152 Introductory German II 3 cr
The second semester of the introductory course. Pre-requisite: LG 151 or equivalent. Fee. **Core Course**.

LG 153 Accelerated Introductory German (Honors) 6 cr
A one-semester intensive first-year course for highly motivated students with prior instruction in the language, i.e., students who have recently completed a minimum of two years of high school German with a "B" average or better. This course covers the material taught in LG 151 and LG 152 and satisfies the Arts and Sciences foreign language requirement. By permission of instructor. Usually taught in the spring semester. Fee.

LG 251 Intermediate German I 3 cr
The first of a two-semester sequence in intermediate German. A continuation of the training necessary to achieve fluency in understanding, speaking, reading, and writing German. Reading of literary, cultural, and historical texts. Class discussions, reports in German, both oral and written, are required. Pre-requisite: LG 152 or equivalent. Fee. **Core Course**.

LG 252 Intermediate German II 3 cr
The second semester of the intermediate sequence. Pre-requisite: LG 251 or equivalent. Fee. **Core Course**.

LG 361 German Culture and Literature from the Beginnings through Classicism 3 cr
Origin and development of German civilization (literature, thought, the arts, and society in a historical context) from the beginnings through the early nineteenth century. Extensive readings, class discussions, and oral and written reports in the language are required. Taught in German. Pre-requisite: LG 252 or equivalent.

LG 362 German Culture and Literature of the Nineteenth Century 3 cr
Development of German civilization (literature, thought, the arts, and society in a historical context) during the period of unification and industrialization, including Romanticism, Realism, Naturalism, and early Modernism. Extensive readings, class discussions, and oral and written reports in the language are required. Taught in German. Pre-requisite: LG 252 or equivalent.

LG 363 Modern and Contemporary German Culture and Literature 3 cr
Development of German civilization (literature, thought, the arts, and society in a historical context) from the early twentieth century through the present. Extensive readings, class discussions, and oral and written reports in the language are required. Taught in German. Pre-requisite: LG 252 or equivalent.

LG 364 Highlights of German Culture and Literature 3 cr
A capstone course highlighting masterpieces of German literature and culture from a particular genre (e.g., the Novelle); a particular period or movement (e.g. Romanticism); an author or group of authors (e.g. Brecht); or a particular thematic focus. Extensive readings, class discussions, and oral and written reports in the language are required. Taught in German. Pre-requisite: LG 363 or equivalent.

LG 366 Advanced German Grammar 3 cr
Designed for the student who wishes to teach or do advanced work. Comprehensive study of formal grammar and structured practice in oral and written expression. Pre-requisite: LG 252 or equivalent.

LG 367 Advanced German Conversation 1 cr
Intensive conversation with practice in using various levels of the spoken language from slang to formal speech. Emphasis on the sounds and idioms of German. The course meets one hour per week with the instructor and one hour per week for a lab session, often with a native speaker. The content of this course will vary over four consecutive semesters. This course may be repeated for a maximum of four credits. Pre-requisite: LG 252 or equivalent.

LG 368 Advanced German Composition (W) 3 cr
Intensive course in writing German. Emphasis is on writing as a process, the communicative purposes of writing, and the development of critical reflection. Analysis of authentic texts and extensive practice in various genres of written German, including description, narrative, report, critical review, and interpretation. Pre-requisite: LG 252 or equivalent.

CLASSICAL GREEK

LG 141 Introductory Classical Greek I 3 cr
Introductory Classical Greek I is the first half of two-course sequence in Classical Greek. The goal of the course is to achieve basic proficiency in understanding, reading and translating, and to acquire basic knowledge of Greek customs, history, and culture.

LG 142 Introductory Classical Greek II 3 cr
Introductory Classical Greek II is the second half of a two-course sequence in Classical Greek. Pre-requisite: LG 141.

LG 241 Intermediate Classical Greek I 3 cr
Intermediate Classical Greek I is the first of a two-semester sequence in intermediate Classical Greek. The course is a continuation of the study necessary to achieve fluency in

reading, understanding and translating Classical Greek. A comprehensive review of grammar is accompanied with the presentation of material beyond the scope of Introductory Classical Greek I and II. All texts for reading and translation are presented in the original classical texts, unabridged and complete. Emphasis is placed on the development of the periods of classical Greek literature as well as pertinent events in Greek history and culture. Pre-requisite: LG 142.

LG 242 Intermediate Classical Greek II 3 cr

Intermediate Classical Greek II is the second of a two-semester sequence in intermediate Classical Greek. Pre-requisite: LG 241.

LATIN

LG 101 Introductory Latin I 3 cr

Introductory Latin I is the first half of a two-course sequence in Classical Latin. The goal of the courses is to achieve basic proficiency in understanding and reading Latin and to acquire a basic knowledge of Roman customs, history, and culture.

LG 102 Introductory Latin II 3 cr

Introductory Latin II is the second half of a two-course sequence in Classical Latin. Pre-requisite: LG 101.

LG 201 Intermediate Latin I 3 cr

The first of a two-semester sequence in intermediate Latin. The course is a continuation of the study necessary to achieve fluency in reading, understanding and translating Classical Latin. A comprehensive review of grammar is accompanied with the presentation of material beyond the scope of Introductory Latin I and II. All texts for reading and translation are presented in the original classical texts, unabridged and complete. Emphasis on the development of the periods of classical Roman literature as well as pertinent events in Roman history and culture. Pre-requisite: LG 102.

LG 202 Intermediate Latin II 3 cr

The second of a two-semester sequence in intermediate Latin. Pre-requisite: LG 201.

RUSSIAN

LG 171 Introductory Russian I 3 cr

The first of a two-semester sequence in introductory Russian. The goal of the two-semester course is to achieve a basic proficiency in understanding, speaking, reading, and writing Russian. Fee. **Core Course**.

LG 172 Introductory Russian II 3 cr

The second semester of the introductory course. Pre-requisite: LG 171 or equivalent. Fee. **Core Course**.

LG 173 Accelerated Introductory Russian (Honors) 6 cr

A one-semester intensive first-year course for highly motivated students with prior instruction in a foreign language (either high school or college level) with a "B" average or better. This course covers material taught in LG 171 and LG 172 and satisfies the Arts and Sciences foreign language requirement. By permission of the instructor. Usually taught in the spring semester. Fee.

LG 271 Intermediate Russian I 3 cr

The first of a two-semester sequence in intermediate Russian. A continuation of the training necessary to achieve fluency and understanding in speaking, reading, and writing Russian. Reading of literary and cultural texts. Increased practice in Russian conversation. Pre-requisite: LG 172 or equivalent. Fee. **Core Course**.

LG 272 Intermediate Russian II 3 cr

The second semester of intermediate Russian. Pre-requisite: LG 271 or equivalent. Fee. **Core Course**.

LG 372 The Golden Age of Russian Literature (W) 3 cr

A survey course designed to familiarize the student with the essential works of 19th-century Russian literature. Students read and discuss works by Pushkin, Lermontov, Gogol', Dostoevsky, Turgenev, Tolstoy, and Chekhov. In English. Russian majors are required to read excerpts of works in Russian and to complete a course project in Russian. Pre-requisite: LG 272 or equivalent.

LG 374 Advanced Russian Grammar 3 cr

A course designed to give students active control of the more complex features of Russian grammar. Structured practice in oral and written expression. Pre-requisite: LG 272 or equivalent.

LG 375 Advanced Russian Conversation 2 cr

Intensive conversation practice in using the various levels of modern spoken Russian. This course meets two hours per week. The content of this course will vary over four consecutive semesters. This course may be repeated for a maximum of four credits. Pre-requisite: LG 272 or equivalent, or permission of the instructor.

LG 376 Advanced Russian Composition (W) 3 cr

This course provides extensive practice in writing Russian. Students read, discuss, and write about texts which reflect the controversial and topical issues of the day. Pre-requisite: LG 272 or equivalent.

LG 380 Russian Poetry 3 cr

Designed to enhance the student's overall command of spoken Russian through the study of Russia's rich poetic tradition. Russian poems and songs provide the basic materials for this course. Lectures, materials, and discussions in Russian. Pre-requisite: LG 272 or equivalent.

LG 381 Russian Prose in Context 3 cr

A course designed to enhance the student's ability to read, translate, and discuss Russian texts. Students read works from both 19th- and 20th- century fiction, which they analyze both thematically and stylistically. Class work and assignments are geared towards increasing the student's vocabulary and understanding of Russian stylistics. All texts, lectures, and discussions in Russian. Pre-requisite: LG 272 or equivalent.

SPANISH

LG 131 Introductory Spanish I 3 cr

The first of a two-semester sequence in introductory Spanish. The goal of the two-semester course is to achieve a basic proficiency in communication in Spanish through the development of listening, speaking, reading and writing skills. Fee. **Core Course**.

LG 132 Introductory Spanish II 3 cr

A continuation of Spanish 131. Pre-requisite: LG 131 or equivalent. Fee. **Core Course**.

LG 231 Intermediate Spanish I 3 cr

The first of a two-semester sequence in intermediate Spanish. A continuation of the training necessary to achieve fluency. Grammar review, class discussions, extensive oral and written work, short readings in literature and culture are included. Pre-requisites: LG 132, LG 134, or equivalent. Fee. **Core Course**.

LG 232 Intermediate Spanish II 3 cr

The second semester of the intermediate sequence. Pre-requisite: LG 231 or equivalent. Fee. **Core Course**.

LG 333 Conversational Spanish and Composition 3 cr

Extensive oral and written work through a variety of activities to review and reinforce acquired language skills, emphasizing communicative skills such as vocabulary acquisition and fluency in the language. Pre-requisite: LG 232 or equivalent.

LG 334 Advanced Spanish Grammar and Composition (W) 3 cr

Extensive study of major aspects of Spanish grammar with emphasis on increasing proficiency in the four skills. Special emphasis is placed on descriptive and narrative writing. Pre-requisite: LG 232 or equivalent.

LG 335 Commercial and Technical Spanish 3 cr

Advanced course in written and spoken business and technical Spanish. Emphasis on writing proficiency in various aspects of business, government, technical and general commercial writing. Development of related speaking skills for commerce. Pre-requisites: LG 333, LG 334, or equivalent.

LG 336 Introduction to Textual Analysis in Hispanic Literature 3 cr

An introduction to literary analysis, literary and critical terminology, and genres as they appear in short works from both Spain and Latin America. Usually taught in fall semester. Pre-requisites: LG 232, LG 234 or equivalent.

LG 337 Spanish for the Medical Professions 3 cr

Is designed for the advanced language student interested in further developing his/her linguistic proficiency in Spanish while acquiring terminology useful to the health care professional. In addition, the course affords the student an opportunity to gain insight into the health care needs of the non-English speaking Hispanic population in the U.S., as well as to begin understanding in general terms its diverse cultural milieu. The course is highly interactive and is conducted in its entirely in the target language. Pre-requisites: LG 333 and LG 334.

LG 431 Hispanic Civilization 3 cr

In-depth study of various aspects of Hispanic civilization and its contributions to world culture; emphasis upon geographical,

historical, social, political, and artistic forces. Extensive class discussions, oral and written reports in the language are required. Usually taught in spring semester. Pre-requisites: LG 333, LG 334, or LG 336.

LG 432 Readings in Spanish Literature 3 cr

Representative readings reflecting major literary movements and cultural events in Spain. Extensive class discussions, oral and written reports in the language are required. Offered in the fall semester only. Pre-requisites: LG 333, LG 334, or LG 336.

LG 433 Readings in Latin American Literature 3 cr

Representative readings reflecting major literary movements and cultural events in Latin America. Extensive class discussions, oral and written reports in the language are required. Offered in the spring semester only. Pre-requisites: LG 333, LG 334, or LG 336.

LESSER TAUGHT LANGUAGES (LGS)

LGS 190 Special Topics 3 cr

Topics to be determined by student need and interest. Course may be repeated when content varies. LGS 190 is an LTLS course. Enrollment by special permission. Fee.

LGS 290 Special Topics 3 cr

Topics to be determined by student need and interest. Course may be repeated when content varies. LGS 290 is an LTLS course. Enrollment by special permission. Fee.

LGS 390 Special Topics 3 cr

Topics to be determined by student need and interest. Course may be repeated when content varies. LGS 390 is an LTLS course. Pre-requisite: Completion of two-year sequence in an LTLS approved language or equivalent. Fee.

LGS 110 Introductory American Sign Language 3 cr

LGS 110 is the FIRST of a two semester sequence in American Sign Language. The Goal of the course is to introduce the students to ASL as it used today. Emphasis is on developing skills in signing through intensive drills, exposure to the basic ASL structural patterns and functional vocabulary. LGS 110 is a LTLs course. Fee. **Core course**.

LGS 111 LGS Introductory American Sign Language II 3 cr

A continuation of ASL 171. Pre-requisite: LTL 110 or equivalent. Fee. **Core Course**.

ARABIC

LGS 106 Introductory Arabic I 3 cr

The first of a two-semester sequence in introductory Arabic. Its purpose is to introduce students to Arabic as it is spoken today. Emphasis on developing speaking and listening skills through intensive drills, exposure to basic structural patterns, and functional vocabulary. Study requires extensive use of audio-tapes. LGS 106 is an LTLS course. Fee. **Core Course**.

LGS 107 Introductory Arabic II 3 cr

A continuation of Arabic I. Pre-requisite: LGS 106 or equivalent. Fee. **Core Course**.

LGS 206 Intermediate Arabic I 3 cr

The first of a two-semester sequence in intermediate Arabic. This is a continuation of Introductory Arabic II. It continues to develop speaking and listening skills as well as reading and writing skills through intensive drills, exposure to basic structural patterns, and functional vocabulary. Study requires extensive use of audio-tapes. Pre-requisite: LGS 107 or equivalent. Fee. **Core Course**.

LGS 207 Intermediate Arabic II 3 cr

A continuation of intermediate Arabic I. Pre-requisite: LGS 206 or equivalent. Fee. **Core Course**.

CHINESE

LGS 121 Introductory Chinese I 3 cr

The first of a two-semester sequence in introductory Mandarin Chinese. The goal of the two-semester course is to introduce students to Mandarin as it is spoken today. Emphasis is on developing speaking and listening skills through intensive drills, exposure to basic structural patterns and functional vocabulary. LGS 121 is an LTLS course. Fee. **Core Course**.

LGS 122 Introductory Chinese II 3 cr

A continuation of introductory Chinese I. Pre-requisite: LGS 121 or equivalent. Fee. **Core Course**.

LGS 221 Intermediate Chinese I 3 cr

The first of a two-semester sequence. A continuation of introductory Chinese. It continues to develop speaking and listening skills, as well as reading and writing skills, through intensive drills, exposure to basic structural patterns, and functional vocabulary. Pre-requisite: LGS 122 or equivalent. Fee. **Core Course**.

LGS 222 Intermediate Chinese II 3 cr

A continuation of intermediate Chinese I. Pre-requisite: LGS 221 or equivalent. Fee. **Core Course**.

GREEK

LGS 141 Introductory Greek I 3 cr

The first of a two-semester sequence in introductory modern Greek. The goal of the course is to introduce students to Greek as it is spoken today. Emphasis on developing speaking and listening skills through intensive drills, exposure to basic structural patterns, and functional vocabulary. LGS 141 is an LTLS course. Fee. **Core Course**.

LGS 142 Introductory Greek II 3 cr

A continuation of introductory Greek I. Pre-requisite: LGS 141 or equivalent. Fee. **Core Course**.

LGS 241 Intermediate Greek I 3 cr

The first of a two-semester sequence in intermediate modern Greek. A continuation of introductory Greek II. It continues to develop speaking and listening skills, as well as reading and writing skills, through intensive drills, exposure to basic structural patterns, and functional vocabulary. Pre-requisite: LGS 142 or equivalent. Fee. **Core Course**.

LGS 242 Intermediate Greek II 3 cr

A continuation of intermediate Greek I. Pre-requisite: LGS 241 or equivalent. Fee. **Core Course**.

HINDI

LGS 131 Introduction Hindi I

The first of a two semester sequence in introductory Hindi. It's purpose is to introduce students to Hindi as it is spoken today. Emphasis on developing speaking and listening skills through intensive drills, exposure to basic structural patterns, and functional vocabulary. LGS 131 is part of the department's Lesser Taught Languages Program. Fee. **Core Course**.

LGS 132 Introductory Hindi II

A continuation of Hindi I. Pre-requisite: LGS 131. Fee. **Core Course**.

ITALIAN

LGS 161 Introductory Italian I

The first of a two semester sequence in Introductory Italian. Its purpose is to introduce students to Italian as it is spoken today. Emphasis on developing speaking and listening skills through intensive drills, exposure to basic structural patterns, and functional vocabulary. LGS 161 is part of the department's Lesser Taught Languages Program. Fee. **Core Course**.

LGS 162 Introductory Italian II

A continuation of Italian 161. Pre-requisite: LGS 161 or equivalent. Fee. **Core Course**.

LGS 261 Intermediate Italian I

The first of a two-semester sequence. A continuation of the training necessary to build fluency in understanding and speaking Italian. Pre-requisite: LGS 162 or equivalent. Fee. **Core Course**.

LGS 262 Intermediate Italian II

A continuation of LGS 261. Pre-requisite: LGS 261 or equivalent: Fee. **Core Course**.

JAPANESE

LGS 101 Introductory Japanese I 3 cr

The first of a two-semester sequence in introductory Japanese. The goal of the course is to introduce students to Japanese as it is spoken today. Emphasis on developing speaking and listening skills through intensive drills, exposure to basic structural patterns, and functional vocabulary. LGS 101 is an LTLS course. Fee. **Core Course**.

LGS 102 Introductory Japanese II 3 cr

A continuation of Japanese 101. Pre-requisite: LGS 101 or equivalent. Fee. **Core Course**.

LGS 201 Intermediate Japanese I 3 cr

The first of a two-semester sequence. A continuation of the training necessary to build fluency in understanding and speaking Japanese. Pre-requisite: LGS 102 or equivalent. LGS 201 is an LTLS course. Fee. **Core Course**.

LGS 202 Intermediate Japanese II 3 cr

A continuation of LGS 201. Pre-requisite: LGS 201 or equivalent. Fee. **Core Course**.

KOREAN

LGS 171 Introductory Korean I

LGS 171 is the FIRST of a two semester sequence of Introductory Korean. The course develops speaking and listening skills, as well as reading and writing skills through intensive drills, exposure to basic structural patterns, and functional vocabulary. Fee. **Core Course**. Pre-requisite: None.

LGS 172 Introductory Korean II
A continuation of Korean 171. Pre-requisite: LTL 171 or equivalent. Fee. **Core Course**.

PORTUGUESE
LGS 181 Introductory Portuguese I
The first of a two semester sequence in Introductory Portuguese. Its purpose is to introduce students to Portuguese as it is spoken today. Emphasis on developing speaking and listening skills through intensive drills, exposure to basic structural patterns, and functional vocabulary. LGS 181 is part of the department's Lesser Taught Languages Program. Fee. **Core Course**.

LGS 182 Introductory Portuguese II
A continuation of Portuguese 181. Pre-requisite: LGS 181 or equivalent. Fee. **Core Course**.

LGS 281 Intermediate Portuguese I
The first of a two-semester sequence. A continuation of the training necessary to build fluency in understanding and speaking Portuguese. Pre-requisite: LGS 182 or equivalent. Fee. **Core Course**.

LGS 282 Intermediate Portuguese II
A continuation of Portuguese 281. Pre-requisite: LGS 281 or equivalent. Fee. **Core Course**.

LEISURE STUDIES (LS)

LS 191 Orientation to Leisure Studies 3 cr
An introduction to the Leisure Services profession; its history, philosophies, and the psychology of leisure in the changing society. Includes an orientation to community leisure agencies.

LS 194 Leisure Crafts 3 cr
Adapting various crafts media for use in recreational programs. Design and execution of creative crafts with emphasis on use of indigenous materials.

LS 276 Introduction to Sport Management 3 cr
A study of the activities, organizations, and businesses involved in producing, facilitating, and organizing sport, fitness, and recreation related products and services.

LS 280 Hospitality Services 3 cr
A study of hotel/motel/resort services. Includes an overview of recreation services, food and beverage, guest services, marketing, housekeeping, maintenance, and fiscal concerns.

LS 292 Outdoor Recreation/ Adventure 3 cr
A classroom introduction to a wide range of outdoor recreation pursuits with an emphasis on safety, minimum impact, and "how to get started" in outdoor activities like backpacking, canoeing, rafting, car camping, hiking and others.

LS 295 Introduction to Therapeutic Recreation 3 cr
Introduces students to the field of Therapeutic Recreation, including the history, foundations, and philosophy of the field. In addition, characteristics and leisure needs of numerous special populations will be introduced.

LS 297 Campus Recreation 3 cr
Planning, organization, and leadership of intramural and community sports activities.

LS 298 Field Work in Leisure Services 3 cr
Opportunity to gain leadership experiences in leisure service settings.

LS 300 Global Tourism 3 cr
Examination of the impact of recreational, socio-cultural, economic, physical environment and governmental factors on leisure travels within the global tourism industry.

LS 375 Management of Therapeutic Recreation Services 3 cr
Management and organization of therapeutic recreation programs including professional and agency standards, staff development, internship and credential requirements, fiscal planning, con tenuous quality improvement, equipment maintenance, advocacy, and public relations.

LS 384 Sports Marketing 3 cr
An examination of marketing concepts and theories applied to the sport industry. The areas this course will cover include basic marketing, target marketing and segmentation, advertising and sponsorship, event marketing and promotions, branding, consumer behavior research, sponsorship proposals, and sports marketing plans.

LS 391 Leadership in Leisure Services (W) 3 cr
Theories, principles, and philosophies of leadership as applied to the delivery of Leisure Services. Also includes a study of programming principles and techniques.

LS 394 Sport Business and Finance 3 cr
This course provides undergraduate students with an introduction to investment valuation and key financial concepts of sport related entities. Students will develop revenue generating insight and budgeting knowledge of actual situations occurring in the sport and recreation industry. Topical areas covered include capital budgeting, facility financing, corporate sponsorship, salary structure, franchise valuations, and personal business transactions.

LS 395 Therapeutic Recreation Process 3 cr
This course introduces the comprehensive program planning process and the elements of assessment and documentation in a variety of therapeutic recreation service settings. A field work component may be required.

LS 397 Intergenerational Recreation and Wellness 3 cr
This course is an intergenerational experience combining theory and practice in aging and recreation. Students utilize the therapeutic recreation process (assessment, program planning, implementation and evaluation) with older adults who have special needs, to promote health, wellness, and rehabilitation.

LS 465* Therapeutic Recreation Program Design and Interventions I 3 cr
This course provides an examination of Therapeutic Recreation interventions and the role of research and theory in influencing practice. Course topics include: activity analysis, programming techniques, scope of service, intervention descriptions, historical perspectives, current research, and theoretical foundations related to TR intervention. A field work component of 40 hours is required that will allow students to gain experience implementing TR programs.

LS 466* Therapeutic Recreation Program Design and Interventions II 3 cr
This course examines modalities and issues in therapeutic recreation practice with the primary emphasis on leisure education, scope of service, nature of populations served, systematic programming, activity analysis, and documentation of results. The course also addresses contemporary problems and issues in therapeutic recreation, and acquiring knowledge of medical terminology and therapeutic drugs.

LS 467* Therapeutic Recreation for Physical Disabilities 3 cr
This course will familiarize the student with the etiology, characteristics and course of treatment provided to individuals with various physically disabling conditions and promote awareness of the role of Therapeutic Recreation in the physical rehabilitation process. A field work component of 40 hours is required.

LS 468 Facilitation Techniques in Therapeutic Recreation 3 cr
Assessment, documentation, and practical application of facilitation techniques in Therapeutic Recreation. Students will be required to prepare for, and assist, in the implementation of therapeutic recreation programs with regional organizations. Special permission of the instructor is required.

LS 469* Therapeutic Recreation for Psychological Impairments 3 cr
This course will familiarize students with the etiology, characteristics, and course of treatment provided to individuals with psychological impairments and developmental disabilities and promote awareness of the role of Therapeutic Recreation in the habilitation/rehabilitation process. A field work component of 40 hours is required.

LS 471* Evaluation and Research in Leisure Studies (W) 3 cr
This course offers an overview of the research and evaluation process in recreation and leisure studies. The first part of the course will emphasize the scope, meaning, and basic concepts of scientific research including aspects of research design. The second part of the course will focus on the application of the basic skills in a practical context in the environment of leisure studies.

LS 472* Legal Issues in Sports and Recreation (W) 3 cr
This course introduces students to the legal liabilities, negligence, contractual agreements, and risk management issues pertaining to the areas of sport and recreation.

LS 479 Leisure and Aging 3 cr
This course will provide an overview of the changes affecting the psychomotor, cognitive and affective domains of the aged; implications of leisure and retirement; and institutional and

community settings that provide leisure services for the older adult.

LS 480* Private and Commercial Leisure Services 3 cr

A survey of private and commercial leisure services including a study of resort operations.

LS 481* Tourism and Resort Development 3 cr

Tourism and recreational travel; nature of resort development and its effect on generating tourist flow to and within regions. Economic importance of both tourism and resort development.

LS 483* Issues in Leisure Services 3 cr

A study of the major trends, problems and issues in various areas of Leisure Studies.

LS 486 Sport and Recreation Facility Planning and Design 3 cr

This course will familiarize students with the basic methodologies, objectives, and principles applied to the design and strategic planning of sport and recreation service facilities. It includes the examination and implementation of guidelines used to create a facility planning brief.

LS 490 Special Topics 3 cr

Selected topics in leisure services. Topics will vary according to needs and interests of students. Course may be repeated for credit when content varies.

LS 492* Outdoor Education and Interpretation 3 cr

Theories, philosophies, and principles of outdoor education with emphasis on the development of interpretive programs.

LS 496* Sport and Recreation Resource Management 3 cr

A study of event and facility resource management in sport and recreation. Applies the functions of management to the supervision, operation, development, evaluation, and financing of sport and recreation facilities in public and private environments.

LS 498* Internship in Leisure Services 12 cr

Supervised experiences in an assigned leisure services or related agency. Requires approximately 500 hours of documented work.

LS 569 Leisure in Modern Society 3 cr

An exploration of the economic, religious, political, and sociocultural factors which influence leisure behavior in modern society.

LS 570 Procedures in Therapeutic Recreation I 3 cr

Procedures in Therapeutic Recreation I was designed to prepare the graduate student for the more complex areas of present day professional issues and services provision including: an in-depth analysis of historical and philosophical influences, therapy and facilitation techniques, quality management, ethics, standards of practice, clinical supervision, health care reimbursement and professional credentialing.

LS 571 Procedures in Therapeutic Recreation II 3 cr

This course is designed to familiarize the graduate student with the Therapeutic Recreation Process. Content areas will include: analyzation of assessment procedures, sources and processes, treatment planning, interdisciplinary procedures, medical record documentation, activity-based interventions and evaluation of program effectiveness.

LS 573 Issues and Trends in Leisure Services 3 cr

An in-depth examination of current issues and trends in Leisure Services with respect to their impact on the leisure service profession and society.

LS 576 Conceptual Foundations of Therapeutic Recreation 3 cr

Designed to introduce the student to the field of Therapeutic Recreation including philosophy, history, current issues and trends, administration and program development. The course will also provide an overview of various disabling conditions.

LS 580 Internship 3 cr

An individually planned practicum experience in an approved leisure services setting. Requires a minimum of 150 work hours per three hours of credit. HPELS advisor approval required.

LS 585 Management of Leisure Services 3 cr

An in-depth examination into the research, foundations, and functions in the delivery of leisure services, including current practices in management of fiscal procedures, budgeting and grants.

LS 590 Special Topics 3 cr

A varying-content course treating various aspects of Leisure Services. May be repeated once for credit when course content varies.

LS 591 Travel and Tourism 3 cr

A survey course designed to provide students with an overview of travel and tourism as an area of study. Discussions will center on tourism at the macro (regional and national) level. Tourist behavior, the social, environmental, and economic impact of tourism will be highlighted.

LS 592 Outdoor Recreation/ Adventure Programming 3 cr

Study and practicum in popular adventure activities (e.g., shooting sports, angling, backpacking, orienteering, rock climbing, canoeing). Emphasis on attitudes, skills, environmental awareness, teaching methodology, and principles of group leadership as they relate to adventuresome activities.

LS 596 Special Projects 3 cr

An individually planned experience whereby a student conceptualizes and researches a special problem relevant to the leisure services profession. Students will share their experiences in a weekly seminar (non-thesis option). HPELS advisor approval required.

***Only for students admitted to candidacy.**

TEACHER LEADER EDUCATION (LTE)

LTE 645 Curriculum Leadership 3 cr

A purpose of this course will be to prepare professional educators through teaching, research and services to become committed to life-long learning and to facilitating the process of building better communities.

LTE 646 Community Leader 3 cr

This course will prepare future teacher leaders to work effectively within their school community as well as with the communities in which they work and with the families of the students they teach.

LTE 647 Instructional Leadership 3 cr

A purpose of this course is to prepare professional educators through teaching, research, and service to become committed to life-long learning and to facilitate the process of building better communities. Students will demonstrate best educational practices and professional dispositions and will learn how to create a positive, motivational learning environment in schools while recognizing, appreciating, and including diverse learners and perspectives. Additionally, students are expected to demonstrate satisfactory skills in curriculum leadership; to engage in action research related to schools; to engage in literacy coaching; to address current family, community, regional, and national issues related to scholastic achievement, and to use tenets of instructional leadership to guide teachers and other professionals toward improving student achievement.

LTE 699 Research Project 1 cr

The internship is a supervised learning experience in a work setting similar to that in which an educator will eventually be employed. The internship provides students with an opportunity to apply theories and concepts learned during the graduate program. Pre-requisite: IDE 692

MATHEMATICS (MA)

MA 110 Finite Mathematics 3 cr

This course is intended to give an overview of topics in finite mathematics together with their applications. The course includes logic, sets, counting, permutations, combinations, basic probability, descriptive statistics, and their applications. Students are required to have a scientific calculator. **Core Course. Note: May be offered for Honors Credit.**

NOTE: MA 110 is not a Pre-requisite for nor is it intended to be preparatory for any course listed below.

MA 112 Precalculus Algebra 3 cr

The course covers algebraic, graphical and numerical properties of functions, focusing on linear, quadratic, general polynomial, absolute value, rational, exponential, and logarithmic functions. Topics also include equations, inequalities, and complex numbers. Applications of mathematics to modeling real world situations are emphasized. Credit for both MA 112 and MA 115 not allowed. Pre-requisite: C or better in MTH 100 or sufficient Mathematics Placement Exam score. **Core Course.**

NOTE: Students who do not have the Pre-requisites for MA 112 should contact Developmental Studies.

MA 113 Precalculus Trigonometry 3 cr

Continuation of MA 112. Topics include numerical, graphical and algebraic properties of

trigonometric functions, inverse trigonometric functions, right angle trigonometry, parametric equations, polar coordinates, and conic sections. Development and application of mathematical models to real-world situations is emphasized. Credit for both MA 113 and MA 115 not allowed. Pre-requisite: C or better in MA 112 or sufficient Mathematics Placement Exam score. **Core Course.**

MA 115 Precalculus Algebra and Trigonometry 4 cr

This fast-paced course is designed as a review of the algebra and trigonometry needed in calculus. It covers the material of MA 112 and MA 113 in one semester. Topics include numerical, graphical and algebraic properties of polynomial, rational, exponential, logarithmic, and trigonometric functions; inverse trigonometric functions; right angle trigonometry; parametric equations; polar coordinates and conic sections. Applications of mathematics to modeling real world situations are emphasized. Pre-requisite: sufficient Mathematics Placement Exam score. Credit for both MA 112 and MA 115 not allowed; credit for both MA 113 and MA 115 not allowed. **Core Course.**

MA 120 Calculus and Its Applications 3 cr

Introduction to calculus with an emphasis on problem solving and applications. Key concepts are presented graphically, numerically and algebraically, although the stress is on a clear understanding of graphs and tabular data. The course covers: algebraic, exponential and logarithmic functions, their properties and their use in modeling; the concepts of derivative and definite integral and their applications to marginal analysis, optimization and probability; examples of multivariable functions, partial derivatives and applications to optimization problems. Students are encouraged to have a graphing calculator. Credit for both MA 120 and MA 125 not allowed. Pre-requisite: C or better in MA 112 or sufficient Mathematics Placement Exam score. MA 120 is not a Pre-requisite for subsequent calculus courses. **Core Course.**

MA 125 Calculus I 4 cr

The course provides an introduction to calculus with emphasis on differential calculus. Topics include limits of functions, derivatives of algebraic and transcendental functions, application of the derivative to curve sketching, optimization problems, and examples in the natural sciences, engineering, and economics. The course concludes with an introduction to anti-derivatives, definite integrals, and the fundamental theorem of calculus. Credit for both MA 120 and MA 125 is not allowed. Pre-requisite: C or better in MA 113 or MA 115 or sufficient Mathematics Placement Exam score. **Core Course.**

NOTE: MA 110, MA 112, MA 113, MA 115, MA 120, and MA 125 have strict Pre-requisites. To be able to enroll in these courses a student needs either to pass the Pre-requisite course with C or better or to have a sufficient Mathematics Placement Exam score.

MA 126 Calculus II 4 cr

This course is a continuation of MA 125 with emphasis on integral calculus. Topics include techniques of integration; applications of the definite integral to geometry, natural sciences, engineering, and economics; improper integrals; infinite sequences and series; Taylor polynomials and Taylor series; parametric equations and polar coordinates. Pre-requisite: C or better in MA 125. **Core Course.**

MA 150 Contemporary Mathematics and Statistics Seminar 1 cr

This course gives an overview of modern mathematics and statistics from the point of view of the practitioners. The course is designed for majors in mathematics and statistics at all levels as well as those students who are considering mathematics or statistics as a major or minor area of study. Topics usually included are elements of geometry, algebra, analysis, methods of statistical inference, the role of the computer in analytical sciences; these topics vary from semester to semester. This course cannot be taken for credit simultaneously with ST 150.

NOTE: May be offered for Honors Credit.

MA 201 Mathematics for Elementary Teachers I 3 cr

An examination of some of the major ideas encountered in the teaching of elementary mathematics. Topics include introduction to problem solving, sets, relations, logic, numeration systems, elementary number theory, properties and operations for whole numbers, integers, rational numbers, and real numbers. Pre-requisite: C or better in MA 110 or MA 112 or higher level course

NOTE: MA 201 does not fulfill graduation requirements for any curriculum other than College of Education.

MA 202 Mathematics for Elementary Teachers II 3 cr

Topics covered are those that a prospective elementary or middle school teacher should expect to encounter in the teaching of geometry in elementary or middle school. Topics include geometric shapes, measurement, triangle congruence and similarity, coordinate geometry. Pre-requisite: C or better in MA 110 or MA 112 or higher level course.

NOTE: MA 202 does not fulfill graduation requirements for any curriculum other than College of Education.

MA 227 Calculus III 4 cr

Vectors; functions of several variables; partial derivatives; local linearity; directional derivatives; the gradient; differential of a function; the chain rule; higher order partial derivatives; optimization of functions of several variables; multiple integrals and their applications; parametric curves and surfaces; vector fields; line and surface integrals; vector calculus. Pre-requisite: C or better in MA 126. **Core Course.**

MA 237 Linear Algebra I 3 cr

An introduction to linear algebra. Topics include vector spaces, linear transformations, determinants, the eigenvalue problem and applications. Pre-requisite: C or better in MA 126. **Core Course.**

MA 238 Applied Differential Equations I 3 cr

First order differential equations. Higher order linear differential equations. Systems of first order linear differential equations. Laplace Transforms. Methods for approximating solutions to first order differential equations. Applications. Students should have taken or be taking MA 227. **Core Course.**

MA 267 Discrete Mathematical Structures 3 cr

This course is an introduction to discrete mathematics for students majoring in computer-related areas. Students will be introduced to concepts and methods that are essential to theoretical computer science. A strong emphasis is placed on developing skills in mathematical reasoning and understanding and writing proofs. Topics include sets, functions, induction, recursion, combinatorics and graphs. Pre-requisite: C or better in MA 113 or C or better in MA 115 or sufficient Mathematics Placement Exam score.

MA 290 Special Topics 3 cr

Selected topics in elementary undergraduate mathematics. This course may be repeated for a maximum of six credits.

MA 303 Mathematics for Elementary Teachers III 3 cr

An exploration of problem solving strategies. Problems exemplifying the various problem solving strategies studied. Emphasis on the development of problem solving skills by exploring interesting problems which demand for their solution that the student select from a wide variety of possible strategies and use a wide variety of conceptual tools. Pre-requisite: C or better in MA 202.

NOTE: MA 303 does not fulfill graduation requirements for any curriculum other than elementary education.

MA 311 Introduction to Number Theory 3 cr

An introduction to classical number theory with a balance between theory and computation. Topics include mathematical induction, divisibility properties, properties of prime numbers, the theory of congruences, number theoretic functions, continued fractions. Pre-requisite: C or better in MA 126.

MA 316 Linear Algebra II 3 cr

A continuation of MA 237. Topics include inner product spaces, spectral theorem for symmetric operators, complex vector spaces, Jordan canonical form. Additional topics such as duality and tensor products to be included at the discretion of the instructor. Pre-requisite: C or better in MA 237.

MA 320 Foundations of Mathematics (W) 3 cr

A transition to higher mathematics with an emphasis on proof techniques. Topics include symbolic logic, elementary set theory, induction, relations, functions, and the structure of the number system. Mathematics and Statistics majors are encouraged to take MA 320 as soon as possible after completing MA 125. Pre-requisites: C or better in EH 102 or EH 105 and MA 125.

MA 321 Elementary Geometry 3 cr

The course covers the major topics from secondary school curriculum of plane and solid geometry from the modern viewpoint. Emphasis will be placed on axioms, definitions, theorems, and proofs. Students will also gain experience

in solving problems and communicating mathematical ideas effectively. Pre-requisite: C or better in MA 320.

MA 332 Differential Equations II 3 cr
Series solutions of second order linear equations. Numerical methods. Nonlinear differential equations and stability. Partial differential equations and Fourier series. Sturm-Liouville problems. Pre-requisites: C or better in MA 227 and MA 238.

MA 334 Advanced Calculus I 3 cr
This is the first of a two-course sequence designed to provide students with the theoretical context of concepts encountered in MA 125 through MA 227. Topics covered include Completeness Axiom, sequences of real numbers, suprema and infima, Cauchy sequences, open sets and accumulation points in Euclidean space, completeness of Euclidean space, series of real numbers and vectors, compactness, Heine-Borel Theorem, connectedness, continuity, Extremum Theorem, Intermediate Value Theorem, differentiation of functions of one variable. Pre-requisites: C or better in MA 227 and MA 237; and in MA 320 or consent of instructor.

MA 335 Advanced Calculus II 3 cr
This is the second of a two-course sequence designed to provide students with the theoretical context of concepts encountered in MA 125 through MA 227. Topics covered include integration of functions of one variable, pointwise and uniform convergence, integration and differentiation of series, differentiable mappings of several variables, chain rule, product rule and gradients, Mean Value Theorem, Taylor's Theorem, Inverse Function Theorem, Implicit Function Theorem. Pre-requisite: C or better in MA 334.

MA 354 Computer Assisted Mathematical Modeling (W) (C) 3 cr
This course is intended to provide the basic ideas regarding formulation, development, testing and reporting of mathematical models of various real world problems. Deterministic and stochastic models, optimization and simulations will be covered. Emphasis will be on careful mathematical formulations and the use of computer software, such as Microsoft Excel, Mathematica and Matlab. A term project will be an important component of this course. The course is taught in a laboratory setting with computers as lab equipment. Pre-requisites: C or better in EH 102, MA 227, and in MA 238.

MA 367 Combinatorial Enumeration 3 cr
An introduction to the mathematical theory of counting. Basic counting principles, permutations and combinations, partitions, recurrence relations, and a selection of more advanced topics such as generating functions, combinatorial designs, Ramsey theory, or group actions and Poyla theory. Pre-requisite: C or better in MA 126 or consent of instructor.

MA 410 History of Mathematics (W) 3 cr
Historical survey of general development of mathematics with a balance of historical perspective and mathematical structure. Pre-requisite: C or better in EH 102 and either senior standing or permission of instructor or department chair.

MA 413 Abstract Algebra I (W) 3 cr
An introduction to group theory and ring theory. Topics include permutations and symmetries, subgroups, quotient groups, homomophisms, as well as examples of rings, integral domains, and fields. Pre-requisites: MA 237 and C or better in EH 102 or EH 105, and C or better in one of the following: MA 311, MA 320, MA 334.

MA 414 Abstract Algebra II (W) 3 cr
A continuation of MA 413 focusing on rings and fields. Topics include rings, ideals, integral domains, fields and extension fields. Geometric constructions and Galois theory are introduced. Pre-requisite: C or better in EH 102 or EH 105 and MA 413.

MA 434 Topology 3 cr
An introduction to topology with emphasis on the geometric aspects of the subject. Topics covered include surfaces, topological spaces, open and closed sets, continuity, compactness, connectedness, product spaces, and identification and quotient spaces. Credit for both MA 434 and MA 542 is not allowed. Pre-requisite: C or better in MA 334.

MA 436 Numerical Analysis 3 cr
Topics include methods of numerical solution of nonlinear equations in one variable, fixed points, contraction mapping and functional iteration methods, interpolation and approximation methods, numerical differentiation and integration, numerical solution of ordinary differential equations, analysis of error for various numerical procedures. Implementation in Mathematica of all numerical methods discussed in class is an essential part of the course. Pre-requisite: Students should have taken or be taking MA 238.

MA 437 Complex Variables 3 cr
Arithmetic of complex numbers; regions in the complex plane; limits, continuity, and derivatives of complex functions; elementary complex functions; mappings by elementary functions; contour integration; power series; Taylor series; Laurent series; calculus of residues; conformal representation; applications. Credit for both MA 437 and MA 537 not allowed. Pre-requisite: C or better in MA 238.

MA 451 Probability 3 cr
A comprehensive introduction to probability, the mathematical theory used to model uncertainty, covering the axioms of probability, random variables, expectation, classical discrete and continuous families of probability models, the law of large numbers and the central limit theorem. Credit for both MA 451 and MA 550 is not allowed. Pre-requisites: C or better in MA 227 and MA 237.

MA 458 Operations Research (W) 3 cr
An introduction to linear programming. The course will include a study of the simplex method as well as using computers to solve linear systems of equations. As time permits, topics covered will include sensitivity analysis, duality, integer programming, transportation, assignment, transshipment, and networks. Credit for both MA 458 and MA 567 is not allowed. Pre-requisites: C or better in EH 102 or EH 105 and MA 237.

MA 467 Mathematical Logic 3 cr
An introduction to formal first-order logic, first-order metatheory, and its extensions. Topics include axiom systems and their models, completeness, compactness, and recursive sets and functions. Identical with PHL 467. Credit cannot be received for both PHL 467 and MA 467. Pre-requisites: PHL 321 or C or better in any 300-level or higher MA course.

MA 481 Cryptography 3 cr
This course gives an introduction to classical and modern methods of message encryption and decryption (cryptography) as well as possible attacks to cryptosystems (cryptanalysis). Topics include information theory, classical (symmetric) cryptosystems (DES, AES), public-key (asymmetric) cryptosystems (Diffie-Hellman, RSA, ElGamal), one-way and trapdoor functions, Hash functions, cryptanalysis, cryptographic protocols (identification, authentication, secret sharing, oblivious transfer, zero-knowledge), e-money and e-commerce. Credit for both MA 481 and MA 581 is not allowed. Pre-requisite: C or better in MA 311.

MA 490 Special Topics 1-3 cr
Selected topics in advanced undergraduate mathematics. This course may be repeated for a maximum of six credits.

MA 494 Directed Studies 1-3 cr
Directed individual study. May be repeated for a maximum of six credits. Pre-requisites: Permission of the department chair.

MA 499 Honors Senior Project 3-6 cr
With the guidance and advice of a faculty mentor, honors students will identify, and carry out a research project in mathematics. The outcome of the research project will include a formal presentation at the annual Honors Student Colloquium. The senior project will be judged and graded by three members of the faculty, chaired by the faculty mentor.

MA 501 Number Systems 3 cr
A case study of axiom systems and the deductive method for graduate students in Mathematics Education. It is expected that students in this course will practice and improve their logical skills, better understand proof as a mathematical activity, and study the similarities and differences between several commonly used number systems. Pre-requisite: C or better in MA 321 or MA 413 or permission of the instructor.

MA 502 Introduction to Abstract Algebra 3 cr
An introduction to the fundamental concepts of modern algebra such as groups, rings, and fields through concrete examples. The course is designed for graduate students in the College of Education. Pre-requisite: C or better in MA 413 or permission of the instructor.

MA 503 Introduction to Analysis 3 cr
A careful look at the elements, procedures, and applications of differential and integral calculus. Pre-requisites: C or better in MA 227 or permission of the instructor. This course is designed for students in the College of Education.

MA 504 Introduction to Geometry 3 cr
An introduction to the foundations of geometry using both synthetic and metric

approaches. Euclidean, finite, projective, and hyperbolic geometries are discussed. The axioms for various geometries are discussed. Pre-requisites: C or better in MA 321 or permission of the instructor. This course is designed for students in the College of Education.

MA 505 Mathematical Problem Solving 3 cr

An in-depth activity-based approach to the methods and strategies for mathematical problem solving for students in Mathematics Education. Problems selected from logic, algebra, analysis, geometry, combinatorics, number theory and probability. Pre-requisite: Permission of the instructor. This course is designed for students in the College of Education.

MA 506 Statistics for Teachers 3 cr

Prepares in-service and pre-service teachers to teach statistics in high schools using a data-based approach. Uses hands-on-activities approach and simulation of situations to teach concepts, and technology to teach data analysis. Pre-requisite: C or better in MA 126 or permission of the instructor. This course is designed for students in the College of Education.

MA 507 Advanced Ordinary Differential Equations 3 cr

A graduate-level introduction to ordinary differential equations and their applications in Physics and Engineering. Topics include differential equations of first and higher order, power series solutions, and Laplace transform.

MA 508 Advanced Partial Differential Equations 3 cr

A continuation of MA 507 with emphasis on partial differential equations and their applications in Physics and Engineering. Topics include Fourier series, Fourier transform, diffusion equation, wave equation, and Laplace equation.

MA 511 Algebra I 3 cr

A graduate level introduction to group theory. Topics include quotient groups, homomorphism, group actions, Sylow theorems, composition series, simple groups, free groups, and fundamental theorem of abelian groups.

MA 512 Algebra II 3 cr

A graduate level introduction to ring theory and fields. Topics include ring homomorphism, quotient rings, ideals, rings of fractions, Euclidean domains, principal ideal domains, unique factorization domains, modules, finite fields, and field extensions. Pre-requisite: C or better in MA 511.

MA 515 Number Theory 3 cr

Modular arithmetic, arithmetic functions, prime numbers, and algebraic number theory.

MA 516 Topics in Number Theory 3 cr

A second course in number theory, covering topics of interest to the students and instructor. Pre-requisite: C or better in MA 515.

MA 518 Linear Algebra I 3 cr

Fields, vector spaces, dual spaces, quotient spaces, multilinear forms, linear transformations, algebras, adjoints, and eigenvalues.

MA 519 Linear Algebra II 3 cr

Triangular form, nilpotence, Jordan form, inner products, self-adjoint transformations, positive transformations, isometries, Spectral Theorem, polar decomposition, and applications to analysis. Pre-requisite: C or better in MA 518.

MA 521 Enumerative Combinatorics 3 cr

Pigeonhole principle, basic counting techniques, binomial coefficients, inclusion-exclusion principle, recurrence relations, generating functions, systems of distinct representatives, and finite fields.

MA 525 Graph Theory 3 cr

Fundamental concepts, connectedness, graph coloring, planarity and Kuratowski's theorem, four-color theorem, chromatic polynomial, Eulerian and Hamiltonian graphs, matching theory, network flows, NP-complete graph problems, Markov chains, and matroids.

MA 535 Real Analysis I 3 cr

An introduction to real analysis. Topics include the metric topology of the reals, limits and continuity, differentiation, and Riemann-Stieltjes integral. Pre-requisite: An undergraduate course in advanced calculus.

MA 536 Real Analysis II 3 cr

A continuation of MA 535. Topics covered include sequences and series of functions, differentiation and integration in several variables,and an introduction to the Lebesgue integral and differential forms as time allows. Pre-requisite: C or better in MA 535.

MA 537 Complex Analysis 3 cr

Arithmetic of complex numbers; regions in the complex plane; limits, continuity, and derivatives of complex functions; elementary complex functions; mappings by elementary functions; contour integration; power series; Taylor series; Laurent series; calculus of residues; conformal representation; and applications. Credit for both MA 537 and MA 437 is not allowed. Pre-requisite: C or better in MA 238.

MA 538 Topics in Complex Analysis 3 cr

A second course in complex analysis, covering topics of interest to the students and instructor. Pre-requisite: C or better in MA 537.

MA 539 Measure Theory 3 cr

Foundations of the general theory of measure and integration, with particular attention to the Lebesgue integral. Function spaces, product measure and Fubini's theorem, the Radon-Nikodym theorem and applications to probability theory are discussed, and possibly additional topics such as Haar measure or the Ergodic Theorem. Pre-requisite: C or better in MA 536.

MA 540 Differential Geometry 3 cr

Local and global theory of curves and surfaces in three-dimensional space.

MA 542 Topology I 3 cr

An introduction to topology with emphasis on the geometric aspects of the subject. Topics covered include surfaces, topological spaces, open and closed sets, continuity, compactness, connectedness, product spaces, and identification and quotient spaces. Credit for both MA 542 and MA 434 is not allowed.

MA 543 Topology II 3 cr

A continuation of MA 542. Topics covered include the fundamental group, triangulations, classification of surfaces, homology, the Euler-Poincare formula, the Borsuk-Ulam theorem, the Lefschetz fixed-point theorem, knot theory, covering spaces, and applications. Pre-requisites: C or better in MA 542 or MA 434 and permission of the instructor.

MA 550 Probability 3 cr

A comprehensive introduction to probability, the mathematical theory used to model uncertainty, covering the axioms of probability, random variables, expectation, classical discrete and continuous families of probability models, the law of large numbers, and the central limit theorem. Credit for both MA 550 and MA 451 is not allowed. Pre-requisites: C or better in MA 227 and MA 237.

MA 551 Theory of Statistics 3 cr

A comprehensive introduction to the mathematical foundations of statistics. Sufficient statistics and information, parameter estimation, maximum likelihood and moment estimation, optimality properties of estimators and confidence intervals. Hypothesis testing, likelihood ratio tests, and power functions. Credit for both MA 551 and ST 470 is not allowed. Pre-requisite: C or better in MA 451 or MA 550.

MA 555 Statistical Analysis I 3 cr

A first course in an integrated two-course sequence in applied statistical theory and methods for research workers in technical fields. Coverage includes probability and basic probability models, mathematical expectations, random sampling processes and central limit theorem, estimation, hypothesis testing and power analysis, and some applications of the theory of least squares. Computer assisted data analysis is used.

MA 560 Statistical Analysis II 3 cr

A second course (continuation of MA 555) in an integrated two-course sequence in applied statistical theory and methods for research workers in technical fields. Coverage includes regression analysis, design and analysis of experiments, factorial experiments, analysis of covariance, nonparametric analytical techniques, and analysis of count data. Computer-assisted data analysis is used. Pre-requisite: C or better in MA 555.

MA 565 Numerical Analysis 3 cr

An introduction to Numerical Analysis. Topics include error analysis, systems of linear equations, nonlinear equations, integration, ordinary differential equations among others. Pre-requisite: C or better in MA 535.

MA 567 Operations Research 3 cr

An introduction to linear programming. The course will include a study of the simplex method as well as using computers to solve linear systems of equations. As time permits, topics covered will include sensitivity analysis, duality, integer programming, transportation, assignment, transshipment, and networks. Credit for both MA 567 and MA 458 is not allowed. Pre-requisites: C or better in MA 237.

MA 568 Topics in Operations Research 3 cr

A second course in operations research, covering topics of interest to the students and instructor. Pre-requisite: C or better in MA 567.

MA 571 Ordinary Differential Equations 3 cr

An introduction to ordinary differential equations from a dynamical systems perspective. Topics include existence and uniqueness theorems, dependence on initial data, linear systems and exponential of operators, stability of equilibria, Poincare-Bendixon theorem. Additional topics such as applications to population dynamics, classical mechanics, periodic attractors among others will be included at the discretion of the instructor. Pre-requisite: C or better in MA 518.

MA 572 Partial Differential Equations 3 cr

An introduction to partial differential equations emphasizing spectral methods. Topics include elementary Hilbert spaces, Fourier series and integrals and their applications to the study of the basic partial differential equations of mathematical physics. More advanced topics such as asymptotic properties and regularity of solutions and nonlinear equations among others will be included at the discretion of the instructor. Pre-requisite: C or better in MA 536.

MA 581 Cryptography 3 cr

This course gives an introduction to classical and modern methods of message encryption and decryption (cryptography) as well as possible attacks to cryptosystems (cryptanalysis). Topics include information theory, classical (symmetric) cryptosystems (DES, AES), public-key (asymmetric) cryptosystems (Diffie-Hellman, RSA, ElGamal), one-way and trapdoor functions, Hash functions, cryptanalysis, cryptographic protocols (identification, authentication, secret sharing, oblivious transfer, zero-knowledge), and e-money and e-commerce. Credit for both MA 481 and MA 581 is not allowed. Pre-requisite: C or better in MA 311.

MA 590 Special Topics 1-3 cr

Selected topics in elementary graduate mathematics. This course may be repeated for a maximum of six credits.

MA 592 Seminar 1 cr

Student seminar. Topics covered vary. This course may be repeated indefinitely, but only two credits count towards the degree. Grading system: satisfactory/unsatisfactory.

MA 594 Directed Studies 1-3 cr

Directed individual study. May be repeated for up to six hours of credit. Pre-requisites: Approval of the department chair.

MA 599 Thesis 1-6 cr

Pre-requisite: Approval of research prospectus by Department Graduate Committee.

MARINE SCIENCES (MAS)

MAS 511 Marine Analytical Methods 3 cr

This course will provide an introduction to the analytical methods most commonly used in marine sciences: spectrometry, fluorometry, colorimetry, gas and liquid chromatography and the use of radio-isotopes. The course will consist of lectures covering the theory of each method and laboratory exercises in their use. Throughout, there will be a focus on the quality of the data being collected, as derived from quantitative assessments of accuracy, precision and repeatability; and propagation of errors. Students will be assessed on problem-sets based on data collected in the labs and on a research project using instruments and techniques of their choice.

MAS 512 Chlorophyll Fluorescence Techniques 2 cr

This course will provide an introduction to the scope and application of fluorescence techniques based on excitation of and emission from the ubiquitous plant pigment chlorophyll a. These include fluorometric determination of chlorophyll concentration in vitro; the use of active, single-wavelength fluorometry to assess temporal and spatial variability of chlorophyll a and microalgal biomass in natural assemblages; the use of multiple-wavelength excitation and/or hyperspectral emission to determine taxonomic distributions in vivo; and the use of modulated (pulse-amplitude modulated and fast repetition rate) fluorometry to investigate photosynthetic efficiency and model productivity.

MAS 520 Marine Resource Management 3 cr

Designed to acquaint graduate students concerned with management of marine resources; development of legislation, evolution of policy, legal processes, impacts on human resources. The emphasis will be placed on living resources. Pre-requisites: Admission to Graduate School.

MAS 521 Marine Conservation Biology 2 cr

The intent of this course is to develop the student's understanding of conservation biology, by building upon the foundations provided in introductory marine ecology class. Assigned readings will be selected from the widest possible range of topics in marine conservation. In some cases, readings will come from disciplines outside the marine sciences. Students will be required to develop a topical term paper and give a short presentation to their class on their chosen topic.

MAS 522 Horseshoe Crabs: A Model to Study Marine Resource Use, Management, and Conservation 3 cr

The course will travel to Delaware Bay, home of the largest population of horseshoe crabs in the world. Students will gain and apply information on recent conflicts in horseshoe crab research and fishery management to explore political, ecological, and economic values of marine resources, options for management, conservation, and outreach, conflict resolution, and applied ecology.

MAS 530 Marine Microbial Ecology 3 cr

A general survey of the types of microorganisms found in the marine environment. Emphasis will be on the interaction of microorganisms with each other and with their environment. In particular, the role of microorganisms in carbon cycling and biogeochemical processes will be stressed. Readings from current literature will expose students to the latest techniques and research.

MAS 531 Physiological Ecology of Marine Microalgae 3 cr

Microalgae are a fundamental component of marine ecosystems, whether as freely-dispersed plankton, sediment-associated microphytobenthos, epiphytes growing over submerged aquatic vegetation, or as coralline endosybionts. This course will cover the acclimative responses to variations in the availability of light, nutrients and temperature; and the stress responses that are engendered when variability in theses environmental factors exceeds the organisms' acclimative capacity. The course will emphasize the commonality of these processes across taxa as well as considering taxon-specific responses that allow different groups to exploit their niches. The course will also cover methods such as molecular biology, active fluorescence and remote sensing that can be used to investigate population dynamics and growth over a range of spatial and temporal scales.

MAS 533 Marine Molecular Ecology 3 cr

The use of molecular biology in ecological studies has been increasing rapidly with the development of new techniques. These techniques can supplement the laboratory and field studies traditionally part of ecology. This course seeks to introduce the use of molecular techniques in marine ecology through lectures accompanied by computer exercises using data from public databases. Lectures will pull data from primary literature, with emphasis on examples of applications in marine science. computer exercises will introduce students to how data is analyzed as well as to some of the programs available to carry out this analysis.

MAS 540 Sediment Biogeochemistry 3 cr

To provide students with an in depth knowledge of sediment biogeochemical processes and the implications thereof on nutrient cycles, plant production and animal distribution. Emphasis will be on early diagenesis in coastal sub-tidal and wetland sediment systems. Pre-requisite: Chemical Oceanography or permission of instructor. Fee.

MAS 548 Marine Biogeochemical Processes 2 cr

The course will examine the interaction between biological, chemical and geological processes in the marine environment. This will be done by first reviewing the cycling of several of the major elements (e.g. carbon, nitrogen, phosphorous, sulfur, and iron) in the sea, and then examining how these cycles differ between various marine ecosystems (e.g. open ocean surface waters, estuaries, coral reefs, seagrass systems and tidal marshes). The focus will be on developing an understanding of how biogeochemical processes serve to regulate ecosystem function in these various habitats. Pre-requisite: Organic chemistry, geology, and marine ecology.

MAS 551 Quantitative Methods in Fisheries and Ecology 3 cr

Ecological and fisheries research has progressed beyond qualitative inference and is continuing to adapt more quantitative methods. A diversity of modeling and experimental approaches exists for ecologists and fisheries scientists. This course is designed to familiarize the students with the most commonly used quantitative approaches. Pre-requisite: Permission of instructor.

MAS 555 Fisheries Oceanography 2 cr

Students examine the relationship between fish life history, recruitment dynamics and harvest potential, and local-, meso- and global scale oceanographic processes. Students are exposed to the evolution in thinking on the role of interaction between biology and physics relative to fish and fisheries. This "readings" type course, by design, is geared toward student participation at an advanced and interactive level.

MAS 570 Ocean Variability and Global Change 2 cr

This course will examine large scale, spatial and temporal variability in the Earth/ ocean system as evidenced by present-day and paleo records. Variability such as the El Nino Southern Oscillation will be covered. It will critically evaluate the evidence for and the consequences of modern global change as it pertains to the marine environment. Emphasis will be placed on potential changes in climate, biogeochemical cycles, hydrologic cycles, eutrophication/species diversity, and UV light fluxes. Pre-requisites: Permission of one of the instructors.

MAS 572 Estuarine Hydrodynamics 3 cr

This course will address physical processes in estuarine environments. With physical processes in estuaries occurring in various timescales, discussions will proceed in terms of three different time scales: turbulent, tidal, and residual time scales. Emphasis will be placed on mass transport by physical transport process (water movement). Pre-requisite: Physical Oceanography or permission of the instructor.

MAS 575 Marine Ecology 4 cr

The course covers general ecological principles and how they apply to marine ecosystems. Both open ocean and nearshore waters are considered. Specific topics covered include: adaptations of marine organisms for life in the intertidal vs. subtitle zones; different modes of feeding and reproduction in marine organisms; and the importance of predation, competition, adult/larval interactions and dispersal mechanisms. The second half of the course is devoted to discussion of specific habitats including: coral reefs, mangrove swamps, kelp forests, and hydrothermal vents. Pre-requisite: General Biology, Marine Biology, or Oceanography.

MAS 581 Advanced Marine Ecology 2 cr

This course will improve students' understanding of ecological processes by building upon the foundations provided in an introductory ecology class. Emphasis will be placed on the mechanisms that control the distribution of marine plants and animals at scales ranging from individual organism to the ecosystem. Assigned readings from the scientific literature will cover the entire range of marine habitats and will reflect classical-to-recent thinking on the major concepts and problems in ecological theory. Quantitative laboratory exercises will train students in the design and statistical analysis of marine ecological studies.

MAS 583 Field Marine Science I 2 cr

The Field Marine Science course will consist of an 11 day field exercise in representative coastal sites in Maine with emphasis on rocky intertidal, kelp bed and eelgrass habitats. Two faculty members will accompany the students, participate in the pre-trip readings and evaluate the product developed by each student. Prerequisite: Marine Biology.

MAS 584 Oceanographic Experience 3 cr

This course provides students with practical skills involved in oceanographic research. Skills may include hydrographic, hydroacoustic and organismic sampling, gear deployment and use of analytical instrumentation at sea. Students participate in one or more oceanographic cruises during a semester and carry out a defined project using research tools available on the ship. A final report on the project forms the major part of the course grade. Cruises are available only on an ad hoc basis so permission of instructor is required.

MAS 585 Marine Zooplankton 3 cr

This course familiarizes the student with the taxonomic breadth of estuarine and marine zooplankton ranging from protistans through all major phyla of metazoa. Though the focus of the course is on taxonomic familiarization, basic biology (including reproduction and feeding) of all major taxa represented in the plankton will be covered. Students will also learn basic and advanced field collection, laboratory and statistical techniques. Although not a Pre-requisite, it is useful for students to have a background in invertebrate zoology.

MAS 587 Seagrass Ecosystems Ecology 2 cr

A survey of current literature on topics related to the ecology of seagrass ecosystems. Students will read assigned papers to be analyzed in a faculty-lead discussion format. A final research paper will be prepared by each student. Pre-requisite: Graduate Standing.

MAS 588 Field Marine Science II 2 cr

The Field Marine Science course will consist of an 8-12 day field exercise in representative coastal sites. Faculty members with diverse interests will accompany the students, participate in pre-trip discussions and evaluate the product developed by each student. The course is designed to familiarize students with habitats and research conditions different from those they experience on the Northern Gulf Coast. Field trip locations are selected on the basis of faculty and student interest, economics, and availability of logistic support. Students pay their room and board costs for the field exercise. The course is primarily for graduate students, but advanced undergraduates may enroll with consent of instructor. Both MAS 588 and MAS 583 may be taken for credit when each is taught in a different environment. Prerequisite: Senior undergraduate or Graduate Status.

MAS 590 Special Topics 1-4 cr

An in-depth tutorial exposure to specific areas in the marine sciences. Credit and title will be arranged to examine the subject matter in an area of current interest to one or a group of students. Specialized topics not currently listed in catalog course offerings. MAS 590 is available to M.S. students - MAS 690 is available to Ph.D. students. Pre-requisite: Admission to Graduate School.

MAS 592 Seminar 1 cr

Students and faculty meet weekly in an interactive discussion of current literature in marine sciences. The focus will be on "state-of-the-art" theories and methodologies as they occur in the primary marine literature. Student presentation is required to receive credit. Prerequisite: Admission to the Graduate Program in Marine Sciences.

MAS 594 Directed Studies 1-4 cr

Independent research, not related to the thesis, under direction of a member of the graduate faculty. May be used to learn new techniques or explore research questions of special interest. A maximum of 4 hours may be earned for this course toward the MS Prerequisite: Admission to the Graduate Program in Marine Sciences.

MAS 599 Thesis 1-8 cr

Independent research by the student under the sponsorship of a member of the department. Progress reports of the work accomplished are required every six months. Pre-requisite: Approved Committee.

MAS 601 Physical Oceanography 4 cr

Physical properties and circulation of the world oceans. Topics to be covered include: basic physical laws, properties of heat, water and salt budgets; waves; tides; large and small scale circulations; sea-level fluctuations; interactions of the sea with the atmosphere and land masses; light and acoustics. Pre-requisite: Admission to graduate program in Marine Sciences Biological Oceanography or equivalent.

MAS 602 Chemical Oceanography 4 cr

An in-depth examination of the chemistry of sea water and its relationship with biological, geological, and physical processes in the oceans. Coverage of sea water composition, buffering capacity, redox potential, and photochemistry will form the basis for an in-depth analysis of dynamic equilibria of gases, organic materials, nutrients, and trace elements in the sea. Critical evaluation of recent primary literature in chemistry oceanography will be used to illustrate state-of-the-art research approaches.

MAS 603 Geological Oceanography 4 cr

Geological Oceanography encompasses the historic and current consequences of both geophysical and classic geological processes. Included topics are tectonic theory and its development, sedimentary processes in coastal and oceanic provinces, stratigraphy, structural geology, micro-paleontology, erosion, diagenesis and the formation of hydrocarbons. Pre-requisite: Admission to the graduate program is Marine Sciences.

MAS 604 Biological Oceanography 4 cr

A comprehensive survey of marine organisms and their interaction including pelagic and benthic communities of the oceans, coastal waters and estuaries. Primary formation of particulate material, feeding processes, kinetics of food webs, biogeochemical processes, patterns of distribution, ecology of biotic systems, human interactions and current concerns are topics to be covered. Pre-requisites: Masters degree in one of the physical or biological sciences departments. Special considerations to other students may be granted with permission of the instructor and the student's departmental chair.

MAS 690 Special Topics 1-4 cr

An in-depth tutorial exposure to specific areas in the marine sciences. Credit and title will be arranged to examine the matter in an area of current interests to one or group of students. Specialized topics not currently listed in catalog course offerings. MAS 590 is available to master students - MAS 690 is available to Ph.D. Students. Pre-requisite: Admission to Graduate School.

MAS 692 Seminar 1 cr

Students and faculty meet weekly in an interactive discussion of current literature in marine sciences. The focus will be on "state-of-the-art" theories and methodologies as they occur in the primary marine literature. Student presentation is required to receive credit. Pre-requisite: Admission to the Graduate Program in Marine Sciences.

MAS 694 Directed Studies 1-4 cr

Independent research, not related to the dissertation, under the direction of a member of the graduate faculty. May be used to learn new techniques or explore research questions of special interest. A maximum of 4 hours may be earned for this course toward the Ph.D. degree. Pre-requisite: Admission to the Graduate Program in Marine Sciences.

MAS 799 Dissertation Research 1-8 cr

Independent research by the student under the sponsorship of a member of the department. Progress reports of the work accomplished are required every six months. Pre-requisite: Approved prospectus.

MATERNAL/CHILD NURSING (MCN)

MCN 347 Nursing Care of Child-Bearing/Child-Rearing Families 4 cr

Analysis of theories, concepts, evidence, and issues and trends in professional nursing care of the childbearing and childrearing family. Emphasis on the use of the nursing process and other systematic approaches to plan, implement, and evaluate health promotion and maintenance activities, illness care, and rehabilitation with individuals and families in various stages of childbearing and childrearing, as well as the gynecologic care of women in a variety of acute and community settings. Pre-requisites/Co-requisites: CMN 350, CMN 351. Pre-requisites: NU 300, NU 301. Co-requisite: MCN 348

MCN 348 Nursing Care of Child-Bearing/Child-Rearing Families Clinical 4 cr

The purpose of this course is to provide students the opportunity to engage in clinical practice with childbearing and childrearing families as well as the gynecologic care of women. Emphasis is on the role of the professional nurse in the application of concepts and theories related to health promotion and maintenance, illness care and rehabilitation with childbearing an childrearing families. Pre-requisites/ Co-requisites: CMN 350, CMN 351. Pre-requisites: NU 300, NU 301. Co-requisite: MCN 347.

MCN 538 Advanced Women's Health Nursing I 3 cr

The purpose of this course is to expand the Women's Health Nurse Practitioner student's knowledge and skills for obtaining, recording and analyzing a systematic health assessment of women. Emphasis is on the synthesis and application of nursing and related theories and scientific knowledge to the development of differential/nursing diagnoses as a basis for health promotion and management. Pre-requisites or Co-requisites: NU 545, NU 607, NU 518. Co-requisites: MCN 539, MCN 541.

MCN 539 Advanced Women's Health Nursing Practicum I 1 cr

The purpose of this clinical course is to provide an environment in which the Women's Health Nurse Practitioner student will have the opportunity to become proficient at obtaining and recording a systematic health history and advanced physical examination of women. The focus is refinement of cognitive and clinical skills needed to provide comprehensive health assessments of women. Co-requisite: MCN 538.

MCN 541 Health Promotion/ Disease Prevention Women's Health Nursing 2 cr

The purpose of this didactic course is to prepare the Women's Health Nurse Practitioner student to identify and implement appropriate health promotion and disease prevention strategies across the lifespan. The focus is on the advanced practice nursing of individuals and families in primary care settings. Emphasis is placed on health promotion/disease prevention with strategic planning at the primary, secondary and tertiary levels of prevention. Various issues are explored pertinent to the advanced practice role. Co-requisite: MCN 538.

MCN 542 Advanced Women's Health Nursing II 3 cr

The purpose of this didactic course is to prepare the Women's Health Nurse Practitioner student to assess, diagnose, and manage selected health care needs of women. The focus is on advanced practice nursing with women in primary, acute, and chronic health care settings. Emphasis is on wellness and the pathophysiology and epidemiology underlying acute and chronic health problems. Pre-requisite: MCN 538. Pre-requisite or Co-requisite: NU 578. Co-requisite: MCN 543.

MCN 543 Advanced Women's Health Nursing Practicum II 3 cr

The purpose of this practicum course is to provide opportunities for the Women's Health Nurse Practitioner student to apply concepts from MCN 542 Advanced Women's Health Nursing II in selected clinical settings. Focus is on advanced practice nursing with women and families in primary, acute, and chronic health care settings. The emphasis is on diagnostic reasoning and decision making/ critical thinking. Co-requisite: MCN 542.

MCN 544 Advanced Women's Health Nursing III 3 cr

The purpose of this course is to provide the Women's Health Nurse Practitioner student an in-depth study of the health care management of women within the framework of advanced nursing. The focus is on selected acute and chronic complex health care problems. Emphasis is on the interaction among health care providers in a culturally diverse environment. Pre-requisite: MCN 542. Co-requisite: MCN 545.

MCN 545 Advanced Women's Health Nursing Practicum III 3 cr

The purpose of this course is to provide opportunity for the Women's Health Nurse Practitioner student to practice within an advanced nursing framework. The focus is on the role of the advanced practice nurse in the health care management of women. Emphasis is on collaboration with other health care providers in a culturally diverse environment. Co-requisite: MCN 544.

MCN 546 Advanced Women's Health Nursing Internship 3 cr

The purpose of this culminating course is to provide a preceptor and faculty facilitated experience in the Women's Health Nurse Practitioner role. The focus is on the application and synthesis of knowledge and skills acquired in all previous courses. Pre-requisite: MCN 544. Co-requisite: MCN 547. Pre-requisites or Co-requisites: NU 608, NU 610, NU 613.

MCN 547 Advanced Women's Health Nursing IV 3 cr

The purpose of this course is to provide a forum for the evaluation of issues and trends encountered in advanced women's health nursing care. Emphasis is on critical analysis and management of issues by the Women's Health Nurse Practitioner student in an interdisciplinary health care system. Co-requisite: MCN 546.

MCN 548 Advanced Pediatric Nursing I 3 cr

The purpose of this first didactic course is to prepare Pediatric Nurse Practitioner students to assess, diagnose, and manage selected health care needs of neonates through one year of life. Emphasis is placed on synthesis and application of nursing and related theories and scientific knowledge to the development of differential/nursing diagnoses as a basis for health promotion and management. Pre-requisites or Co-requisites: NU 545, NU 518, NU 607. Co-requisites: MCN 549, MCN 551.

MCN 549 Advanced Pediatric Nursing Practicum I 1 cr

The purpose of this first practicum course is to provide opportunities for Pediatric Nurse Practitioner students to apply concepts from Advanced Pediatric Nursing I in selected clinical settings. The focus is continued refinement of cognitive and clinical skills needed to provide comprehensive health assessments of children and to apply diagnostic reasoning. Co-requisite: MCN 548.

MCN 551 Health Promotion/Disease Prevention for Pediatric Nursing 2 cr

The purpose of this didactic course is to prepare the Pediatric Nurse Practitioner students to identify and implement appropriate health promotion and disease prevention strategies for children from birth to adolescence. The focus is on the advanced practice nursing of children and families in primary care settings. Emphasis is placed on health promotion/disease prevention with strategic planning at the primary, secondary and tertiary levels of prevention. Various issues

are explored pertinent to the advanced practice role. Co-requisite: MCN 548.

MCN 552 Advanced Pediatric Nursing II 3 cr

The purpose of this didactic course is to prepare the Pediatric Nurse Practitioner students to assess, diagnose, and manage selected health care needs of children from birth to school age. The focus is on advanced practice nursing with children and families in primary and acute care settings. Emphasis is on the wellness, and the pathophysiology and epidemiology underlying acute and chronic health problems. Pre-requisite: MCN 548. Pre-requisite or Co-requisite: NU 578. Co-requisite: MCN 553.

MCN 553 Advanced Pediatric Nursing Practicum II 3 cr

The purpose of this practicum course is to provide opportunities for the Pediatric Health Nurse Practitioner students to apply concepts from MCN 552 Advanced Pediatric Health Nursing II in selected clinical settings. Focus is on advanced practice nursing with children and families in primary settings. The emphasis is on diagnostic reasoning and decision making/ critical thinking. Co-requisite: MCN 552.

MCN 554 Advanced Pediatric Nursing III 3 cr

The purpose of this course is to provide the Pediatric Nurse Practitioner students an in-depth study of the health care management of children from school-age to adolescence within the framework of advanced nursing. The focus is on selected acute and chronic complex health problems. Emphasis is on the interaction among health care providers in a culturally diverse environment. Pre-requisite: MCN 552. Co-requisite: MCN 555.

MCN 555 Advanced Pediatric Nursing Practicum III 3 cr

The purpose of this course is to provide opportunity for the Pediatric Nurse Practitioner students to practice within an advanced nursing framework. The focus is on the role of the advanced practice nurse in the health care management of children. Emphasis is on collaboration with other health care providers in a culturally diverse environment. Co-requisite: MCN 554.

MCN 556 Advanced Pediatric Nursing Internship 3 cr

The purpose of this culminating course is to provide a preceptor and faculty facilitated experience in the Pediatric Nurse Practitioner role. The focus is on the application and synthesis of knowledge and skills acquired in all previous courses. Pre-requisite: MCN 554. Co-requisite: MCN 557. Pre-requisites or Co-requisites: NU 608, NU 610, NU 613.

MCN 557 Advanced Pediatric Nursing IV 3 cr

The purpose of this course is to provide a forum for the evaluation of issues and trends encountered in advanced child health nursing care. Emphasis is on critical analysis and management of issues by the Pediatric Nurse Practitioner in an interdisciplinary health care delivery system. Co-requisite: MCN 556.

MCN 558 Advanced Acute Care Pediatric Nursing I 3 cr

The purpose of this course is to expand the Acute Care Pediatric Nurse Practitioner student's knowledge and skills for obtaining, recording and analyzing a systematic health assessment of the infant, child and adolescent in a primary care setting. Emphasis is placed on the synthesis of nursing in application and related theories and scientific knowledge for the development of differential/nursing diagnosis as a basis for health promotion and management. Pre-requisites/ Co-requisites: NU 518, NU 607, NU 545, NU 578. Co-requisites: MCN 559, MCN 571.

MCN 559 Advanced Acute Care Pediatric Nursing Practicum I 1 cr

This course provides an environment in which the Acute Care Pediatric Nurse Practitioner student will have the opportunity to become proficient at obtaining, recording and analyzing a systematic health history and advanced physical examination of infants, children and adolescents. The focus is refinement of cognitive and clinical skills needed to provide comprehensive health assessments for infants and children. Co-requisite: MCN 558.

MSN 562 Advanced Acute Care Pediatric Nursing II 3 cr

This course prepares Acute Care Pediatric Nurse Practitioner students to assess, diagnose, and manage selected health care needs of children. The focus is on advanced practice nursing with children and families in acute care settings. Emphasis is placed on wellness and the pathophysiology and epidemiology underlying acute and chronic health problems. Pre-requisite: MCN 558. Co-requisite: MCN 563.

MCN 563 Advanced Acute Care Pediatric Nursing Practicum II 3 cr

This course provides an opportunity for the Acute Care Pediatric Nurse Practitioner student to apply concepts from Acute Care Pediatric Nursing II in select clinical settings. Focus is on children and families in acute care settings. The emphasis is on diagnostic reasoning and decision making/critical thinking. Practicum experiences will include rotations with a primary preceptor. Co-requisite: MCN 562.

MCN 564 Advanced Acute Care Pediatric Nursing III 3 cr

This course provides an in-depth study of the health care management of the Acute Care Pediatric patient. Emphasis is on the interaction among health care providers in a culturally diverse environment. Co-requisite: MCN 565. Pre-requisites: NU 545, NU 578, MCN 562, MCN 563.

MCN 565 Advanced Acute Care Pediatric Nursing Practicum III 3 cr

This course provides an opportunity for the Acute Care Pediatric nurse practitioner student to apply concepts from Advanced Acute Care Pediatric Nursing II in select clinical settings. The emphasis is on diagnostic reasoning and decision-making/critical thinking. Co-requisite: MCN 564. Pre-requisites: NU 545, NU 578, MCN 562, MCN 563.

MCN 566 Advanced Acute Care Pediatric Nursing Practicum IV 3 cr

This course provides a forum for the evaluation of issues and trends encountered in advanced Acute Care Pediatric nursing. Emphasis is on critical analysis and management of issues by the Acute Care Pediatric Nurse Practitioner in an interdisciplinary health care delivery system. Co-requisite: MCN 567. Pre-requisites: MCN 564, MCN 565.

MCN 567 Advanced Acute Care Pediatric Nursing Seminar 3 cr

The purpose of this course is to provide a preceptor and faculty facilitated experience in the Acute Care Pediatric Nurse Practitioner role. The focus is on application and synthesis of knowledge and skills acquired in all previous courses. Co-requisite: MCN 566. Pre-requisites: MCN 564, MCN 565.

MCN 568 Advanced Neonatal Nursing I 3 cr

The purpose of this first didactic course is to prepare Neonatal Nurse Practitioner student to assess, diagnose, and manage selected health care needs of neonates through one year of life. Emphasis is placed on synthesis and application of nursing and related theories and scientific knowledge to the development of differential/nursing diagnoses as a basis for health promotion and management. Pre-requisites or Co-requisites: NU 518, NU 545, NU 607. Co-requisites: MCN 569, MCN 571.

MCN 569 Advanced Neonatal Nursing Practicum I 1 cr

The purpose of this first practicum course is to provide opportunities for Neonatal Nurse Practitioner students to apply concepts from Advanced Neonatal Nursing I in selected clinical settings. The focus is continue refinement of cognitive and clinical skills needed to provide comprehensive health assessments of adults and children and to apply diagnostic reasoning. Co-requisite: MCN 568.

MCN 571 Health Promotion Disease Prevention Neonatal AC Pediatric Nursing 2 cr

The purpose of this didactic course is to prepare the Neonatal and Acute Care Pediatric Nurse Practitioner students to identify and implement appropriate health promotion and disease prevention strategies neonate to age 21 years. The focus is on the advanced practice nursing of individuals and families in primary care settings. Emphasis is placed on health promotion/disease prevention with strategic planning at the primary, secondary and tertiary levels of prevention. Various issues are explored pertinent to the advanced practice role. Pre-requisite or Co-requisite: MCN 558 or MCN 568.

MCN 572 Advanced Neonatal Nursing II 3 cr

The purpose of this didactic course is to prepare the Neonatal Nurse Practitioner student to assess, diagnose, and manage selected health care needs of neonates and their families from birth through one year of life. The focus is on neonates and families in primary, acute, and chronic health care settings. Emphasis is placed on wellness and the pathophysiology

and epidemiology underlying acute and chronic health problems. Pre-requisite: MCN 568. Pre-requisite or Co-requisite: NU 578. Co-requisite: MCN 573.

MCN 573 Advanced Neonatal Nursing Practicum II 3 cr

The purpose of this practicum course is to provide opportunities for the Neonatal Nurse Practitioner students to apply concepts from MCN 572 Advanced Neonatal Nursing II in selected clinical settings. Focus is on advanced nursing practice with neonates and their families through one year of life in primary, acute, and chronic health care settings. The emphasis is on diagnostic reasoning and decision making/ critical thinking. Co-requisite: MCN 572.

MCN 574 Advanced Neonatal Nursing III 3 cr

The purpose of this course is to provide the Neonatal Nurse Practitioner student an in-depth study of the infant/neonate within the framework of nursing. The focus is on selected acute, and chronic complex health problems of neonates in the primary, acute, and chronic health care settings. Emphasis is on the interaction among health care providers in a culturally diverse environment. Pre-requisite: MCN 572. Co-requisite: MCN 575.

MCN 575 Advanced Neonatal Practicum III 3 cr

The purpose of this course is to provide opportunity for the Neonatal Nurse Practitioner student to practice within an advanced nursing framework. The focus is on the role of the advanced practice nurse in the management of the neonate through one year of life. Emphasis is on collaboration with other health care providers in a culturally diverse environment. Co-requisite: MCN 574.

MCN 576 Advanced Neonatal Nursing Internship 3 cr

The purpose of this culminating course is to provide a preceptor-faculty facilitated experience in the Neonatal Nurse Practitioner role. The focus is on the application and synthesis of knowledge and skills acquired in all previous courses. Pre-requisite: MCN 574. Co-requisite: MCN 577. Pre-requisites or Co-requisites: NU 608, NU 610, NU 613..

MCN 577 Advanced Neonatal Nursing IV 3 cr

The purpose of this course is to provide a forum of the evaluation of issues and trends encountered in advanced neonatal nursing care. Emphasis is on critical analysis and management of issues by the Neonatal Nurse Practitioner in an interdisciplinary health care system. Co-requisite: MCN 576. Pre-requisites: MCN 574, MCN 575, NU 506. Pre-requisites or Co-requisites: NU 508, NU 513, NU 514, NU 545, NU 578, HSC 568.

MCN 604 Pediatric Acute NP Project Planning and Development 3 cr

This course assists the acute care pediatric nurse practitioner DNP student to learn the processes embedded in developing a doctoral synthesis project. The course will address all aspects of project planning and development as a preliminary step to the acute care pediatric nurse practitioner students' selection of a topic or phenomenon of interest for the project and will incorporate well-built questions, search strategies and outcomes, identification of resources needed, plan for evaluation and dissemination.

MCN 617 Pediatric Acute NP Residency I 3 cr

Theories of leadership, motivation, power, and change are used to influence change in health care organizations. This course will implement evidence-based clinical models and evaluate their effectiveness in health outcomes. The acute care pediatric nurse practitioner student will synthesize, critique, and apply evidence to support quality clinical or organizational practices.

In this mentored and supervised experience, the acute care pediatric nurse practitioner student will work with the primary faculty advisor to complete projects and advance their selected practice area. The acute care pediatric nurse practitioner student will have access to an authority for expanded scope of practice to master the DNP competencies. Residency sites will depend upon the acute care pediatric nurse practitioner student's career trajectory and approval by collaborating faculty. During the residency semester, student must participate in scheduled scholarly seminars online. A total of 180 clinical hours of direct practice/ management is required.

MCN 618 Pediatric Acute NP Residency II 3 cr

Provides acute care pediatric nurse practitioner students the opportunity to fully express all DNP competencies. The acute care pediatric nurse practitioner student, guided by the faculty facilitator, will implement the scholarly doctoral system's change project.

MCN 619 Pediatric Acute NP Residency III 3 cr

Final course in residency series as acute care pediatric nurse practitioner student continues to implement and evaluate project plan. Provide acute care pediatric nurse practitioner student the opportunity to fully express all DNP competencies. The acute care pediatric nurse practitioner student, guided by the core faculty and advisor completes quality improvement evidence-based system's change project.

MCN 625 WH CNS Project Planning and Development 3 cr

This course assists the women's health clinical nurse specialist DNP student to learn the processes embedded in developing a doctoral synthesis project. The course will address all aspects of project planning and development as a preliminary step to the women's health clinical nurse specialist students' selection of a topic or phenomenon of interest for the project and will incorporate well-built questions, search strategies and outcomes, identification of resources needed, plan for evaluation and dissemination.

MCN 626 WH CNS Residency I 3 cr

Theories of leadership, motivation, power, and change are used to influence change in health care organizations. This course will implement evidence-based clinical models and evaluate their effectiveness in health outcomes. The women's health clinical nurse specialist student will synthesize, critique, and apply evidence to support quality clinical or organizational practices.

In this mentored and supervised experience, the women's health clinical nurse specialist student will work with the primary faculty advisor to complete projects and advance their selected practice area. The women's health clinical nurse specialist student will have access to and authority for expanded scope of practice to master the DNP competencies. Residency sites will depend upon the student's career trajectory and approval by collaborating faculty. During the residency semester, the women's health clinical nurse specialist student must participate in scheduled scholarly seminars online. A total of 180 clinical hours of direct practice/management is required.

MCN 627 WH CNS Residency II 3 cr

Provides women's health clinical nurse specialist students the opportunity to fully express all DNP competencies. The women's health clinical nurse specialist student, guided by the faculty facilitator, will implement the scholarly doctoral system's change project.

MCN 628 WH CNS Residency III 3 cr

Final course in residency series as women's health clinical nurse specialist student continues to implement and evaluate project plan. Provides the women's health clinical nurse specialist student the opportunity to fully express all DNP competencies. The women's health clinical nurse specialist student, guided by the core faculty and advisor completes quality improvement evidence-based system's change project.

MCN 637 Peds CNS Project Planning and Development 3 cr

This course assists the pediatric clinical nurse specialist DNP student to learn the processes embedded in developing a doctoral synthesis project. The course will address all aspects of project planning and development as a preliminary step to the pediatric clinical nurse specialist student's' selection of a topic or phenomenon of interest for the project and will incorporate well-built questions, search strategies and outcomes, identification of resources needed, plan for evaluation and dissemination.

MCN 638 Peds CNS Residency I 3 cr

Theories of leadership, motivation, power, and change are used to influence change in health care organizations. This course will implement evidence-based clinical models and evaluate their effectiveness in health outcomes. The pediatric clinical nurse specialist student will synthesize, critique, and apply evidence to support quality clinical or organizational practices.

In this mentored and supervised experience, the pediatric clinical nurse specialist student will work with the primary faculty advisor to complete projects and advance their selected practice area. The pediatric clinical nurse specialist student will have access to and authority for expanded scope of practice to master the DNP competencies. Residency sites will depend upon the pediatric clinical nurse specialist student's career trajectory and approval by collaborating faculty. During the residency semester, the pediatric clinical nurse specialist student must participate in scheduled scholarly

seminars online. A total of 180 clinical hours of direct practice/management is required.

MCN 639 Peds CNS Residency II 3 cr

Provides pediatric clinical nurse specialist students the opportunity to fully express all DNP competencies. The pediatric clinical nurse specialist student, guided by the faculty facilitator, will implement the scholarly doctoral system's change project.

MCN 640 Peds CNS Residency III 3 cr

Final course in residency series as pediatric clinical nurse specialist student continues to implement and evaluate project plan. Provides the pediatric clinical nurse specialist student the opportunity to fully express all DNP competencies. The pediatric clinical nurse specialist student, guided by the core faculty and advisor completes quality improvement evidence-based system's change project.

MCN 644 WNP Project Planning and Development 3 cr

This course assists the acute care women's health nurse practitioner DNP student to learn the processes embedded in developing a doctoral synthesis project. The course will address all aspects of project planning and development as a preliminary step to the acute care women's health nurse practitioner DNP student's' selection of a topic or phenomenon of interest for the project and will incorporate well-built questions, search strategies and outcomes, identification of resources needed, plan for evaluation and dissemination.

MCN 645 WNP Residency I 3 cr

Theories of leadership, motivation, power, and change are used to influence change in health care organizations. This course will implement evidence-based clinical models and evaluate their effectiveness in health outcomes. The women's health nurse practitioner student will synthesize, critique, and apply evidence to support quality clinical or organizational practices.

In this mentored and supervised experience, the women's health nurse practitioner student will work with the primary faculty advisor to complete projects and advance their selected practice area. The women's health nurse practitioner student will have access to and authority for expanded scope of practice to master the DNP competencies. Residency sites will depend upon the women's health nurse practitioner student's career trajectory and approval by collaborating faculty. During the residency semester, the women's health nurse practitioner student must participate in scheduled scholarly seminars online. A total of 180 clinical hours of direct practice/management is required.

MCN 646 WNP Residency II 3 cr

Provides women's health nurse practitioner students the opportunity to fully express all DNP competencies. The women's health nurse practitioner student, guided by the faculty facilitator, will implement the scholarly doctoral system's change project.

MCN 647 WNP Residency III 3 cr

Final course in residency series as women's health nurse practitioner student continues to implement and evaluate project plan. Provides the women's health nurse practitioner student the opportunity to fully express all DNP competencies. The women's health nurse practitioner student, guided by the core faculty and advisor completes quality improvement evidence-based system's change project.

MCN 654 Peds Primary Project Planning and Development 3 cr

This course assists the primary care pediatric nurse practitioner DNP student to learn the processes embedded in developing a doctoral synthesis project. The course will address all aspects of project planning and development as a preliminary step to the primary care pediatric nurse practitioner DNP student's' selection of a topic or phenomenon of interest for the project and will incorporate well-built questions, search strategies and outcomes, identification of resources needed, plan for evaluation and dissemination.

MCN 655 Peds Primary Residency I 3 cr

Theories of leadership, motivation, power, and change are used to influence change in health care organizations. This course will implement evidence-based clinical models and evaluate their effectiveness in health outcomes. The primary care pediatric nurse practitioner student will synthesize, critique, and apply evidence to support quality clinical or organizational practices.

In this mentored and supervised experience, the primary care pediatric nurse practitioner student will work with the primary faculty advisor to complete projects and advance their selected practice area. The primary care pediatric nurse practitioner student will have access to and authority for expanded scope of practice to master the DNP competencies. Residency sites will depend upon the primary care pediatric nurse practitioner student's career trajectory and approval by collaborating faculty. During the residency semester, the primary care pediatric nurse practitioner student must participate in scheduled scholarly seminars online. A total of 180 clinical hours of direct practice/management is required.

MCN 656 Peds Primary Residency II 3 cr

Provides primary care pediatric nurse practitioner students the opportunity to fully express all DNP competencies. The women's health nurse practitioner student, guided by the faculty facilitator, will implement the scholarly doctoral system's change project.

MCN 657 Peds Primary Residency III 3 cr

Final course in residency series as primary care pediatric nurse practitioner student continues to implement and evaluate project plan. Provides the primary care pediatric nurse practitioner student the opportunity to fully express all DNP competencies. The primary care pediatric nurse practitioner student, guided by the core faculty and advisor completes quality improvement evidence-based system's change project.

MCN 674 Neonatal Nurse Practitioner Project Planning and Development 3 cr

This course assists the neonatal nurse practitioner DNP student to learn the processes embedded in developing a doctoral synthesis project. The course will address all aspects of project planning and development as a preliminary step to the neonatal nurse practitioner DNP student's' selection of a topic or phenomenon of interest for the project and will incorporate well-built questions, search strategies and outcomes, identification of resources needed, plan for evaluation and dissemination.

MCN 675 Neonatal Nurse Practitioner Residency I 3 cr

Theories of leadership, motivation, power, and change are used to influence change in health care organizations. This course will implement evidence-based clinical models and evaluate their effectiveness in health outcomes. The neonatal nurse practitioner student will synthesize, critique, and apply evidence to support quality clinical or organizational practices.

In this mentored and supervised experience, the neonatal nurse practitioner student will work with the primary faculty advisor to complete projects and advance their selected practice area. The neonatal nurse practitioner student will have access to and authority for expanded scope of practice to master the DNP competencies. Residency sites will depend upon the neonatal nurse practitioner student's career trajectory and approval by collaborating faculty. During the residency semester, the neonatal nurse practitioner student must participate in scheduled scholarly seminars online. A total of 180 clinical hours of direct practice/management is required.

MCN 676 Neonatal Nurse Practitioner Residency II 3 cr

Provides neonatal nurse practitioner students the opportunity to fully express all DNP competencies. The neonatal nurse practitioner student, guided by the faculty facilitator, will implement the scholarly doctoral system's change project.

MCN 677 Neonatal Nurse Practitioner Residency III 3 cr

Final course in residency series as neonatal nurse practitioner student continues to implement and evaluate project plan. Provides the neonatal nurse practitioner student the opportunity to fully express all DNP competencies. The neonatal nurse practitioner student, guided by the core faculty and advisor completes quality improvement evidence-based system's change project.

MCN 692 MCN-DNP Residency Progression 3 cr

Students will register for this course to complete residency course work under supervision of faculty. Students must remain continuously enrolled until all residency requirements are completed. Co-requisite: MCN 619 Pre-requisite: MCN 618

MECHANICAL ENGINEERING (ME)

Note: Students must obtain Professional Component Standing before they can enroll in any 300-level engineering course.

ME 123 Introduction to Design and Ethics 3 cr

An introduction to the techniques used in the design of engineering systems, including problem identification, brainstorming alternative solutions, establishing criteria and constraints, implementing and evaluating solutions, and oral and written communication of the results.

Professional engineering codes will be used as the starting point to discuss ethics in engineering design. Teamwork and team roles will be emphasized along with computer skills for computation, writing, graphics, and presentations. One and one-half hours of design. Pre-requisite: EH 101. Fee.

ME 135 Engineering Graphics and Communications 3 cr

Graphical representation of objects orthographic, oblique, and isometric views. Freehand lettering and sketching, computer aided graphics, presentation of graphics based on numerical data using spreadsheet, word processor and presentation software. Fee.

ME 228 Mechanical Engineering Analysis I 3 cr

Introduction to numerical methods with applications to ME simulation and design. Introduction to MATLAB and engineering applications. Introduction to numerical differentiation and integration. Pre-requisite: MA 126. Co-requisite: MA 237. Fee.

ME 312 Mechanical Engineering Thermodynamics 3 cr

Thermodynamic power and refrigeration cycles, gas mixtures, psychometrics, and combustion. One-half hour of design. Pre-requisite: EG 270. Fee.

ME 314 Machine Component Design 3 cr

Analysis and optimization of machine elements to accomplish given tasks within limits of stress and size. One hour of design. Pre-requisites: EG 284, EG 315. Fee.

ME 316 Instrumentation and Experimental Methods 3 cr

Measuring system analysis and design, signal conditioning, analysis of data, statistical error analysis, digital data collection and analysis, communication of results. This course is a Co-requisite with ME 319 Instrumentation Laboratory. The same grade will be given in both courses. Pre-requisites: EG 220, MA 238, PH 202. Co-requisite: ME 319. Fee.

ME 317 Heat Transfer 3 cr

Steady and transient multi-dimensional conduction, forced and natural convection, radiation and heat exchangers. One-half hour of design. Pre-requisites: EG 270, EG 360, MA 238, ME 328. Fee.

ME 319 Instrumentation Lab (W) 1 cr

Laboratory component of ME 316 Instrumentation. This course is a Co-requisite with ME 316 Instrumentation. The same grade will be given in both courses. Pre-requisites: EG 220, MA 238, PH 202. Co-requisite: ME 316. Fee.

ME 326 Materials Science 3 cr

Mechanical, chemical, and physical properties of materials. Relationship between structure, processing, and properties of engineering materials. One-half hour of design. Pre-requisites: CH 131, EG 315, PH 202. Fee.

ME 328 Mechanical Engineering Analysis II 3 cr

Numerical solutions of differential equations with applications to ME simulation and design. Introduction to Finite Elements. One-half hour of design. Pre-requisites: ME 228, EG 315, MA 227, MA 237, MA 238. Fee.

ME 336 Materials Science Laboratory (W) 1 cr

Experimental study of the effect of thermal and mechanical processings of properties. Pre-requisite: ME 326. Fee.

ME 365 Design of Fluid Power Systems 3 cr

Fluid power components are studied in detail. Design of complete hydraulic systems is stressed. One hour of design. Pre-requisites: EG 284, EG 315, EG 360, ME 328. Fee.

ME 411 Thermal System Design 3 cr

Thermal system design using principles of thermodynamics, fluid mechanics, heat transfer, and numerical simulation. Communication of results. Three hours of design. Pre-requisites: EG 360, ME 312, ME 317, ME 328. Fee.

ME 412 Thermal Science Laboratory 1 cr

Experimental study of thermal science principles and systems. Communication of results. Pre-requisites: EG 360, ME 312, ME 316, ME 317. Fee.

ME 413 Capstone Design I 2 cr

First capstone design course for mechanical engineering students. Team-oriented projects from industry and faculty. Two hours of design. Pre-requisites: EG 231, ME 312, ME 314, ME 317. Fee.

ME 414 Capstone Design II 1 cr

Continuation of Capstone Design I course for mechanical engineering students. Team-oriented design projects from industry and faculty. Oral and written design presentation. One hour of design. Pre-requisite: ME 413. Fee.

ME 416 Capstone Design Project 1 cr

Students will work as teams to solve engineering design problems and present their solutions in written and oral formats. Co-requisite: ME 414 Pre-requisite: ME 413 Minimum grade of D. Fee

ME 417 Dynamics of Machines 3 cr

A study of the effects of external forces and moments on the motion of machines. Topics include the study of the position, velocity and acceleration of machine components during operation and the determination of forces on the connections and members. One hour of design. Pre-requisites: EG 284, EG 315, ME 328. Fee.

ME 419 Computer Aided Design and Manufacturing 3 cr

Introduction to computer aided design (CAD) and computer aided manufacturing (CAM) principles and their practical applications as fundamental elements of contemporary product design and manufacturing. This course is dual listed with an equivalent 500-level mechanical engineering course. One hour of design. Pre-requisites: ME 135, ME 314. Fee.

ME 421 Mechanical Systems Design 3 cr

A study of design techniques as applied to mechanical components and systems. Computer simulation and numerical techniques. Communication of results. Three hours of design. Pre-requisites: ME 314, ME 328. Fee.

ME 422 Gas Turbines 3 cr

Introduction to gas turbines covering thermodynamics, fluid mechanics, combustion, cycle analysis, compressors, turbines, and component matching. One hour of design. Pre-requisites: EG 360, ME 312. Fee.

ME 426 Dynamic Systems and Control 3 cr

Modeling dynamic systems. Introduction to the principles of feedback control systems. Analysis of linear systems. Pre-requisites: MA 238, ME 316, ME 328. Fee.

ME 429 Controls Laboratory 1 cr

Design and implementation of analog and digital feedback control systems. Introduction to Programmable Logic Controllers. Control applications for microprocessors. One-half hour of design. Pre-requisite: ME 426. Fee.

ME 430 Mechanism Synthesis 3 cr

Kinematic synthesis of planar linkages for function, path, and motion generation. Topics include: degrees of freedom; graphical, linear analytical, and nonlinear analytical methods; and curvature theory. This course is dual-listed with an equivalent 500-level mechanical engineering course. One hour of design. Pre-requisites: EG 284, ME 328. Fee.

ME 431 Gas Dynamics 3 cr

Introduction to compressible fluid flow. Conservation laws, isentropic flow, adiabatic flow, flow with heat transfer, and normal shock. One hour of design. Pre-requisites: EG 360, ME 312. Fee.

ME 432 Advanced Thermodynamics 3 cr

Continuation of mechanical engineering thermodynamics to develop a broader and deeper understanding of thermal energy transformations. One hour of design. Pre-requisite: ME 312. Fee.

ME 438 Finite Element Analysis 3 cr

Introduction to the finite element method. Engineering application to stress-strain analysis is emphasized. Other field problems are also considered. This course is dual-listed with an equivalent 500-level mechanical engineering course. Pre-requisite: ME 328. Fee.

ME 439 Boundary Elements I 3 cr

Fundamental concepts of the boundary element method of numerically solving partial differential equations. Application to potential flow problems in heat transfer. This course is dual listed with an equivalent 500-level mechanical engineering course. Pre-requisites: ME 328 and consent of instructor. Fee.

ME 441 Microprocessors for Mechanical Engineers 3 cr

Basic concepts of programming and applying microprocessors to the control of mechanical systems. Assembly language programming. Memory decoding and use. Input and output circuits. Interfacing with the PIA. Pre-requisites: EG 220, ME 316. Fee.

ME 450 Heating, Ventilation, and Air Conditioning 3 cr

Addresses the heating and cooling of buildings. Covers related engineering sciences, cooling and heating loads, systems, and equipment. One hour of design. Pre-requisites: EG 360, ME 312, and 317. Fee.

ME 451 Refrigeration Systems 3 cr
Study of refrigeration systems including solution of typical engineering design problems. Concepts from fluid mechanics, thermodynamics, and heat transfer are used. One hour of design. Pre-requisites: EG 360, ME 312, ME 317. Fee.

ME 452 Combustion 3 cr
Introduction to the theory of combustion processes, chemical equilibrium, adiabatic flame temperatures, reaction kinetics. This course is dual listed with an equivalent 500-level mechanical engineering course. Pre-requisite: ME 312. Fee.

ME 453 IC Engines 3 cr
Fuel-air cycles. Fuel, air and exhaust flows. Heat and mass losses. Engine performance. One hour design. Pre-requisites: EG 360, ME 312, ME 317. Fee.

ME 460 Intro to Marine Engineering 3 cr
Categorization of Ships, ship Geonmetry and Hydrostatics, Ship Stability, Ship Hazards, Resistance and Power. Propellers and Propulsion Systems, Ship Dynamics and Control. Pre-requisites: EG 315 and EG 360. Fee

ME 461 Turbomachinery 3 cr
Energy transfer between fluid and rotor: fluid flow in turbomachines, centrifugal and axial flow pumps and compressors; radial and axial flow turbines. Pre-requisites: EG 360 and ME 312. One hour of design. Fee.

ME 466 Aerospace Propulsion 3 cr
Introduction to air breathing propulsion. Covers thermodynamics, fluid dynamics, combustion, cycle analysis, inlets and nozzles, compressors, turbines, and component matching. 1 hour design. Pre-requisites: EG 360, ME 312, and ME 317. Fee.

ME 467 Introduction to Biomedical Engineering 3 cr
Survey of topics and current issues in the field of biomedical engineering. Topics include biomechanics, biomedical instrumentation, biomaterials engineering, biomedical imaging, cellular mechanics, tissue engineering, biomedical design and ethics. A portion of the course is devoted to basic biology concepts and principles. Students will review literature and discuss technical and technological developments relevant to biomedical engineering. Fee.

ME 468 Concepts of Aircraft Design 3 cr
Introduction to aircraft design, including an understanding of the various components leading to a good conceptual design. Introduction to parameters in aerospace analysis and how they may impact a design. Application of design concepts to an RFP (request for proposal) for design competition. Pre-requisites: ME 324 or EG 360 or CE 365, ME 312, ME 317. Fee.

ME 472 Vibration Analysis and Synthesis 3 cr
Steady state and transient vibration analysis of discrete and continuous systems. Vibration problems as related to design are also included. One hour of design. Pre-requisites: EG 284, EG 315, MA 238, ME 316, ME 328. Fee.

ME 474 Noise and Vibration Control 3 cr
Principles of acoustics; human response to noise; control of noise and vibration by means of isolation, sound barriers, and absorption. One hour of design. Pre-requisite: ME 472. Fee.

ME 490 Special Topics 1-3 cr
Topics of current mechanical engineering interest. Pre-requisite: Consent of instructor. Fee.

ME 494 Directed Independent Study 1-3 cr
Selected mechanical engineering topics of special or current interest not available in regularly scheduled courses. Pre-requisite: Consent of instructor. Fee.

ME 499 Honors Senior Project (H) 3 cr
Under the advice and guidance of a faculty mentor, honors students will identify and carry out a research project, relevant to the field of Mechanical Engineering study, that will lead to a formal presentation at the Annual Honors Student Colloquium. The senior project will be judged and graded by three faculty chaired by the honors mentor. This course is required for Honors recognition. A minimum of 4 credit hours is required, but students may enroll for a maximum of six (6) credit hours over two semesters. Pre-requisites: Senior status plus completion of a project prospectus. Fee.

ME 518 Advanced Mechanical Engineering Analysis 3 cr
Application of numerical methods including finite difference; finite element and boundary element techniques to the solution of problems in Mechanical Engineering. Fee.

ME 519 Computer Aided Design and Manufacturing 3 cr
Introduction to computer aided design (CAD) and computer aided manufacturing (CAM) principles and their practical applications as fundamental elements of contemporary product design and manufacturing. This course is dual listed with an equivalent 400-level mechanical engineering course. Fee.

ME 520 Advanced Fluid Mechanics 3 cr
Analysis of steady and unsteady motion of a viscous fluid. Topics include: conservation equations, Newtonian fluids and the Navier-Stokes equations, vorticity, analytical solutions, boundary layers, instability of viscous flows. Fee.

ME 522 Hydrodynamic Instability 3 cr
Normal mode analysis; linear stability analysis; Raleigh-Benard, Taylor, Raleigh-Taylor, Kevin-Helmholtz, Gortler instability; Orr-Sommerfield equation and TS Wave; Bifurcation. Pre-requisite: ME 520. Fee.

ME 525 Boundary Layer Theory 3 cr
Development of Navier-Stokes and boundary layer equations, perturbation theory application and boundary layer transition. Fee.

ME 530 Mechanism Synthesis 3 cr
Kinematic synthesis of planar linkages for function, path, and motion generation. Topics include: degrees of freedom; graphical, linear analytical, and nonlinear analytical methods; and curvature theory. This course is dual-listed with an equivalent 400-level mechanical engineering course. Fee.

ME 538 Finite Element Analysis 3 cr
Introduction to the finite element method. Engineering application to stress-strain analysis is emphasized. Other field problems are also considered. This course is dual-listed with an equivalent 400-level mechanical engineering course. Pre-requisite: MA 507 or MA 508. Fee.

ME 539 Boundary Elements I 3 cr
Fundamental concepts of the boundary element method of numerically solving partial differential equations. Application to potential flow problems in heat transfer. This course is dual listed with an equivalent 400-level mechanical engineering course.

ME 540 Advanced Heat Transfer 3 cr
Steady and transient conduction, external and internal forced convection, natural convection, radiation with participating media, boiling heat transfer, Stefan condition. Fee.

ME 541 Conduction Heat Transfer 3 cr
Closed form analytical and approximate numerical solutions of one, two- and three-dimensional steady state and transient problems in conduction heat transfer. Pre-requisites: MA 507, consent of instructor. Fee.

ME 542 Convection Heat Transfer 3 cr
Fundamental laws of motion and energy balance for a viscous fluid, classical solution of the Navier-Stokes and energy equations, laminar/turbulent hydrodynamic and thermal boundary layers, convection heat transfer in laminar/turbulent internal flows. Fee.

ME 543 Radiation Heat Transfer 3 cr
Blackbody radiation, diffuse-gray surfaces, radiative exchange in a multi-surface enclosure, gas radiation in enclosures with participating media, introduction to available numerical methods. Fee.

ME 544 Heat Transfer with Change of Phase 3 cr
Boiling heat transfer and critical heat flux, condensation heat transfer, Stefan problem, freezing and melting, ablation, introduction to available numerical techniques. Pre-requisite: ME 540 or ME 542. Fee.

ME 545 Experimental Methods in Fluid Mechanics and Heat Transfer 3 cr
Uncertainty analysis, system response, sampling theory and FFT, differential pressure measurement and multi-hole probes, thermocouple and RTD, thermal anemometry, LDV and other non-intrusive optical methods, flow visualization. Fee.

ME 550 Combustion 3 cr
Introduction to the theory of combustion processes, chemical equilibrium, adiabatic flame temperature, reaction kinetics, flame structure. This course is dual-listed with an equivalent 400-level mechanical engineering course. Fee.

ME 551 Classical Thermodynamics 3 cr
Postulational treatment of the physical laws of equilibrium, equations of state, processes, equilibrium, stability, reactive systems, phase transition. Fee.

ME 552 Statistical Thermodynamics 3 cr
Principles of kinetic theory, quantum mechanics, and statistical mechanics with

particular reference to thermodynamic systems. Conclusions of classical thermodynamics are established from the microscopic viewpoint. Fee.

ME 560 Compressible Fluid Flow 3 cr
Foundations of fluid dynamics and thermodynamics of one dimensional flow and heat transfer, isentropic flow, shock waves and method of characteristics. Fee.

ME 561 Turbomachinery 3 cr
Energy transfer between fluid and rotor; fluid flow in turbomachines, centrifugal and axial-flow pumps and compressors; radial and axial flow turbines. Fee.

ME 562 Computational Fluid Dynamics and Heat Transfer I 3 cr
Derivation of conservation equations, numerical solution of inviscial and viscous incompressible flow problems, emphasis on finite volume method, introduction to finite element and spectral method. Fee.

ME 563 Computational Fluid Dynamics and Heat Transfer II 3 cr
Governing equations in general coordinates, differential geometry for curvilinear coordinates, grid generations, numerical uncertainties. Pre-requisite: ME 562. Fee.

ME 564 Turbulent Flow 3 cr
Reynolds equations, statistics of turbulence, analysis of free and wall turbulence, turbulence models. Pre-requisite: ME 520. Fee.

ME 565 Lubrication 3 cr
Friction of solids and fluids. Lubricants. Theory of sliding bearings. Multidimensional bearings with constant forces and velocities. Solid, hydrodynamic and gas lubrication. Design of bearings. Fee.

ME 566 Aerospace Propulsion 3 cr
Introduction to air breathing propulsion. Covers thermodynamics, fluid dynamics, combustion, cycle analysis, inlets and nozzles, compressors, turbines, and component matching.

ME 567 Principles of Biomedical Engineering 3 cr
Survey of topics and current issues in the field of biomedical engineering. Topics may include biomechanics, biomedical instrumentation, biomaterials engineering, biomedical imaging, cellular mechanics, tissue engineering, biomedical design and ethics. A portion of the course is devoted to basic biology concepts and principles. Students will review literature and discuss technical and technological developments relevant to biomedical engineering. Fee.

ME 571 Advanced Engineering Dynamics 3 cr
Three-dimensional kinematics and kinetics of particles and rigid bodies, energy, momentum, and stability; application of Lagrange's equations to machinery and gyrodynamics. Fee.

ME 572 Advanced Vibrations 3 cr
Free and forced vibrations of mechanical systems having lumped mass and elasticity; introduction to vibrations of continuous systems; engineering applications. Pre-requisite: MA 507 or MA 508. Fee.

ME 573 Vibrations of Continuous Systems 3 cr
Equations of motion for strings, membranes, bars, and plates with various boundary conditions, steady state and transient solutions, exact and approximate methods; wave propagation in elastic media. Pre-requisite: MA 507. Fee.

ME 574 Nonlinear Vibrations 3 cr
Vibrations of damped and undamped systems with nonlinear restoring forces; free and forced oscillations in self-sustained systems; Hills equation and its application to the study of the stability of nonlinear oscillations. Pre-requisites: ME 572, MA 508. Fee.

ME 575 Continuum Mechanics 3 cr
Cartesian tensor analysis. Analysis of stress and strain, fundamental laws of continuum mechanics. Constitutive equations, application to solid and fluid mechanics. Fee.

ME 582 Advanced Materials Science 3 cr
Classical and quantum mechanical model of atoms, bonding, magnetism, superconductivity, high strength low density materials, corrosion, biomedical materials. Fee.

ME 583 Applied Elasticity 3 cr
Classical problems in elasticity, torsion and bending theory, plane problems in rectangular and polar coordinates; axisymmetric problems, thermoelasticity. Pre-requisite: MA 507 or MA 508. Fee.

ME 584 Introductory Metal Theory 3 cr
Theories of metals to explain electrical conductivity and scattering process, electronic and lattice heat capacity, magnetic behavior, cohesion and lattice constant. Pre-requisite: MA 507. Fee.

ME 585 Theory of Plates 3 cr
Basic equations of rectangular and circular plates with various boundary conditions; classical solutions and approximate methods in the theory of thin plates. Pre-requisites: ME 583, MA 507. Fee.

ME 586 Theory of Shells 3 cr
Introduction to differential geometry; general equations for arbitrary shells; shallow shell theory with applications; solutions to membrane and bending theory for shells of revolution. Pre-requisite: ME 585. Fee.

ME 589 Biomechanics 3 cr
Discrete mass and continuum mechanics description of biological materials; biodynamics of limb and gross body motions, various models for injury to head, neck, torso, and extremities. Fee.

ME 590 Special Topics 1-3 cr
Topics of current mechanical engineering interest. Pre-requisite: Consent of instructor. Fee.

ME 592 Directed Independent Study 1-3 cr
Directed study, under the guidance of a faculty advisor, of a topic from the field of Mechanical Engineering not offered in a regularly scheduled course. Pre-requisite: Consent of instructor.

ME 594 Projects in Mechanical Engineering 1-3 cr
May be repeated for credit. Pre-requisite: Approved proposal and consent of director of engineering graduate studies. Fee.

ME 599 Thesis 1-6 cr
Thesis research may be taken more than once. Pre-requisite: Approved prospectus. Fee.

METEOROLOGY (MET)

MET 140 Introduction to Meteorology 3 cr
This course focuses on introducing the student to the basic concepts of meteorology. Major topics include the structure of our atmosphere, heat balance, meteorological measurements, atmospheric stability, atmospheric motion, and wind circulations on both the global and local scales. Other areas covered may include an introduction to air masses, fronts, and precipitation processes. The analysis of U.S. government weather charts is also introduced. **Core course**. Co-requisite: MET 140L.

MET 140L Introduction to Meteorology Lab 1 cr
Laboratory exercises associated with MET 140. Co-requisite: MET 140. Fee.

MET 191 Tropical Weather Discussion 1 cr
Tropical Weather Discussion is an introductory course in current or recently-active tropical weather systems. This course mainly reviews the structure, behavior, history and potential forecasts of tropical cyclones in the Atlantic, Pacific, and Indian Ocean basins from a meteorological perspective with special emphasis on activity in the Atlantic basin. The course is taught during the Fall Semester because it overlaps with the most active period of the Atlantic Hurricane Season. Other tropical weather topics such as El Nino, La Nina, monsoon troughs, tropical upper-tropospheric troughs, Madden Julian Oscillation, and hurricane climatology are discussed during weeks of inactivity when no tropical cyclones may be occurring.

MET 341 Climatology (W) 3 cr
Analysis of global climate as aggregate weather. Component elements, factors controlling distribution, resulting area patterns, and climatic classification are studied (identical to GEO 341). Pre-requisite: MET 353 or GEO 353. Minimum Grade of "C" needed in course Pre-requisite. Fee.

MET 342 Severe Weather 3 cr
A study of the causes, structure, and impact of tornadoes, hurricanes, thunderstorms and severe weather systems (identical to GEO 342). Pre-requisite: MET 353 or GEO 353. Minimum Grade of "C" needed in course Pre-requisite.

MET 353 General Meteorology 4 cr
An overall view of the field of meteorology for science majors and minors. This course uses a quantitative approach to study the composition of the atmosphere, atmospheric processes, global circulation, and storm development. Laboratory exercises pay particular attention to hands-on analysis of meteorological charts (identical to GEO 353). Pre-requisites: MET 140, MET 140L, and MA 112. Minimum grade of "C" needed in MA 112. Fee.

MET 354 Dynamic Meteorology I 3 cr

Dynamic meteorology is the study of atmospheric motions that control our weather and climate. Using fundamental laws of physics (fluid dynamics and thermodynamics), a set of mathematical equations that describe how the atmosphere behaves, is derived. These equations are too complex to solve analytically, but with certain assumptions they can be simplified to find approximate solutions. Even though approximate, these solutions still give useful information about the current state of the atmosphere and its evolution in to the future. Forecasting rules and techniques are based on the theories derived in dynamic meteorology. Thorough understanding of these theories is invaluable to becoming a skilled forecaster. Pre-requisites: MA 126 or MA 233 and PH 201 or PH 216. Minimum Grade of "C" needed in course Pre-requisites.

MET 355 Dynamic Meteorology II 3 cr

The circulation of the atmosphere and the structure of storms is quantitatively analyzed using equations of atmospheric flow. The jet stream, atmospheric waves, mid-latitude cyclones, and the concept of vorticity are given considerable attention. Pre-requisite: MET 354. Minimum Grade of "C" needed in course Pre-requisite.

MET 356 Physical Meteorology 4 cr

A detailed investigation of adiabatic processes, thermodynamic diagrams, atmospheric stability, and precipitation processes. Additional topics include atmospheric composition and aerosols, radiation and electricity. Pre-requisite: MET 353, MA 126 and PH 201. Minimum grade of "C" needed in course Pre-requisite.

MET 357 Meteorological Instrumentation 2 cr

Design, calibration, use and maintenance of existing and newly developed meteorological instruments and instrumentation systems. Analysis of data collected by instruments and instrument systems. Pre-requisite: MET 353/ GEO 353. Minimum grade of "C" needed in course Pre-requisite. Fee.

MET 358 Radar Meteorology 4 cr

This course is designed to give the student a three-fold introduction to weather radar and its value in the workplace. Basic radar principles and assumptions applicable to all radars are presented: the Doppler function and limitations are covered in depth with final emphasis on properly utilizing weather radar in an operational setting. Pre-requisites: MET 354 and PH 202. Minimum Grade of "C" needed in course Pre-requisites. Fee.

MET 359 Introduction to Television Weather 2 cr

This course gives the students the basic skills necessary for broadcasting weather information on TV. This course will focus on the basic principles and techniques of effective TV weather broadcasting. Pre-requisites: MET 353/ GEO 353. Minimum Grade of "C" needed in course Pre-requisite.

MET 360 Atmospheric Analysis 1 cr

Analysis of meteorological charts with an emphasis on meteorological reasoning and plausibility in the real atmosphere. Provides additional preparation for students prior to Synoptic Meteorology. Pre-requisites: MET 353 and MET 354. Minimum grade of "C" needed in course Pre-requisites.

MET 370 Satellite MET 3 cr

This course is an introduction to the weather satellite and its influence on meteorological observations and forecasting. Both radiative propagation theory and satellite interpretation of meteorological features will be covered extensively. Pre-requisites: MET 354 and PH 202 or PH 217.

MET 401 Weather Forecasting I 2 cr

A course specifically designed for students minoring in meteorology. Students are introduced to weather forecasting concepts and methods. Pre-requisite: MET 353/GEO 353. Minimum Grade of "C" needed in course Pre-requisite.

MET 402 Weather Forecasting II 2 cr

A course specifically designed for students minoring in meteorology. Weather forecasting techniques are discussed with an emphasis on the use of meteorological models and severe weather forecasting. Pre-requisite: MET 401. Minimum Grade of "C" needed in course Pre-requisite.

MET 410 Meteorological Phenomenology (W) 3 cr

This class is an introduction to reading meteorological journal and professional writings and to writing some of the standard scientific forms common in both operational and research meteorology: summaries, conference abstracts, and scientific journal articles. The students will engage in brief examination of some of the fundamental phenomena in the atmosphere through selected journal articles and write about these topics in an appropriate manner as inquisitive meteorologists. Pre-requisites: EH 102, MET 353, MET 354 or MET 401.

MET 420 Computer Applications in Meteorology (C) 4 cr

Students will be introduced to computer applications that are commonly used in meteorology. Simple programming skills will be developed using FORTRAN (including UNIX) programming and data visualization through IDL (Interactive Data Language). Pre-requisites: MET 354 and MET 355. Minimum grade of "C" needed in course Pre-requisites. Fee.

MET 430 Mesoscale Meteorology 3 cr

Assessment of mesoscale phenomena, including frontogenesis and frontolysis, low level jet streams, nocturnal boundary layer wind maxima, sea and land breezes, gravity waves, dry lines, lake-effect snow, and deep moist convection. Emphasis on scale analysis, subsynoptic-scale dynamics, interactions with larger-scale processes, and case study examples. Pre-requisite: MET 355.

MET 440 Air Pollution Meteorology 2 cr

Air Pollution Meteorology is a survey course in air pollution topics taught primarily from an atmospheric perspective. This course covers topics on air pollution history, methods of measuring air quality, sources of air pollution, basic atmospheric pollution dispersion concepts, basic principles of air pollution modeling and prediction, and an overview of the impacts of polluted air on human health and the environment. Pre-requisites: MET 140 or GEO 101 and MA 110.

MET 442 Tropical Meteorology 2 cr

This course will focus on the structure and behavior of tropical cyclones. Students will be introduced to the physics and dynamics of tropical cyclones and the equations that describe them. In addition, students will be exposed to a research environment where they will utilize scientific journals and participate in a simulated scientific conference. Pre-requisite: MET 354. Minimum Grade of "C" needed in course Pre-requisite.

MET 454 Synoptic Meteorology I 6 cr

Principles of dynamic meteorology are applied to current surface and upper air analyses of frontal cyclones. An emphasis is placed on forecasting techniques, daily weather discussions, continuity and analysis. Pre-requisites: MET 355, MET 356 (may be taken simultaneously with MET 454) or instructor permission. Minimum grade of "C" needed in course Pre-requisites. Fee.

MET 455 Synoptic Meteorology II 6 cr

Through the use of surface and upper air analysis, satellite and radar imagery, and the principles of atmospheric dynamics, convective weather systems are studied and forecast. Principles of numerical forecast models and their interpretation are stressed. Special attention will be placed on predicting and monitoring severe weather events, using computer model forecasts, and daily weather discussions. Pre-requisite: MET 454. Minimum grade of "C" needed in course Pre-requisite. Fee. This course serves as a capstone class for meteorology majors.

MET 456 Applied Climatology (W) 3 cr

Training in the application of climatology to solve real world problems. In addition to an examination of present day climate patterns, their causes, and mechanisms, the course focuses on the El Nino, recent and past climates, the natural and human impact on the earth's energy balance, global warming, ozone hole and chaos theory. Pre-requisites: EH 102, MET 341/ GEO 341 and MET 353/GEO 353. Minimum Grade of "C" needed in course Pre-requisites.

MET 490 Special Topics 2-4 cr

Meteorology topics not covered in current meteorology courses. May be repeated when content varies for a maximum of 4 hours. May require permission of instructor.

MET 492 Seminar 1-4 cr

Departmental seminar investigating a special field of meteorology. (Topic announced prior to registration.) May be repeated when content varies for a maximum of 8 hours. Pre-requisite: Requires permission of the instructor.

MET 494 Directed Studies 1-4 cr

Independent research in field, laboratory, or library under the direction of a member of the meteorology faculty. Pre-requisite: Requires permission of the instructor. May be taken for a total of 8 hours.

MET 495 Mesonet Internship 1 cr

Students will learn various aspects of mesonet (mesoscale weather station network) operation and maintenance. Students will take part in routine weather station site visits, emergency site visits when a sensor malfunctions, and quality control of incoming data. Once a year every weather station receives a complete retrofit where all sensors are replaced with freshly calibrated sensors. If such a retrofit occurs during the semester of a student's internship, the student will be given the opportunity to take part in this process as well. A large component of this course will consist of field work. Depending on student schedules and mesonet behavior, time will also be spent in the lab performing manual data quality control using the USA Mesonet website. Pre-requisite: MET 353.

MET 496 Internship in Meteorology 1-3 cr

On-the-job learning through occupational, professional, or research work with an approved firm, agency, or meteorology faculty member. Open only to meteorology majors. Pre-requisite: Permission of department chair.

MET 497 Broadcast Meteorology Practicum I 3 cr

This course focuses on introducing the student to the ever evolving technology in broadcast meteorology. Emphasis is placed on the application of meteorological data through the use of professional television weather graphics systems in order to develop a "weather story." Particular attention is given to the use of chroma key mechanics/techniques for public viewing. Pre-requisite: MET 354 and MET 359. Minimum grade of "C" needed in course Pre-requisites. Fee.

MET 498 Broadcast Meteorology Practicum II 3 cr

This course focuses on communicating accurate forecasts and other important weather info to the public. Attention is given to fine-tuning the on-air weather presentation style, as well as developing a professional resume tape of weather shows in order to gain employment as a broadcast meteorologist. Special attention is given to severe weather cut-ins and accurately conveying severe weather threats to the public. Pre-requisites: MET 497 and MET 355. Minimum grade of "C" needed in course Pre-requisites.

MET 540 Topics in Air Pollution MET 3 cr

Topics in Air Pollution Meteorology is a graduate course on advanced air pollution topics taught primarily from an atmospheric perspective. This course provides an overview of "dry" meteorological processes, such as temperature, pressure, wind, and general circulation combined with topics on air pollution history, methods of measuring air quality, sources of air pollution, atmospheric pollution dispersion concepts, principles of air pollution modeling and prediction, and the impacts of polluted air on human health and the environment.

MET 594 Graduate Directed Studies in Meteorology 1-4 cr

Graduate level independent study in Meteorology under the direction of a member of Meteorology's Graduate Faculty. Student must have an approved topic and must be accepted by a Graduate Faculty mentor before registering for this class. Pre-requisite: Graduate standing.

MANAGEMENT (MGT)

MGT 300 Management Theory and Practice 3 cr

Theories of organizational structures, practices, and behavior, and the effective leadership and management of organizations. Emphasis on leadership and developing patterns and strategies of organization management in a dynamic environment as affected by the interaction of material and human resources using the technique of applied social and management sciences. Pre-requisite: sophomore standing.

MGT 305 Organizational Communication (W) 3 cr

A study of written and oral communication in organizations. Emphasis is given to communication theory, including organization flows and barriers to organizational communication. The preparation of neutral, negative, and persuasive written messages as well as formal written reports is covered in depth. In addition, oral presentations and employment interviews are discussed. Pre-requisites: EH 101, EH 102 with a minimum grade of "C".

MGT 311 Legal Environment of Business II 3 cr

An advanced treatment of the law of agency, commercial transactions, business organizations, property, negotiable instruments, secured transactions, professional liability, debtor-creditor relations, including application sections of the Uniform Commercial Code. Pre-requisite: BUS 265.

MGT 325 Operations Management 3 cr

Addresses concepts, problems, and managerial approaches applicable to the management of manufacturing and service operations. The course will examine the strategic and tactical considerations that are involved in creating a systematic framework that supports the creation of competitive advantages through effective operations and the production of high quality products. Topics covered include the role of operations in the overall organization, operations strategy development and implementation, product design and process selection, location and capacity planning, facilities' layout, quality management, inventory management, production planning, scheduling and control, and project management. An important component of the overall course is the incorporation of computer applications for problem solving and decision making in operations. Pre-requisites: BUS 255 and MGT 300.

MGT 334 International Management 3 cr

Exposes students to the challenges that confront the managers of organizations and individuals in global settings. Special focus is on dealing with and benefiting from the diversity that exists across international cultures, markets, economics, governments, and organizations. Pre-requisite: MGT 300.

MGT 340 Organizational Behavior (W) 3 cr

A study of human and group behavior in the workplace and within society. The focus is on individual characteristics and processes such as personality, perception, and motivation; interpersonal processes such as group behavior, leadership, communication, and decision making; and organizational processes such as culture, structure, power, and change. Pre-requisites: junior standing, EH 102, MGT 300, MGT 305.

MGT 345 Creativity and Innovation 3 cr

This course provides a broad framework for understanding the nature of entrepreneurship in multiple organizational settings. The course introduces students to the innovation and idea generation process and helps students determine the most desirable educational path for them to achieve their career goals. Sophomore standing.

MGT 347 Franchising 3 cr

This course is designed for students who are interested in learning about the opportunities and threats that abound in the modern world of franchising. Students will study existing franchising from both a historical and theoretical context. The logic of this course is that franchising is one of the development models that minimize risk for the "small business" focused student. Some franchising oriented people may want to start a franchise and grow it rapidly. This option is often a first step into business ownership for inexperienced owners. We discuss the applicability, opportunities, challenges, and implementation of the franchising model for expanding existing businesses. The format consists of case study and lecture discussion sequenced with extensive background readings, occasional guest lecturers, and a term case-based project culminating in a transactional plan.

MGT 351 Human Resource Management 3 cr

Principles, policies, and practices used to develop a sound human resource management program in the business organization. Among the topics included are job analysis, employment, organization development, employee development and evaluation, wage and salary administration and labor relations. Pre-requisite: MGT 300.

MGT 355 Legal and Financial Aspects of Entrepreneurship

This course provides an overview of the legal and financial issues most frequently encountered by entrepreneurs and others involved in start-ups and small closely held, or family businesses. The course covers various aspects of financing and entrepreneurial venture. Major topics attracting seed and growth capital from sources such as venture capital, investment banking, government, and commercial banks; creating, protecting and leveraging intellectual property. Among the issues discussed are valuing a company, going public, selling out, acquisitions, bankruptcy, different legal forms or organizations, partnerships, and taxes.

MGT 356 Strategic Issues in Family Business

This course examines a new discipline that has developed in the last ten years and focuses

on the unique aspects of family businesses. Organizational behavior, law, finance, operations, and basic small business concepts are being integrated into this course. Students will have an opportunity to consult with and develop transition plans for a family firm in a live field project.

MGT 357 Leadership 3 cr

This course includes a review of traditional as well as current thinking in Leadership theory. Students will complete several self-assessment exercises designed to assess one's leadership style and ability as a leader. A series of successful leaders will be studied in-depth.

MGT 365 New Venture Creation 3 cr

How new businesses are organized and planned. Objectives are: 1) understanding the knowledge, skills and abilities required of entrepreneurs, 2) creating and developing opportunities for new ventures, and 3) planning resources to convert those opportunities into businesses. Students work in teams to develop a business plan for a new venture they have chosen.

MGT 390 Total Quality Management 3 cr

Total Quality Management (TQM) is a management philosophy which emphasizes customer focus, continuous improvement, and employee involvement throughout the organization. This course is an introductory course which examines these components and their integration into a comprehensive quality management system. Pre-requisites: MGT 300, MGT 325.

MGT 430 Operations Research 3 cr

Reviews selected operations research concepts: nonlinear optimization methods, linear programming; dynamic programming; model building; and simulation methods. The student is expected to understand the concepts of operations research and to be able to use computer procedure to solve problems. Pre-requisite: MGT 325.

MGT 441 Service Operations 3 cr

This course will provide students the opportunity to learn about service operations management, including service strategies and operations considerations and imperatives for service enterprises, and how service systems are structured and operated. Students will also learn about various tools and techniques for managing service operations such as how to forecast service demand, determine capacity requirements, schedule activities, coordinate operations, plan and schedule service activities, and evaluate system performance. Pre-requisite: MGT 325.

MGT 450 Organizational Staffing 3 cr

A detailed study of the function of employee staffing in a modern work organization. Emphasis on job analysis, criterion development, development and use of employment tests, validation of selection techniques, and statistical methods for making fair employment decisions. Course work includes a comprehensive group staffing project. Pre-requisites: MGT 340, MGT 351, BUS 245.

MGT 451 Employee Training and Development 3 cr

An applied course which details the training and development function. Content areas of job analysis, training needs analysis, training program development and implementation, and program evaluation will be incorporated in a comprehensive training and development project. Pre-requisites: MGT 340 and MGT 351.

MGT 452 Employment Law 3 cr

Analysis of significant workplace torts and laws regulating the employment relationship including: Title VII, FMLA, AOA, ADEA, FLSA, OSHA, and related state laws. Emphasis on federal legislation and developing case law. Pre-requisites: BUS 265 and MGT 351.

MGT 454 Compensation Administration 3 cr

A study of the fundamentals of compensation administration in organizations. Topics include job analysis, KSA determination, job evaluation, wage structure development, incentive pay systems, legal aspects of compensation and new developments in compensation. Comprehensive course project required. Pre-requisites: MGT 351, MGT 452.

MGT 455 Labor-Management Relations 3 cr

An examination of the organizing, negotiation, and contract administration phases of union-management relations. Case analyses, federal legislation and case law in labor relations, significant current issues, and a collective bargaining simulation are featured. Pre-requisite: MGT 351.

MGT 460 Organization Development and Change 3 cr

Provides insight into theory and practice of organization change and development. It bridges the gap between theory and practice and emphasizes the process of improving both organizations and individuals. Topics covered encompass understanding organizations and how they change, intervention strategies, and methods for improving organizations, quality of work-life approaches and strategic considerations in system-wide change. Pre-requisites: senior standing, and MGT 300.

MGT 462 Negotiation and Dispute Resolution in Business 3 cr

This course provides theoretical background and practical applications in business negotiation, conflict management and alternative dispute resolution. Areas covered include positional and interest-based bargaining, business and employment arbitration, organizational conflict management strategies, mediation, and effective communications for negotiators and ADR participants. Pre-requisite: MGT 300.

MGT 470 High Performance Organizations 3 cr

This course examines the role of organization culture, leadership, employee involvement, work teams, and human resource practices in developing and sustaining high performance organizations that practice the principles of total quality management. Pre-requisites: senior standing, and MGT 300.

MGT 475 Strategic Human Resource Management 3 cr

This is a capstone course in human resource management that reviews essential human resource management topics to prepare students for the SHRM Assurance of Learning Exam. Topics covered include strategic HR, ethics, recruiting and selection, employee and organizational development, performance management, employment law, compensation administration, workplace safety, employee relations, labor relations, and general management topics including motivation, individual differences, organizational culture, and leadership. In addition, the course covers state of the art issues in human resource management, which are new and not well developed in existing texts.

MGT 483 Social Entrepreneurship 3 cr

This course provides a broad theoretical perspective and practical framework for understanding social entrepreneurs and the social ventures they create ranging from local social organizations to large international social ventures leading global change. The course introduces students to the possibilities of social entrepreneurship and an introduction to the entire social venture creation process and life cycle. This course is service-learning based and all students will participate in term-based community-based projects with local non-profit organizations. Extensive work outside the normal classroom hours is required for this course. Junior Standing.

MGT 485 Business Policy in a Global Economy 3 cr

The culmination course in business and management education. Interdisciplinary and global in nature, the course uses the case method to develop a top management perspective in which all business disciplines are integrated into the organization's effective total functioning. Pre-requisites: Seniors who have completed all core courses, petitioned for graduation, and are beginning the final semester.

MGT 486 Undergraduate Comprehensive Exam 0 cr

A Co-requisite course with MGT 485 with no credit hours which includes an undergraduate comprehensive business exam.

MGT 490 Special Topics 3 cr

Designed to provide senior students enrolled in the Mitchell College of Business an opportunity to study selected topics of particular interest. Pre-requisite: senior standing. (A student may count no more than three hours of Special Topics in the concentration).

MGT 492 Management Analysis and Consulting 3 cr

Designed to help students bridge the gap between the management theory and the realities involved in the practice of management. Topics include 1) development of the human, social, and political skills of the student as an individual, 2) business ethics, 3) global management issues, and 4) current trends in society that affect business and management. Assignments include a project with a local organization to identify critical management issues, analyze alternatives, and present specific recommended solutions to company managers.

Pre-requisites: Senior standing, MGT 300, MGT 340, MGT 351.

MGT 494 Directed Study in Management 3 cr

Primarily designed to give superior students an opportunity to study some phase of management of particular interest. Conferences, a bibliography, and a formal research report are required. Pre-requisites: junior or senior standing, a cumulative GPA of 2.5 or better, and approval of the department chair following the evaluation of the written proposal.

MGT 496 Management Internship 3 cr

The internship program is designed to give students practical experience in their field of study. Students complete directed projects under the supervision of Department Chair. No more than three hours of internship credit may be counted toward a degree in the Mitchell College of Business. Pre-requisites: Junior or Senior standing, declared major in Management, overall GPA of at least 2.5, and Internship Agreement signed by Department Chair.

MGT 503 Management Information Systems 3 cr

This course provides an overview of information systems from an organizational, managerial, and technical perspective. The topics covered will focus on the strategic role of information systems and information technology in business processes, change and knowledge management, group and individual decision-making, and electronic commerce

MGT 521 Data Analysis for Business Decisions 3 cr

An examination of basic statistical concepts used in business analysis. Topics include fundamental of probability, sampling, statistical estimation, test of hypothesis, analysis of variance, and regression analysis. Emphasis is placed on the use of statistical techniques for business decision making.

MGT 522 Supply Chain Operations Management 3 cr

An integrative approach to the processes, operations, and information required to produce and transform resources into value-added outputs that maximize customer satisfaction. Particular emphasis is placed on strategic supply chain management, operations strategy, value chain analysis, demand management, process mapping, quality assurance, customer fulfillment strategies, order fulfillment processes, relationship and information management in supply networks, measuring operational performance, and analytical tools for managing operations and supply systems.

MGT 530 Managing People and Organizations 3 cr

The course combines individual and group behavior topics with essential fundamentals of human resource management to ensure that students are prepared to meet the challenges of managing resources and leading people in today's dynamic organizations. Topics include: leadership, decision-making, motivation, communication, conflict resolution, diversity, organizational staffing, compensation management, and employee training and development.

MGT 532 Legal and Ethical Environment of Business 3 cr

Legal and Ethical Environment of Business is designed to develop an in-depth analytical understanding of selected legal/ethical issues and trends and their impact on management and other business functions. Students will analyze the legal and ethical implications of issues including products liability, professional regulation, corporate responsibility, workplace discrimination and harassment, privacy, workplace safety, restraints on trade, land use regulation, international law, and alternative dispute resolution.

MGT 580 Strategic Management 3 cr

The integrative capstone course emphasizes decision-making through a strategic management process. The strategic management process requires decision-makers to evaluate industry conditions and company-specific resources, capabilities, and competencies using analytical tools to identify strategic issues and alternatives critical to the company's well-being. The course includes decision-making scenarios at corporate-, business- and unit-levels, including business and multinational diversification, formulation of business and competitive strategy, and strategy execution issues. The course also examines the importance of effective corporate governance and decision-making keyed to ethical and socially responsible principles and values.

MGT 590 Special Topics 3 cr

Designed to provide graduate students an opportunity to study selected topics. Pre-requisite: Approval of department chair. A student may count no more than three hours of Special Topics in the M.B.A. degree program.

MGT 594 Independent Study in Management 3 cr

Readings and research on selected topics. Conferences and formal research report required. Pre-requisite: Approval of department chair.

MGT 599 Graduate Comprehensive Exam 0 cr

A Co-requisite course with MGT 515 with no credit hours which includes a graduate comprehensive business exam.

MGT 600 Seminar in Organizational Behavior 3 cr

This course will explore key concepts and research programs in the field of organizational behavior. We will accomplish this by covering a blend of classic and contemporary literature so that we can appreciate the prevailing theories and findings in the several subfields of organizational behavior. For each topic we will also go beyond the existing literature, and work to increase our understanding by reframing key variables, altering perspectives, bringing in new theories, and comparing levels of analysis.

MGT 605 Seminar in Organization Theory, Development and Change 3 cr

This seminar provides and in-depth understanding of organizational theory, including a historical overview of the theories of organizational change.

MGT 610 Seminar in Leadership 3 cr

This course includes a review of traditional as well as current thinking in leadership theory, with a special emphasis on social intelligence, and organizational citizenship behavior. The first third of the course will be leadership theory, followership, and current trends in leadership thought and research; the second third will focus on the role of emotional and social intelligence in leadership and followership, and the last third will be an examination of the leader's influence on organizational citizenship or extra-minimal behavior.

MGT 615 Entrepreneurship Theory and Practice 3 cr

This course introduces students to a process of understanding and experiencing the qualities and thinking of entrepreneurship researchers. The course objectives include providing students with high quality information to help them better understanding how to commence establishing a career in academics or professional positions. Students are introduced to the basic research and topics and to help identify the general problems facing entrepreneurs in starting and operating new ventures and how to approach solving these problems.

MGT 620 Seminar in Strategic Management 3 cr

This course is designed to develop a thorough understanding of the primary frameworks of competitive strategy and corporate strategy. Topics covered include industry and competitive analysis, resource based view of the firm, value chain analysis, competitive strategies, business models, scope of the firm, strategic alliances, and offensive and defensive strategies.

MICROBIOLOGY AND IMMUNOLOGY (MIC)

MIC 530 Microbes and Host Defense 3 cr

This course presents the fundamental aspects of microbiology including morphology, metabolism of microorganisms, the basic principles of the use of antibiotics and chemotherapeutic agents, microbial genetics, virology, and medical microbial ecology. The principles of immunology and infection in relation to clinical disease are discussed with special emphasis on laboratory diagnosis.

MIC 536 Literature Reports 1 cr

Students and faculty participate in a supervised reading of the current literature and meet periodically (usually once a week) to interact in a discussion of the selected article or topic. The goal of this course is to maintain the faculty's and students' level of information at a "state-of-the-art" in both methods and theory in the discipline and to develop critical skills in reviewing the literature.

MIC 537 Directed Studies 1-6 cr

Students participate in research under the direction of a graduate faculty member. The student may pursue independent research or participate in a literature project.

MIC 590 Special Topics 1-3 cr

Each course provides in-depth tutorial exposure to specific areas in the discipline. Student and/or faculty presentations followed

by group discussions (usually in the Socratic mode), examine the subject matter in an area of current interest either to one student or to a group of students. Credits and titles are arranged with an individual faculty member.

MIC 630 Advanced Microbial Pathogenesis 3 cr

This course discusses the fundamentals of this area with particular emphasis on Escherichia coli and Salmonella typhimurium as model systems. The development of problem solving skills will be stressed. Topics including aerobic vs. anaerobic metabolism, membrane physiology, biosynthesis of macromolecules and regulation of gene expression provide an integrated view of the microbial cell. Pre-requisites: Medical Microbiology (MIC 530), Fundamentals of Basic Medical Sciences I (IDL 580) and Fundamental of Basic Medical Sciences II (IDL 581).

MIC 632 Advanced Immunology 3 cr

Selected topics in immunology are considered using formal lectures followed by student presentations. Design and interpretation of immunological experiments are emphasized throughout the course. Pre-requisites: Medical Microbiology (MIC 530), Fundamentals of Basic Medical Sciences I (IDL 580) and Fundamentals of Basic Medical Sciences II (IDL 581).

MIC 633 Advanced Virology 3 cr

This course reviews the reproductive cycles of important human viruses and subviral agents and the diseases they cause. The focus is on the molecular biology of animal viruses and their mechanisms of regulation, assembly, and pathogenesis. Human immunodeficiency virus will be considered in detail. The course is constructed as an interactive lecture series with student reports and literature surveys. Pre-requisites: Medical Microbiology (MIC 530), Fundamentals of Basic Medical Sciences I (IDL 580) and Fundamentals of Basic Medical Sciences II (IDL 581).

MIC 636 Research Seminar 1 cr

Students and faculty present a research topic for discussion before members of the department. The presentations are usually scheduled on a rotational basis. The student may present research data for critique by the faculty.

MIC 799 Research/Dissertation 1-6 cr

Independent research by the student under the sponsorship of the graduate faculty in individual departments in the Basic Medical Sciences. Pre-requisite: Approved formal research proposal.

MARKETING (MKT)

MKT 310 Introduction to International Business 3 cr

This course focuses on exploring the terminology, scope, status and evolving patterns of international business. Specifically, the course addresses the role of cultural, political, ethical, technological, and economic factors in the international business context and how businesses deal with uncertainty and risk. The course examines the impact of global forces on businesses at home and abroad, the role of the governments in promoting and protecting business interest, the role of international agencies in the business environment. Prerequisites: None.

MKT 320 Principles of Marketing 3 cr

Description and analysis of the institutions involved in the operations required to create and coordinate the kind, quality, and quantity of market transactions necessary to satisfy the need of households, industry, government, and international customers. Topics include marketing planning, market segmentation, societal and ethical obligations, and strategies for products, pricing, promotion, and channel decisions. Pre-requisite: Sophomore standing.

MKT 336 International Marketing 3 cr

Examination of cultural, economic, and political factors that affect marketing of goods and services worldwide. Emphasis is placed on developing global marketing strategies of multinational corporations within existing trade structure and regulations. Both product and service flows between countries and regions are discussed. Pre-requisites: MKT 320 and sophomore standing.

MKT 340 Introduction to E-Commerce 3 cr

Designed to provide an overview of a new paradigm for business transactions. Focuses on electronic interactions and exchanges in both B2B and B2C arenas, and the infrastructure providers as they converge for the purchase and sale of goods, services, ideas, and information over the Internet. Pre-requisite: MKT 320

MKT 345 Real Estate 3 cr

Introduction to the tools used to make intelligent decisions regarding real estate as a wealth-building asset. Topics include legal rights, valuation, financial analysis, contracts, and brokerage with practical applications. Emphasis is given to local supply and demand conditions and property location and their impact on typical consumer decisions. Pre-requisite: FIN 315.

MKT 346 Alabama Real Estate Law and Regulations 1 cr

Course required for students planning to take the Alabama Real Estate License Examination. Topics include current Alabama Real Estate License Law, Administrative Rules and Regulations, Consumer Guides, State Court Cases and relevant readings in Real Estate Risk Management. Pre-requisite: Completion or current enrollment in MKT 345 and consent of the instructor.

MKT 348 Real Estate Valuation 3 cr

Emphasis is given to the valuation process and the analysis that leads to valid estimates of value. The cost, sales comparison, and income approaches to value are examined and illustrated within the Uniform Standards of Professional Appraisal Practice requirements. Typical valuation reports are discussed and illustrated. Pre-requisites: MKT 345.

MKT 350 Internet Marketing 3 cr

Examination of the interactive processes and transactions involved in satisfying the needs of consumers, businesses, and government. Involves the study of marketing planning, consumer research, segmentation, and Implementation of marketing strategies on the Internet in order to accomplish corporate objectives. Pre-requisite: MKT 320.

MKT 355 Customer Relationship Management 3 cr

The course provides a comprehensive business model integrating customers and suppliers along the value chain. The focus is on the methodologies, tools, and techniques required for customer acquisition, retention, and profitability in competitive buyer/supplier environments. Pre-requisite: MKT 320.

MKT 374 Consumer Behavior 3 cr

A study of the contributions of the behavioral sciences to the interpretation of market information. Involves the use of behavioral information which pertain to the analysis of consumers and organizational buyers in both domestic and international settings. Pre-requisite: MKT 320.

MKT 375 Supply Chain Management 3 cr

This course encompasses the design and management of the supply chain that collectively provides for the exchange of title, physical movement, and storage activities in marketing, including the use of new technologies. This course examines the role of manufacturers and intermediaries in channel strategies including scope, methods, problems and opportunities of total supply chain coordination. Pre-requisite:: MKT 320.

MKT 376 Business To Business Marketing 3 cr

Study of the participants, channels, and relationships that govern the behavior of industrial buyers and marketers. Pre-requisite: MKT 320.

MKT 377 Pricing Strategies 3 cr

Pricing strategies encompasses the design and monitoring of an integrative framework for making pricing decisions. The purpose of this course is to synthesize economic and behavioral principles with marketing, accounting, and financial information, and to analyze the various pricing options within legal, market, and corporate constraints. This course covers both theory and application of pricing strategies for national and multinational concerns organized as either profit or non-profit entities. Pre-requisite: MKT 320.

MKT 379 Retailing 3 cr

Study of the management of retail operations. Topics include store location and layout, merchandise buying and planning, legal and ethical issues, promotion, pricing, human resource management, financial planning, information systems, and customer services. Pre-requisite: MKT 320.

MKT 380 Integrated Marketing Communications 3 cr

Study of the fundamentals of marketing communications from a strategic perspective. Examines the roles of and relationships between a variety of marketing communication elements including advertising, direct marketing, database marketing, interactive marketing, media planning, public relations, sales promotion, and personal selling. Pre-requisite: MKT 320.

MKT 381 Sales Management and Personal Selling 3 cr

Study of the principles and practices of sales management in planning, organizing, directing, and controlling, the sales organization in both domestic and international markets. Included

in the course are skills developed through presentation, discussion, and role playing. Special emphasis is directed to recruiting, selecting, training, evaluating, compensating, and supervising sales personnel and sales organizations. Pre-requisite: MKT 320.

MKT 382 Brand Management 3 cr

Systematic examination of strategies involved in tangible and intangible product decisions. Issues and strategies involved in identifying and implementing the development of new goods and services for both domestic and international markets are examined in depth, as well as the management of mature products. Pre-requisite: MKT 320.

MKT 384 Market Research 3 cr

Study of information gathering techniques, research methods and procedures used to solve marketing problems in consumer and organizational in both domestic and international markets. Pre-requisites: BUS 255 and MKT 320.

MKT 385 Services Marketing 3 cr

Study of the unique features of services marketing and the service sector. Examines the strategies and activities of organizations and industries whose core product is service, such as sports, hospitality, healthcare, financial services, information technology, and event marketing. Pre-requisite: MKT 320.

MKT 405 Current Issues in Supply Chain Management 3 cr

An integrative course highlighting the major managerial challenges in key components of the supply chain, including sourcing, production, and logistics, with special emphasis on supply chain integration, customer value and performance measurement.

MKT 445 Real Estate Finance and Investments 3 cr

Analysis of income property debt and equity instruments, financing documents, financial analysis and risk scenarios of different types, and relevant local, state, and federal laws and court cases. Pre-requisites: MKT 345.

MKT 448 Real Estate Law 3 cr

A detailed examination of the contracts, documents, and instruments used in a transaction on one or more of the real property rights, and relevant local, state, and federal laws and court cases. Pre-requisite: MKT 345.

MKT 477 Export-Import Management 3 cr

Study of exporting and importing strategies used by both domestic and multinational firms including a concentration in the areas of international pricing, governmental assistance, and channel selection. Emphasis is placed on the best practices and procedures of packing and documentation. Pre-requisites: MKT 320 and MKT 336.

MKT 479 Marketing Policy (W) 3 cr

The capstone course for marketing majors. Integration and application of marketing concepts requiring analysis of both domestic and international marketing problems. Pre-requisites: Seniors only, MKT 374, MKT 384.

MKT 490 Special Topics 3 cr

Designed to provide senior students an opportunity to study selected topics of particular interest. Pre-requisite: Approval of department chair. (A student may count no more than three hours of Special Topics in the Concentration.) Pre-requisite: Junior standing.

MKT 492 Seminar: International Business 3 cr

Examines current organizations and practices of domestic and foreign businesses in the international market; problems of trade and foreign government regulation barriers, investment opportunities and economic arrangements and developments, the role of the manager in the rapidly changing economic environments. Pre-requisites: Junior standing and MKT 320.

MKT 494 Directed Study in Marketing 3 cr

Primarily designed to give superior students an opportunity to study some phase of marketing of particular interest. Conferences, a bibliography, and a formal research report are required. Pre-requisites: Junior or senior standing, a cumulative GPA of 2.5 or better, and approval of the department chair following the evaluation of a written proposal.

MKT 496 Marketing Internship 3 cr

The internship program is designed to give students practical experience in their field of study. Students complete directed projects under the supervision of Department Chair. No more than three hours of internship credit may be counted toward a degree in the Mitchell College of Business. Pre-requisites: Junior or Senior standing, declared major in Marketing, overall GPA of at least 2.5, and Internship Agreement signed by Department Chair.

MKT 541 Strategic Marketing 3 cr

The course focuses on the development, implementation, and evaluation of marketing in strategic and complex environments. The course deals with an in-depth analysis of concepts, theories, technologies, facts, analytical procedures, techniques, and models as applied to the marketing function. The course addresses strategic issues such as which customers to target; which needs to satisfy; what products and services to offer; what prices to set; what communications to send; what channels of distribution to use; and what partnerships to develop. Students will learn methods of measuring customer profitability and customer lifetime value; the return on the marketing investment and its impact on shareholder value; and the ethical and social implications of marketing decisions.

MKT 544 Global Environment of Business 3 cr

The course highlights the strategic nature of the influences on every aspect of business that enables comprehension of both the bearing and magnitude of the nuances across borders. The course encourages appreciation of the role of global forces in the survival and success of business enterprises while facilitating the understanding of the basic tenets and concepts in global business and how they relate to doing business globally. It also advances the comprehension of the environmental forces, such as economic, technological, sociocultural, natural, competitive, legal-political-regulatory, that affect business decisions in the global arena while allowing students to demonstrate an understanding of the importance of specific market strategies that involve business decision making within an ethical and technological framework.

MKT 590 Special Topics 3 cr

Designed to provide graduate students an opportunity to study selected topics. A student may count no more than three hours of Special Topics in the MBA degree program. Pre-requisite: Approval of department chair.

MKT 594 Independent Study in Marketing 3 cr

Readings and research on selected topics. Conferences and formal research report required. Pre-requisite: Approval of department chair.

MKT 602 Development of Marketing Theory 3 cr

Students in this seminar will understand both the philosophy of science and marketing theory literature. The seminar will also include readings from other social sciences. Students will develop an idea of what is meant by scientific theory and will have an opportunity to consider which philosophy is appropriate for them as they pursue their future research career.

MKT 607 Consumer Behavior: Theory and Practice 3 cr

A study of consumption behavior with an emphasis on underlying theories and relevant literature within the framework of both marketing and psychology. Examination of the influence on behaviors and the process of consumer decision making from conceptual and managerial perspectives.

MKT 612 Integrated Marketing Communication: Theory and Practice 3 cr

The course provides conceptual and managerial perspectives on integrative marketing communications functions encompassing the full spectrum of traditional and emerging media, emphasizing the role of IMC in marketing strategy and organizational success in globally competitive environments.

MKT 618 Global Logistics and Supply Chain Management 3 cr

This course provides a conceptual and managerial perspective on integrative, inter-firm and cross-functional systems and processes necessary to coordinate demand and supply patterns, with particular focus on customer and order fulfillment strategies, procurement, transportation and distribution systems, and customer success within competitive global environments.

MKT 625 Strategic Marketing: Analysis, Planning and Execution 3 cr

This course focuses on marketing's role in shaping a firm's overall direction. The course will expose students to both marketing theory and practical applications, with an emphasis on the evolution of marketing strategy. The course also provides an overview of the various sub-disciplines comprising marketing and future challenges that marketing strategists need to address.

MILITARY SCIENCE (MS)

MS 101 Basic Leadership Skills I 1 cr

An introductory course of instruction and participation in common military task and leadership skills. Students are encouraged to attend Physical Training (PT) Lab three (3) times per week for 1 hour per session and required to attend a 2 hour leadership lab every other week. No Fee.

MS 102 Basic Leadership Skills II 1 cr

A continuing course of instruction and participation in individual common military task and leadership skills. Students are encouraged to attend Physical Training (PT) Lab three (3) times per week for 1 hour per session and required to attend a 2 hour leadership lab every other week. No Fee.

MS 201 Intermediate Military Skills I 3 cr

A further development of common task and leadership skills required to prepare cadets to lead small military units. Emphasis on practical application of basic military skills and ability through development of leadership skills. Students are encouraged to attend Physical Training (PT) Lab three (3) times per week for 1 hour per session and required to attend a 2 hour leadership lab every week. Fee.

MS 202 Intermediate Military Skills II 3 cr

A further development of common task and leadership skills required to prepare cadets to lead small military units. Emphasis on practical application of basic military skills and ability through development of leadership skills. Students are encouraged to attend Physical Training (PT) Lab three (3) times per week for 1 hour per session and required to attend a 2 hour leadership lab every week. Fee.

MS 301 Adaptive Team Leadership (W) 3 cr

Challenges cadets to study, practice, and evaluate adaptive leadership skills as they are presented with challenging scenarios related to squad tactical operations. Cadets receive systematic and specific feedback on their leadership attributes and actions. Based on such feedback, as well as their own self-evaluations, cadets continue to develop their leadership and critical thinking abilities. Cadets also conduct physical fitness training three times per week focusing on development of individual flexibility, muscular strength, and cardio-respiratory endurance. Students are required to attend Physical Training (PT) Lab three (3) times per week for 1 hour per session and a 2 hour leadership lab every week. Contact Hour Distribution: 3 hours and 1 lab. Pre-requisite(s): 101 and 102; 201, 202. Fee.

MS 302 Applied Team Leadership 3 cr

Increasingly intense situational leadership challenges to build cadet awareness and skills in leading tactical operations up to platoon level. Cadets review aspects of combat, stability, and support operations. They also conduct military briefings and develop proficiency in garrison operation orders. Cadets also conduct physical fitness training three times per week focusing on development of individual flexibility, muscular strength, and cardio-respiratory endurance. Students are required to attend Physical Training (PT) Lab three (3) times per week for 1 hour per session and a 2 hour leadership lab every week. Fee.

MS 401 Adaptive Leadership 3 cr

This course transitions the focus of student learning from being trained, mentored and evaluated as an MSL III Cadet to learning how to train, mentor and evaluate underclass Cadets. MSL IV Cadets will learn the duties and responsibilities of an Army staff officer and apply the Military Decision Making Process (MDMP), Army writing style and the Army's principles of training and training management cycle during weekly training meetings to plan, execute and assess battalion training events. Cadets will learn about the special trust proposed by the U.S. Constitution to Army Officers; a trust above and beyond other professions. Cadets will learn Army values and ethics and how to apply them to everyday life as well as in the Full Spectrum Operating Environment (OE). The MSL IV Cadet will learn about the officer's role in the Uniform Code of Military Justice (UCMJ), counseling subordinates, administrative actions and methods on how to best manage their career as an Army Officer. In addition, MSL IVs are rotated through a variety of leadership positions that support a variety of ROTC battalion training and recruiting events throughout the semester where the MSl IV student will receive detailed and constructive feedback on their leader attributes and core leader competencies from experienced cadre. Students are required to attend Physical Training (PT) Lab three (3) times per week for 1 hour per session and a 2 hour leadership lab every week. Fee.

MS 402 Leadership in a Complex World (W) 3 cr

Continued intensive study and work involving the daily operation and supervision of military units. Special emphasis on leadership responsibilities, military justice, ethical behavior, and decision making. Students are required to attend Physical Training (PT) Lab three (3) times per week for 1 hour per session and a 2 hour leadership lab every week. Fee.

MS 494 Directed Studies 1-3 cr

Directed study and research. May be repeated in different subject areas. Course work will be specified by the instructor prior to the beginning of the semester. Studies may include but are not limited to research papers, special projects, and leadership seminars. Students are required to attend Physical Training (PT) Lab three (3) times per week for 1 hour per session. One and three hour courses are available. Fee.

MATHEMATICS FOR COLLEGE (MTH)

MTH 100 Intermediate College Algebra 3 cr

This course covers algebra topics needed for further study in mathematics including use of set, interval, roster and scientific notation; solving and graphing: linear equations, inequalities, absolute value, quadratic, rational and radical equations; operations on functions, rational expressions, radical expressions, polynomials and complex numbers; and applications. Pre-requisite: Appropriate score on the Mathematics Placement Exam. For freshmen with conditional admission, appropriate score on the Mathematics Placement Exam or successful completion of DS 082. Requires 5 hours per week of work in a computer lab. Fee required.

MUSIC, APPLIED (MUA, MUB)

NOTE: All applied music courses (MUA and MUB), except recital courses (MUA 100, 300, 400 and 500), require a special fee.

MUA 100 Recital Class No Credit

A convocation required each term of all full-time music majors meeting each week in laboratory session to hear performances, perform, and discuss performing techniques, plus ten evening public programs. Six semesters of successful participation required for graduation with adjustments for transfer students.

MUA 124 Group Applied Elective Voice 1 cr

Applied voice lessons taught in groups of 4, consisting of individual instruction in technique and performance. Two 1-hour sessions per week TBA (MW or TR). This course is for non-majors. Majors and minors in music should take other applied courses. Special fee applies.

MUA 300 Junior Recital No Credit

Performance concentration junior recital. To be taken with a 400 level applied music course.

MUA 400 Senior Recital No Credit

Bachelor of Music for all concentrations degree senior recital. To be taken with the appropriate 300 or 400 level applied music course.

MUA 599 Curriculum, Pedagogy, and Instructional Techniques 2 cr

This is an integrated study concentrating on the following subjects: literature, pedagogy, studio performance and master class. Studies focus on pedagogy, both private and group teaching methods, and instructional techniques grounded in research.

GROUP A (MUA)

MUA 101 Piano (Elective)	**1 cr**
MUA 102 Piano (Elective)	**2 cr**
MUA 201 Piano (Major/Lower Division)	**1 cr**
MUA 202 Piano (Major/Lower Division)	**2 cr**
MUA 301 Piano (Major/Upper Division)	**1 cr**
MUA 302 Piano (Major/Upper Division)	**2 cr**
MUA 401 Piano (Major/Performance)	**1 cr**
MUA 402 Piano (Major/Performance)	**2 cr**
MUA 403 Piano (Major/Performance)	**3 cr**
MUA 111 Organ (Elective)	**1 cr**
MUA 112 Organ (Elective)	**2 cr**
MUA 211 Organ (Major/Lower Division)	**1 cr**
MUA 212 Organ (Major/Lower Division)	**2 cr**
MUA 311 Organ (Major/Upper Division)	**1 cr**
MUA 312 Organ (Major/Upper Division)	**2 cr**
MUA 411 Organ (Major/Performance)	**1 cr**
MUA 412 Organ (Major/Performance)	**2 cr**
MUA 413 Organ (Major/Performance)	**3 cr**
MUA 124 Group Applied Elective Voice	**1 cr**
MUA 221 Voice (Major/Lower Division)	**1 cr**
MUA 222 Voice (Major/Lower Division)	**2 cr**
MUA 321 Voice (Major/Upper Division)	**1 cr**
MUA 322 Voice (Major/Upper Division)	**2 cr**
MUA 421 Voice (Major/Performance)	**1 cr**
MUA 422 Voice (Major/Performance)	**2 cr**

MUA 423 Voice (Major/Performance) 3 cr
MUA 131 Violin (Elective) 1 cr
MUA 132 Violin (Elective) 2 cr
MUA 231 Violin (Major/Lower Division) 1 cr
MUA 232 Violin (Major/Lower Division) 2 cr
MUA 331 Violin (Major/Upper Division) 1 cr
MUA 332 Violin (Major/Upper Division) 2 cr
MUA 431 Violin (Major/Performance) 1 cr
MUA 432 Violin (Major/Performance) 2 cr
MUA 433 Violin (Major/Performance) 3 cr
MUA 141 Viola (Elective) 1 cr
MUA 142 Viola (Elective) 2 cr
MUA 241 Viola (Major/Lower Division) 1 cr
MUA 242 Viola (Major/Lower Division) 2 cr
MUA 341 Viola (Major/Upper Division) 1 cr
MUA 342 Viola (Major/Upper Division) 2 cr
MUA 441 Viola (Major/Performance) 1 cr
MUA 442 Viola (Major/Performance) 2 cr
MUA 443 Viola (Major/Performance) 3 cr
MUA 151 Violoncello (Elective) 1 cr
MUA 152 Violoncello (Elective) 2 cr
MUA 251 Violoncello (Major/Lower Division) 1 cr
MUA 252 Violoncello (Major/Lower Division) 2 cr
MUA 351 Violoncello (Major/Upper Division) 1 cr
MUA 352 Violoncello (Major/Upper Division) 2 cr
MUA 451 Violoncello (Major/Performance) 1 cr
MUA 452 Violoncello (Major/Performance) 2 cr
MUA 453 Violoncello (Major/ Performance) 3 cr
MUA 161 String Bass (Elective) 1 cr
MUA 162 String Bass (Elective) 2 cr
MUA 261 String Bass (Major/Lower Division) 1 cr
MUA 262 String Bass (Major/Lower Division) 2 cr
MUA 361 String Bass (Major/Upper Division) 1 cr
MUA 362 String Bass (Major/Upper Division) 2 cr
MUA 461 String Bass (Major/Performance) 1 cr
MUA 462 String Bass (Major/Performance) 2 cr
MUA 463 String Bass (Major/Performance) 3 cr
MUA 171 Harp (Elective) 1 cr
MUA 172 Harp (Elective) 2 cr
MUA 271 Harp (Major/Lower Division) 1 cr
MUA 272 Harp (Major/Lower Division) 2 cr
MUA 371 Harp (Major/Upper Division) 1 cr
MUA 372 Harp (Major/Upper Division) 2 cr
MUA 471 Harp (Major/Performance) 1 cr
MUA 472 Harp (Major/Performance) 2 cr
MUA 473 Harp (Major/Performance) 3 cr
MUA 181 Guitar (Elective) 1 cr
MUA 182 Guitar (Elective) 2 cr
MUA 281 Guitar (Major/Lower Division) 1 cr
MUA 282 Guitar (Major/Lower Division) 2 cr
MUA 381 Guitar (Major/Upper Division) 1 cr
MUA 382 Guitar (Major/Upper Division) 2 cr
MUA 481 Guitar (Major/Performance) 1 cr
MUA 482 Guitar (Major/Performance) 2 cr
MUA 483 Guitar (Major/Performance) 3 cr
MUA 186 Percussion (Elective) 1 cr
MUA 187 Percussion (Elective) 2 cr
MUA 286 Percussion (Major/Lower Division) 1 cr
MUA 287 Percussion (Major/Lower Division) 2 cr
MUA 386 Percussion (Major/Upper Division) 1 cr
MUA 387 Percussion (Major/Upper Division) 2 cr
MUA 486 Percussion (Major/Performance) 1 cr
MUA 487 Percussion (Major/Performance) 2 cr
MUA 488 Percussion (Major/Performance) 3 cr

GROUP A (MUA)

MUA 500 Graduate Recital No Credit

Graduate recital. To be taken in conjunction with a 500-level applied music course.

MUA 501 Piano 1 cr
MUA 502 Piano 2 cr
MUA 503 Piano 3 cr
MUA 511 Organ 1 cr
MUA 512 Organ 2 cr
MUA 513 Organ 3 cr
MUA 521 Voice 1 cr
MUA 522 Voice 2 cr
MUA 523 Voice 3 cr
MUA 531 Violin 1 cr
MUA 532 Violin 2 cr
MUA 533 Violin 3 cr
MUA 541 Viola 1 cr
MUA 542 Viola 2 cr
MUA 543 Viola 3 cr
MUA 551 Violoncello 1 cr
MUA 552 Violoncello 2 cr
MUA 553 Violoncello 3 cr
MUA 561 String Bass 1 cr
MUA 562 String Bass 2 cr
MUA 563 String Bass 3 cr
MUA 581 Guitar 1 cr
MUA 582 Guitar 2 cr
MUA 583 Guitar 3 cr
MUA 586 Percussion 1 cr
MUA 587 Percussion 2 cr
MUA 588 Percussion 3 cr

GROUP B (MUB)

MUB 101 Flute (Elective) 1 cr
MUB 102 Flute (Elective) 2 cr
MUB 201 Flute (Major/Lower Division) 1 cr
MUB 202 Flute (Major/Lower Division) 2 cr
MUB 301 Flute (Major/Upper Division) 1 cr
MUB 302 Flute (Major/Upper Division) 2 cr
MUB 401 Flute (Major/Performance) 1 cr
MUB 402 Flute (Major/Performance) 2 cr
MUB 403 Flute (Major/Performance) 3 cr
MUB 111 Oboe (Elective) 1 cr
MUB 112 Oboe (Elective) 2 cr
MUB 211 Oboe (Major/Lower Division) 1 cr
MUB 212 Oboe (Major/Lower Division) 2 cr
MUB 311 Oboe (Major/Upper Division) 1 cr
MUB 312 Oboe (Major/Upper Division) 2 cr
MUB 411 Oboe (Major/Performance) 1 cr
MUB 412 Oboe (Major/Performance) 2 cr
MUB 413 Oboe (Major/Performance) 3 cr
MUB 121 Clarinet (Elective) 1 cr
MUB 122 Clarinet (Elective) 2 cr
MUB 221 Clarinet (Major/Lower Division) 1 cr
MUB 222 Clarinet (Major/Lower Division) 2 cr
MUB 321 Clarinet (Major/Upper Division) 1 cr
MUB 322 Clarinet (Major/Upper Division) 2 cr
MUB 421 Clarinet (Major/Performance) 1 cr
MUB 422 Clarinet (Major/Performance) 2 cr
MUB 423 Clarinet (Major/Performance) 3 cr
MUB 131 Bassoon (Elective) 1 cr
MUB 132 Bassoon (Elective) 2 cr
MUB 231 Bassoon (Major/Lower Division) 1 cr
MUB 232 Bassoon (Major/Lower Division) 2 cr
MUB 331 Bassoon (Major/Upper Division) 1 cr
MUB 332 Bassoon (Major/Upper Division) 2 cr
MUB 431 Bassoon (Major/Performance) 1 cr
MUB 432 Bassoon (Major/Performance) 2 cr
MUB 433 Bassoon (Major/Performance) 3 cr
MUB 141 Saxophone (Elective) 1 cr
MUB 142 Saxophone (Elective) 2 cr
MUB 241 Saxophone (Major/Lower Division) 1 cr
MUB 242 Saxophone (Major/Lower Division) 2 cr
MUB 341 Saxophone (Major/Upper Division) 1 cr
MUB 342 Saxophone (Major/Upper Division) 2 cr
MUB 441 Saxophone (Major/Performance) 1 cr
MUB 442 Saxophone (Major/Performance) 2 cr
MUB 443 Saxophone (Major/Performance) 3 cr
MUB 151 Trumpet/Cornet (Elective) 1 cr
MUB 152 Trumpet/Cornet (Elective) 2 cr
MUB 251 Trumpet/Cornet (Secondary) 1 cr
MUB 252 Trumpet/Cornet (Secondary) 2 cr
MUB 351 Trumpet/Cornet (Major/Upper Division) 1 cr
MUB 352 Trumpet/Cornet (Major/Upper Division) 2 cr
MUB 451 Trumpet/Cornet (Major/Performance) 1 cr
MUB 452 Trumpet/Cornet (Major/Performance) 2 cr
MUB 453 Trumpet/Cornet (Major/Performance) 3 cr
MUB 161 French Horn (Elective) 1 cr
MUB 162 French Horn (Elective) 2 cr
MUB 261 French Horn (Major/Lower Division) 1 cr
MUB 262 French Horn (Major/Lower Division) 2 cr
MUB 361 French Horn (Major/Upper Division) 1 cr
MUB 362 French Horn (Major/Upper Division) 2 cr
MUB 461 French Horn (Major/Performance) 1 cr
MUB 462 French Horn (Major/Performance) 2 cr
MUB 463 French Horn (Major/Performance) 3 cr
MUB 171 Trombone (Elective) 1 cr
MUB 172 Trombone (Elective) 2 cr
MUB 271 Trombone (Major/Lower Division) 1 cr
MUB 272 Trombone (Major/Lower Division) 2 cr
MUB 371 Trombone (Major/Upper Division) 1 cr

MUB 372 Trombone (Major/Upper Division) 2 cr
MUB 471 Trombone (Major/Performance) 1 cr
MUB 472 Trombone (Major/Performance) 2 cr
MUB 473 Trombone (Major/Performance) 3 cr
MUB 181 Baritone/Euphonium (Elective) 1 cr
MUB 182 Baritone/Euphonium (Elective) 2 cr
MUB 281 Baritone Horn/Euphonium (Major/Lower Division) 1 cr
MUB 282 Baritone Horn/Euphonium (Major/Lower Division) 2 cr
MUB 381 Baritone Horn/Euphonium (Major/Upper Division) 1 cr
MUB 382 Baritone Horn/Euphonium (Major/Upper Division) 2 cr
MUB 481 Baritone Horn/Euphonium (Major/Performance) 1 cr
MUB 482 Baritone Horn/Euphonium (Major/Performance) 2 cr
MUB 483 Baritone Horn/Euphonium (Major/Performance) 3 cr
MUB 186 Tuba (Elective) 1 cr
MUB 187 Tuba (Elective) 2 cr
MUB 286 Tuba (Major/Lower Division) 1 cr
MUB 287 Tuba (Major/Lower Division) 2 cr
MUB 386 Tuba (Major/Upper Division) 1 cr
MUB 387 Tuba (Major/Upper Division) 2 cr
MUB 486 Tuba (Major/Performance) 1 cr
MUB 487 Tuba (Major/Performance) 2 cr
MUB 488 Tuba (Major/Performance) 3 cr

GROUP B (MUB)
MUB 501 Flute 1 cr
MUB 502 Flute 2 cr
MUB 503 Flute 3 cr
MUB 511 Oboe 1 cr
MUB 512 Oboe 2 cr
MUB 513 Oboe 3 cr
MUB 521 Clarinet 1 cr
MUB 522 Clarinet 2 cr
MUB 523 Clarinet 3 cr
MUB 531 Bassoon 1 cr
MUB 532 Bassoon 2 cr
MUB 533 Bassoon 3 cr
MUB 541 Saxophone 1 cr
MUB 542 Saxophone 2 cr
MUB 543 Saxophone 3 cr
MUB 551 Trumpet/Cornet 1 cr
MUB 552 Trumpet/Cornet 2 cr
MUB 553 Trumpet/Cornet 3 cr
MUB 561 French Horn 1 cr
MUB 562 French Horn 2 cr
MUB 563 French Horn 3 cr
MUB 571 Trombone 1 cr
MUB 572 Trombone 2 cr
MUB 573 Trombone 3 cr
MUB 581 Baritone Horn/ Euphonium 1 cr
MUB 582 Baritone Horn/ Euphonium 2 cr
MUB 583 Baritone Horn/ Euphonium 3 cr
MUB 586 Tuba 1 cr
MUB 587 Tuba 2 cr
MUB 588 Tuba 3 cr

MUSIC EDUCATION, METHODS, AND MATERIALS (MUE)

MUE 102 Elementary Class Piano 1 cr
Functional keyboard playing. Pre-requisites: Open to music majors and minors only. No previous knowledge in piano necessary. To be taken in sequence. Fee.

MUE 103 Elementary Class Piano 1 cr
Functional keyboard playing. Open to music majors and minors only. Pre-requisites: MUE 102 or instructor permission. Fee.

MUE 120 Elementary Class Voice 1 cr
Beginning voice instruction emphasizing the fundamentals of singing and the vocal mechanism. This is the first semester of a two semester sequence.

MUE 121 Intermediate Class Voice 1 cr
This course is a continuation of MUE 120. Vocal fundamentals and the mechanics of singing will be emphasized. More advanced vocal exercises, diction, and interpretation will be stressed. Pre-requisite: MUE 120.

MUE 170 Elementary Class Percussion 1 cr
Beginning percussion instruction with emphasis on development of sight-reading, concert style/mallet techniques and basic concepts of percussion instruments.

MUE 182 Elementary Class Guitar 1 cr
Beginning guitar instruction with the development of proficiency in sight reading and correct right and left hand techniques. Pre-requisites: No previous knowledge in guitar is necessary. Open to any University student excluding guitar majors. To be taken in sequence. Fee.

MUE 183 Elementary Class Guitar 1 cr
Beginning guitar instruction with the development of proficiency in sight reading and correct right and left hand techniques. Pre-requisite: MUE 182 or instructor permission. Fee.

MUE 202 Intermediate Class Piano 1 cr
A continuation of elementary class piano including sight-reading and keyboard harmony. Pre-requisite: MUE 103 or instructor permission. Open to non-piano music majors and minors only. Fee.

MUE 203 Intermediate Class Piano 1 cr
A continuation of elementary class piano including sight-reading and keyboard harmony. Open to music majors and minors only. Pre-requisite: MUE 202 or instructor permission. Fee.

MUE 212 Advanced Keyboard Musicianship I 1 cr
MUE 212 is the first of four courses required of all concentration level and performance level piano majors. During the course students develop sight-reading ability, read lead sheets, learn accompanying strategies and practice systematic piano technique. Class piano pedagogy is also addressed. Pre-requisite: Piano major or concentration. Fee.

MUE 213 Advanced Keyboard Musicianship II 1 cr
MUE is the second of four courses required of all concentration level and performance level piano majors. During the course, students develop sight-reading ability, read lead sheets, learn accompanying strategies and practice systematic piano technique. Class piano pedagogy is also addressed. Pre-requisite: MUE 212 or consent of instructor. Fee.

MUE 240 String Methods Class 1 cr
The techniques of teaching the string instruments in class situations and the development of some proficiency on each string instrument.

MUE 241 Woodwind Methods Class 1 cr
The techniques of teaching the woodwind instruments in class situations and the development of some proficiency on each of the main woodwind instruments.

MUE 242 Brass Methods Class 1 cr
The techniques of teaching the brass instruments in class situations and the development of some proficiency on each of the main brass instruments.

MUE 243 Percussion Methods Class 1 cr
The techniques of teaching percussion instruments and the development of some proficiency on all percussion instruments.

MUE 301 Music for Elementary Classroom Teachers I 3 cr
The fundamentals of music, music reading, and classroom instrument experience in the light of the needs of the classroom teacher. Pre-requisites: Not open to music majors or those with previous music-theory credit.

MUE 312 Advanced Keyboard Musicianship III - Vocal Accompaniment 1 cr
MUE 312 is the third of four courses required of all concentration and performance level piano majors. Students will develop sight-reading ability, read lead sheets, learn accompanying strategies and practice systematic piano technique. Vocal accompanying workshops and class piano pedagogy are included. Pre-requisite: MUE 213 or consent of instructor. Fee.

MUE 313 Advanced Keyboard Musicianship IV - Instrumental Accompaniment 1 cr
MUE 313 is the fourth of four courses required of all concentration and performance level piano majors. During the course, students develop sight-reading ability, read lead sheets, learn accompanying strategies and practice systematic piano technique. Instrumental accompanying workshops and class piano pedagogy are included. Pre-requisite: MUE 312 or consent of instructor. Fee.

MUE 346 Marching Band Techniques 1 cr
The techniques of organization, administration, instruction, and rehearsal of the marching band. Pre-requisite: Music major.

MUE 411 Woodwind Pedagogy 2 cr
A survey of the teaching techniques, instruments, accessories and pedagogical materials for woodwind instruments. Pre-requisite: Upper division studio study in woodwinds or permission of instructor.

MUE 412 Brass Pedagogy 2 cr
This course is intended as a technique course specific to high and low brass instruments. Topics of study will include: development of technique, etudes, performance preparation, pedagogical literature, and performance anxiety.

Pre-requisite: Upper division studio study in brass or permission of instructor.

MUE 413 Percussion Pedagogy 2 cr
A comprehensive study of methods and materials used to teach percussion instruments. Pre-requisite: Upper division studio study in percussion or permission of instructor.

MUE 414 Guitar Pedagogy 2 cr
A survey of the teaching techniques, instruments, accessories and pedagogical materials for guitar. Pre-requisite: Upper division studio study in guitar or permission of instructor.

MUE 444 Elementary/ School Music (W) 3 cr
Music program, methods, music literature, and teaching aids for elementary and middle school students. Pre-requisites: Junior level or above in music education concentration, admission to candidacy, completion of two-thirds of teaching field.

MUE 446 Piano Pedagogy 2 cr
Methods and materials for the private lesson. Lab practice in teaching included. Offered in alternate years. Pre-requisite: Piano major or piano concentration.

MUE 448 Vocal Pedagogy 2 cr
Theory and practice of the art of teaching singing as it relates to Voice Science, with regard to both current and historical practices, physiology, function, acoustics, observations, and hands-on experience. Pre-requisite: Upper division or above in vocal studio studies.

MUE 455 Teaching Music in Middle and Secondary Schools 3 cr
Assists the student in organizing materials and in developing methods of teaching music in middle and secondary schools. Pre-requisites: Junior level or above in music education concentration, admission to candidacy, completion of two-thirds of teaching field.

MUE 494 Directed Studies 1-3 cr
An individual project concerned with the student's special interests in music education. May be repeated for a maximum of six hours. Pre-requisite: Department Chair permission.

MUE 501 Instrumental Music Education 3 cr
Study of the organization, development, appraisal, role and future trends of instrumental programs in the public schools.

MUE 512 Foundations of Music Education 4 cr
Sequential study of major philosophies guiding music teaching and the history of music education that have led to contemporary issues and problems in Music Education. Major philosophies including Pestalozzi, Reimer, and the praxial approach of Mark and history from perspectives of sociology, psychology, philosophy, curriculum, history and comparative curricula, including emerging trends in the profession.

MUE 513 Curriculum and Assessment in Music Education 4 cr
Critical evaluation of current literature, research, and assessment tools used in the curriculum and teaching of music. This course examines the relationship between curriculum theory and philosophy of music education. Through the study of traditional and contemporary models of curriculum development and evaluation, students broaden their understanding of curriculum as it impacts the learning process. Field experience required.

MUE 520 Advanced Studies in Early Childhood/Elementary Music 4 cr
Music supervision and administration, program development, conducting children's choirs, inclusion, instructional materials and innovative teaching techniques for early childhood and elementary music programs, including Kodaly, Orff, Dacroze and Gordon.

MUE 534 Keyboard, Voice, Guitar in Music Education/Therapy 3 cr
The study of music literature, note reading, and the effective practice of incorporating keyboard, voice, and guitar through music education and music therapy.

MUE 536 Integrating Arts in Education 1-3 cr
This course examines arts integration as a philosophical approach to increasing the effectiveness of learning and content retention in the PK-12 classroom.

MUE 540 Advanced Studies in Teaching Choral Music 4 cr
Focus of the course is to enhance the student's knowledge of rehearsal techniques and instructional strategies, strengthening the role of the conductor, techniques for analytical preparation of choral music, and organization of choral programs. Emphasis will also be given to expanding knowledge of choral repertoire and resources for the choral conductor.

MUE 560 Advanced Studies in Teaching Instrumental Music 4 cr
The purpose of this course is to help the student develop teaching materials, gain greater familiarity with instrumental music repertoire, and develop instructional strategies for instrumental music. Emphasis will be placed on rehearsal procedures, analytical techniques, organizational structure, instrumental music program management, and advanced instrumental conducting.

MUE 585 Practicum in Music Education 1-4 cr
Observation and involvement in the teaching of undergraduate music courses at the college level with opportunities for individual research and teaching experiences.

MUE 589 Reading and Conference 1 cr
Guided study in preparation of the portfolio - video recording and self-critique, pedagogical project and research paper - which should be taken in conjunction with preparation of the final portfolio.

MUE 590 Special Topics 1-3 cr
Special topics in music education designed to meet specific needs and special interests, and to explore current issues in the field. May be repeated for a maximum of nine hours credit when content varies.

MUSIC HISTORY AND LITERATURE (MUL)

MUL 101 Introduction to Music 3 cr
Music, what it is and how to listen to it; basic materials of music and the great style periods of music literature in the Western World. Attendance at approved concerts is required. Fee. **Core Course**.

The preceding introductory course requires no previous experience in music.

MUL 201 Contemporary Music 3 cr
An introduction to music-literature trends in the 20th century.

MUL 235 Survey of Musical Masterworks I 2 cr
This course is the first of a two semester sequence and will familiarize the student with the vocabulary, traditions, conventions, genres and repertoire of the art music world. The course will focus on the "greatest hits" of the concert repertory and other works of a regional/ timely interest. Pre-requisite: MUT 113 or permission of instructor.

MUL 236 Survey of Musical Masterworks II 2 cr
This course is the second of a two semester sequence and will familiarize the student with the vocabulary, traditions, conventions, genres and repertoire of the art music world. The course will focus on the "greatest hits" of the concert repertory and other works of a regional/ timely interest. Pre-requisite: MUL 235.

MUL 315 History of Music Theatre (W) 3 cr
A comprehensive overview of the origins and evolution of American Music Theatre. The course also includes both general and specific information toward appropriate performance choices.

MUL 335 History of Music I (W) 3 cr
Music of the Western World from pre-Christian times to 1750: evolution of forms, styles and media. Pre-requisite: MUT 113 and MUL 236.

MUL 336 History of Music II (W) 3 cr
Music of the Western World from 1750 to the present; evolution of forms, styles, and media. Pre-requisites: MUL 335 or instructor permission.

MUL 411 Woodwind Literature 3 cr
A survey of the major works of the solo, concerto, and chamber music repertoire for woodwind instruments. Pre-requisite: Upper division studio study in woodwinds or permission of instructor.

MUL 412 Brass Literature 3 cr
A survey of the major works of the solo, concerto and chamber music repertoire for brass instruments. Pre-requisite: Upper division brass studio study or permission of instructor.

MUL 413 Percussion Literature 3 cr
A survey of the major works of the solo, concerto and chamber music repertoire for percussion instruments. Pre-requisite: Upper division studio study in percussion or permission of instructor.

MUL 414 Guitar Literature 3 cr
A survey of the major works of the solo, concerto, and chamber music repertoire for guitar. Pre-requisites: Upper division studio study in guitar, special permission of instructor.

MUL 438 Keyboard Literature 3 cr
Major works and styles in the keyboard literature from English Virginalists through the contemporary period. Offered in alternate years. Pre-requisites: Upper division piano study or instructor permission.

MUL 442 Organ Literature 3 cr
Music for pipe organ, both secular and sacred. Offered in alternate years. Pre-requisite: Organ majors or instructor permission.

MUL 444 Vocal Solo Literature 3 cr
A comprehensive overview of standard solo vocal repertoire within the foundation of historical performance practice of sacred and secular vocal music from its beginnings to the present. Pre-requisites: Upper division vocal majors who have completed the Music History sequence (MUL 335/336) or instructor permission.

MUL 494 Directed Studies 1-3 cr
An individual project concerned with the student's special interests. May be repeated for a maximum of six hours. Pre-requisite: Department Chair permission.

MUL 501 Graduate Research in Music 2 cr
Methods and materials of research in music. Bibliography and bibliographical aids. Introduction to musicology. Critical and historical writing. A survey of references sources consulted in graduate music courses; format for papers and thesis, including footnotes and bibliography.

MUL 530 Symphonic Literature 3 cr
A survey of the development of the symphony and related forms from its origins through the twentieth century.

MUL 535 American Music 4 cr
Early music in the colonies. Various attempts to create an individual 'American' musical style. Diversity of influences: European, African - American, Native American, Spanish-Mexican, religious, jazz, folk song, minstrel, etc. Music of Billings, Mason, Gottschalk, MacDowell, Sousa, Ives, Gershwin, Copland, and others.

MUL 590 Special Topics in Music History 1-4 cr
A study of works and styles appropriate to the topics listed: (1) Middle-Ages; (2) Renaissance; (3) Baroque Period; (4) Classical Period; (5) Romantic Period; (6) Modern. May be repeated for credit when topics vary.

MUSEUM STUDIES (MUM)

MUM 201 Introduction to Museum Studies 3 cr
This course is designed to provide a general introduction to museum history, practice, and the role of museums in contemporary society. The class will explore a range of museum positions, curatorial practices, collection management, museum administration, and the academic and public roles museums play in society. Pre-requisite: EH 102. Fee.

MUM 290 Special Topics 3 cr
Different subjects or themes in museum studies as announced. This course may be repeated twice when content varies, for a maximum of nine credit hours. Pre-requisite: To be announced.

MUM 390 Special Topics 3 cr
Different subjects or themes in museum studies as announced. This course may be repeated twice when content varies, for a maximum of nine credit hours. Pre-requisite: To be announced.

MUSICAL ORGANIZATIONS (MUO)

(Auditions are required for some organizations. Contact the Department of Music for specific information)

Lower division credit is for 1st and 2nd year students. Upper division credit is for 3rd and 4th year students and reflects increased responsibility and leadership within the section and/or ensemble as assigned by the conductor/director. Graduate credit requires assisting the conductor/director with logistics, rehearsals, and presentation of concerts. Each number to be repeated four times for a two-year sequence of the course.

MUO 111, 411 Concert Choir ½ or 1 cr
This large University ensemble is open to all majors, and performs the masterpieces of choral literature. Required of all voice majors, and a placement audition is required for all participants.

MUO 114, 414 Chamber Singers ½ cr
A small, select ensemble devoted to the performance of vocal chamber music. Audition and instructor permission required.

MUO 115, 415 Chorale ½ or 1 cr
The Chorale is the preeminent choral ensemble on campus. Chorale members are chosen through special auditions, and perform in area schools and venues to promote the University and the Department of Music.

MUO 116, 416 Opera and Musical Theatre Workshop ½ cr
A performing ensemble dedicated to training students in the fundamentals of stage craft, performance, and production through experience with music for the stage. Standards of opera, operetta, and American musical theater are explored in scene exercises and fully-staged productions on and off campus. Enrollment is open to all students through audition or permission of the instructor.

MUO 117, 417 University Symphony Band ½ or 1 cr
A large performing ensemble of woodwind, brass and percussion instrumentalists with an emphasis on wind band literature and live performance. Open to music majors and non-music majors with prior instrumental performance experience in high school or junior college.

MUO 118, 418 Woodwind Ensemble ½ cr
The study and performance of literature for all combinations of woodwind instruments.

MUO 119, 419 Brass Ensemble ½ cr
The study and performance of literature for all combinations of brass instruments.

MUO 120, 420 Percussion Ensemble ½ cr
The study and performance of literature for all combinations of percussion instruments.

MUO 121, 421 Jazz Band ½ cr
The ensemble study of jazz with an emphasis on literature and live performance.

MUO 122 Basketball Pep Band 1 cr
Performs for USA Basketball games throughout the basketball season. Schedule varies annually.

MUO 123, 423 String Ensemble ½ cr
The study and performance of literature for all combinations of string ensembles.

MUO 124, 424 Piano Ensemble ½ cr
The study and performance of two-piano and piano-ensemble literature. Required of piano majors.

MUO 125, 425 Guitar Ensemble ½ cr
The study and performance of ensemble literature for guitar. Required of guitar majors.

MUO 126, 426 Collegium Musicum ½ cr
A performing ensemble dedicated to combined chamber music experience of both vocal and instrumental forces, playing one-to-a-part, and focusing on music written before 1800. Enrollment is open to the entire university community through audition or permission of the co-directors. By virtue of the terms of the attached constitution, members will learn to choose repertoire, budget and raise small funds, develop programs, reserve performance space, organize print material, and explore the dynamics of team production. This team-taught course will also be dedicated to sharing cultural focuses and encouraging the exchange of attitudes shared historically by all people.

MUO 127, 427 Wind Ensemble ½ or 1 cr
A select performing ensemble of woodwind, brass and percussion instrumentalists with an emphasis on wind ensemble literature and live performance. Open to music majors and non-majors with prior instrumental performance experience in high school or junior college. Audition or permission of instructor required for participation.

MUO 129, 429 Mixed Chamber Ensemble ½ cr
The study and performance of chamber literature for all combinations of instruments and voices.

MUO 130, 430 University Marching Band 1 cr
A large performing ensemble of woodwind, brass, percussion instrumentalists, and appropriate auxiliary personnel with an emphasis on live performance for athletic events. Open to music majors and non-music majors with prior instrumental performance experience in high school or junior college.

MUO 133, 433 University Orchestra ½ or 1 cr
A large performing ensemble of string, woodwind, brass and percussion instrumentalists with an emphasis on orchestral literature and live performance. Open to music majors and non-music majors with prior instrumental performance experience in high school or junior college. Audition or permission of instructor required for participation.

MUO 136, 436 World Music Ensemble ½ cr
The study and performance of world literature for all combinations of instruments with an emphasis on music from non-Western cultures.

MUO 138, 438 Flute Choir ½ cr
The study and performance of literature for all combinations of flutes.

MUO 139, 439 Trumpet Ensemble ½ cr
The study and performance of literature for all combinations of trumpets.

MUO 140, 440 Horn Choir ½ cr
The study and performance of literature for all combinations of horns.

MUO 141, 441 Trombone Choir ½ cr
The study and performance of literature for all combinations of trombones.

MIO 142, 442 Tuba-Euphonium Ensemble ½ cr
The study and performance of literature for combinations of tubas and euphonium.

MUO 143, 443 Brass Choir ½ cr
The study and performance of literature for large brass ensemble.

MUO 144, 444 USA Steel Band ½ cr
The study and performance of literature for steel band including the traditional styles of soca and calypso music from the Caribbean. Instructor permission required.

MUO 511 University Concert Choir ½ or 1 cr
This large ensemble is open to all majors, and performs the masterpieces of choral literature. Required of all voice majors, and a placement audition is required for all participants.

MUO 514 Chamber Singers ½ cr
A small, select ensemble devoted to the performance of vocal chamber music. Audition and instructor permission required.

MUO 515 Chorale ½ or 1 cr
The Chorale is the preeminent choral ensemble on campus. Chorale members are chosen through special auditions, and perform in area schools and venues to promote the University and the Department of Music.

MUO 516 Opera and Musical Theatre Workshop ½ cr
A performing ensemble dedicated to training students in the fundamentals of stage craft, performance, and production through experience with music for the stage. Standards of opera, operetta, and American musical theater are explored in scene exercises and fully-staged productions on and off campus. Enrollment is open to all students through audition or permission of the instructor.

MUO 517 University Symphony Band ½ or 1 cr
A large performing ensemble of woodwind, brass and percussion instrumentalists with an emphasis on wind band literature and live performance. Open to music majors and non-music majors with prior instrumental performance experience in high school or junior college.

MUO 518 Woodwind Ensemble ½ cr
The study and performance of literature for all combinations of woodwind instruments.

MUO 519 Brass Ensemble ½ cr
The study and performance of literature for all combinations of brass instruments.

MUO 520 Percussion Ensemble ½ cr
The study and performance of literature for all combinations of percussion instruments.

MUO 521 Jazz Band ½ cr
The ensemble study of jazz with an emphasis on literature and live performance.

MUO 523 String Ensemble ½ cr
The study and performance of literature for all combinations of string ensembles.

MUO 524 Piano Ensembles ½ cr
The study and performance of two-piano and piano-ensemble literature. Required of piano majors.

MUO 525 Guitar Ensemble ½ cr
The study and performance of ensemble literature for guitar. Required of guitar majors.

MUO 526 Collegium Musicum ½ cr
A performance ensemble dedicated to combined chamber music experience of both vocal and instrumental forces, playing one-to-a-part, and focusing on music written before 1800. Enrollment is open to the entire university community through audition or permission of the co-directors. By virtue of the terms of the attached constitution, members will learn to choose repertoire, budget and raise small funds, develop programs, reserve performance space, organize print material, and explore the dynamics of team production. This team-taught course will also be dedicated to sharing cultural focuses and encouraging the exchange of attitudes shared historically by all people.

MUO 527 Wind Ensemble ½ or 1 cr
A select performing ensemble of woodwind, brass and percussion instrumentalists with an emphasis on wind ensemble literature and live performance. Open to music majors and non-majors with prior instrumental performance experience in high school or junior college. Audition or permission of instructor required for participation.

MUO 529 Mixed Chamber Ensemble ½ cr
The study and performance of chamber literature for all combinations of instruments and voices.

MUO 530 University Marching Band 1 cr
A large performing ensemble of woodwind, brass, percussion instrumentalists, and appropriate auxiliary personnel with an emphasis on live performance for athletic events. Open to music majors and non-music majors with prior instrumental performance experience in high school or junior college.

MUO 533 University Orchestra ½ cr or 1
A large performing ensemble of string, woodwind, brass and percussion instrumentalists with an emphasis on orchestral literature and live performance. Open to music majors and non-music majors with prior instrumental performance experience in high school or junior college. Audition or permission of instructor required for participation.

MUO 536 World Music Ensemble ½ cr
The study and performance of world literature for all combinations of instruments with an emphasis on music from non-Western cultures.

MUO 538 Flute Choir ½ cr
The study and performance of literature for all combinations of flutes.

MUO 539 Trumpet Ensemble ½ cr
The study and performance of literature for all combinations of trumpets.

MUO 540 Horn Choir ½ cr
The study and performance of literature for all combinations of horns.

MUO 541 Trombone Choir ½ cr
The study and performance of literature for all combinations of trombones.

MUO 542 Tuba-Euphonium Ensemble ½ cr
The study and performance of literature for all combinations of tubas and euphonium.

MUO 543 Brass Choir ½ cr
The study and performance of literature for large brass ensemble.

MUO 544 USA Steel Band ½ cr
The study and performance of literature for steel band including the traditional styles of soca and calypso music from the Caribbean. Instructor permission required.

MUSIC STUDIO (MUS)

MUS 201 Introduction to Music Education Technology 2 cr
Application of current Music Technology for the N-12 curriculum. Laboratory experience is given in selected software programs appropriate to music education. Fee. Pre-requisite: MUT 113 or instructor consent.

MUS 202 Vocal Diction I 1 cr
A lecture/performance course, rooted in the International Phonetic Alphabet (IPA), designed to enable singers to analyze and perform vocal repertoire in English, Italian, and Latin.

MUS 203 Vocal Diction II 1 cr
A lecture/performance course, rooted in the International Phonetic Alphabet (IPA), designed to enable singers to analyze and perform vocal repertoire in German, French, and Spanish. Pre-requisite: MUS 202.

MUS 204 Introduction to Music Business 3 cr
A general overview of the music industry is the primary objective of the course. Some emphasis will be placed on career options.

MUS 304 Principles of Music Business I 3 cr
A continuation of MUS 204, 304 will place emphasis on the legal aspects of the music industry. Pre-requisite: MUS 204 or permission of instructor.

MUS 305 Principles of Music Business II 3 cr

A continuation of MUS 304, 305 will address marketing and promoting in music Pre-requisite: MUS 304 or permission of instructor.

MUS 404 Recording Technology 2 cr

This course provides an overview of analog and digital audio, introduces students to basic recording/mixing tools and techniques, and cross-platform hardware/software systems. Specific topics include: microphone and mixer preparation, studio and computing equipment, analog capture, analog to digital conversion, and digital capture/edit. Also addressed: project management, assets, and pre project presentation.

MUS 421 Music, Sound and Multimedia 2 cr

This course familiarizes students with the techniques and materials for incorporating sound and music in the Wintel and Macintosh multi-media environments. Topics to be addressed will include making music with and without MIDI, sound resources, special effects, commercial libraries and sounds, digital sequencing, authoring environment, and legal issues.

MUS 422 Sequencing 2 cr

To familiarize students with professional-level music sequencing software, hardware, and techniques. Students will gain practical skills with MIDI recording, playback, and editing.

MUS 470 Internship in Music Business 9-12 cr

Internship is a program that provides qualified university students with supervised experience in production practice, management techniques, research applications, personnel matters, and other activities found in modern music industry. Pre-requisites: Completion of the Music Business Concentration core including College of Business course requirements, permission of the participating business/ organization, and approval of the departmental internship coordinator and department chair.

MUS 490 Special Topics in Music Technology 1-3 cr

This course introduces students to fundamental techniques and materials for working with studio-quality sound, hardware, and software. Topics will be drawn from: MIDI/music networks, graphic notation, MIDI controllers/ sequences, sampling basics, and film and video synchronization fundamentals. May be repeated for a maximum of nine credit hours. Pre-requisites: MUS 421, 422 or consent of the instructor.

MUS 499 Senior Honors Project in Music 3-6 cr

With the guidance and advice of a faculty mentor, Honors Students will identify, and carry out a research project in music. The outcome of the research project will include a written report and formal presentation at the annual Honors Student Colloquium. The senior project will be judged and graded by three members of the faculty, chaired by the faculty mentor. Permission of department chair.

MUS 521 Music, Sound and Multimedia 3 cr

This course familiarizes students with the techniques and materials for incorporating sound and music into Multimedia environment. Topics to be addressed include making music with and without MIDI, sound resources, special effects, commercial libraries and sounds. Digital Sequencing, Authoring Environments, and legal issues.

MUS 590 Special Topics in Music Technology 1-3 cr

Special topics in Music Technology. May be repeated for a maximum of nine hours credit when content varies. Pre-requisite: MUS 522 or consent of instructor.

MUSIC THEORY (MUT)

CONDUCTING

MUT 361 Fundamentals of Conducting 3 cr

Basic baton technique; simple and complex rhythms; score reading; practical choral and instrumental conducting techniques. Pre-requisite: MUT 213.

MUT 362 Instrumental Conducting 3 cr

Advanced baton technique; psychology of rehearsal; interpretative conducting techniques for instrumental organizations. Pre-requisite: MUT 361.

MUT 364 Choral Conducting and Literature 3 cr

Advanced conducting with attention to the harmonic and formal analysis of choral works; special emphasis on performance practice. Pre-requisite: MUT 361.

MUSIC THEORY

NOTE: A placement test is required of all transfer students. See Placement in Music Theory.

MUT 112 Basic Music Theory I 3 cr

Integrated course in aural and non-aural music theory including music skills, part writing analysis, counterpoint, sight singing, dictation, keyboard harmony, and computer applications in part writing and ear- training.

MUT 113 Basic Music Theory II 3 cr

Elementary part-writing in two, three, and four voices. Sight-singing, ear-training, and keyboard harmony. Must be taken in sequence. Pre-requisite: MUT 112 with a grade of C or higher.

MUT 212 Intermediate Music Theory I 3 cr

A continuation of elementary theory. Chromatic harmony and remote modulation; sight-singing, ear-training, keyboard harmony. Must be taken in sequence. Pre-requisite: MUT 113 with a grade of C or higher.

MUT 213 Intermediate Music 3 cr

A continuation of elementary theory. Chromatic harmony and remote modulation; sight-singing, ear-training, keyboard harmony. Must be taken in sequence. Pre-requisite: MUT 212 with a grade of C or higher.

MUT 312 Integrated Analytical Techniques I 2 cr

This is the first semester of a two semester sequence designed to familiarize students with the rudiments of formal analysis, counterpoint, and practical orchestration for 18th, 19th and 20th century music - particularly emphasizing classical, jazz, pop, and selected world-music styles. Pre-requisites: MUT 213 with a grade of C or higher, Theory Placement Exam, or consent of instructor.

MUT 313 Integrated Analytical Techniques II 2 cr

This is the second semester of a two semester sequence designed to familiarize students with the rudiments of formal analysis, counterpoint, and practical orchestration for 18th, 19th and 20th century music - particularly emphasizing classical, jazz, pop, and selected world-music styles. Pre-requisites: MUT 312 with a grade of C or higher, Theory Placement Exam, or consent of instructor.

MUT 314 Introduction to Composition 2 cr

Compositional techniques and the writing of original compositions for solo instruments and small ensembles. Pre-requisite: MUT 213.

MUT 412 Orchestration 2 cr

The techniques of scoring for the orchestra, band, and small ensembles. Pre-requisite: MUT 213.

MUT 413 Band Arranging 2 cr

The techniques of scoring for the modern concert wind band. Offered in alternate years. Pre-requisite: MUT 213.

MUT 421 Composition I 3 cr

Original work in music composition. To be taken in sequence. Offered by special arrangement only. Pre-requisite: MUT 314.

MUT 422 Composition II 3 cr

Original work in musical composition. To be taken in sequence. Offered by special arrangement only. Pre-requisite: MUT 421.

MUT 490 Special Topics 1-3 cr

Special topics in music theory and composition. May be repeated for a maximum of six hours credit when content varies.

MUT 512 Introductory Analysis of Music Literature 4 cr

Introduction to the techniques of analysis applied to a selection of music literature emphasizing works from the seventeenth century to the middle of the twentieth century.

MUT 513 Pedagogy of Theory 1-4 cr

Practices and principles of teaching music theory, emphasizing most desirable and practical offerings possible. A comparative survey of current systems and materials for teaching music theory and aural skills. Review of materials and methods used in teaching the written music theory sequence and in teaching aural skills (music dictation and sight singing). Includes review of textbooks and technology used in the classroom.

NURSING (NU)

NU 101 Freshman Seminar in Nursing 2 cr

The purpose of this course is to introduce the unique requirements and opportunities of professional nursing to beginning students who have declared nursing as their major and are considering nursing as a major. The course focuses on the value of higher education as a base for a career in nursing and develops an awareness of activities and support services

available within the University to enhance student success. Academic rules and regulations and policies related to admission, progression, and graduation in the University and College are discussed.

NU 300 Foundations of Professional Nursing 4 cr

The purpose of the course is to provide students the opportunity to appraise theories, concepts, evidence, issues and trends in promoting the health of an adult-geron population experiencing commonly occurring health care needs. Emphasis is on the use of the nursing process and other systematic approaches to assess, plan, implement, and evaluate health promotion and maintenance activities, illness care, and rehabilitation with adults in a variety of acute and community settings. Pre-requisites: NU 311, NU 325, NU 327, HSC 342, HSC 343. Co-requisite: NU 301.

NU 301 Foundations of Professional Nursing Clinical 3 cr

Application of concepts and theories related to health promotion and maintenance, illness care, and rehabilitation with an adult-geron population experiencing commonly occurring health care needs. Emphasis is the role of the professional nurse and on the use of the nursing process with an adult-geron population in a variety of acute and community based settings. Pre-requisite: NU 325, NU 327, HSC 343. Co-requisite: NU 300.

NU 304 Evidence Based Practice in Nursing (W) 3 cr

This course surveys the research process. Its focus is on research, the methods for critiquing research, and ethical and legal implications. Emphasis is on the importance of research to nursing practice and the development of critical consumers of nursing research. Pre-requisites: NU 300, NU 301, HSC 332.

NU 311 Clinical Nursing Skills 3 cr

The purpose of this course is to provide students the opportunity to acquire basic nursing care skills. The emphasis is on the responsibilities of the professional nurse in ensuring quality and safety. Students are introduced to simulation as an approach to sharpen clinical reasoning and communication skills in a safe environment. Pre-requisites: Admission to professional component or special permission of instruction. Pre-requisites/ Co-requisites: NU 325, NU 327, HSC 343.

NU 325 Health Assessment 3 cr

The purpose of the course is to provide students the opportunity to acquire basic nursing assessment skills. The emphasis is on the assessment skills of the whole person, including physical, psychological, sociocultural, and spiritual aspects of persons from all stages of life. Students will learn skills associated with obtaining a health history and performing health assessments across the lifespan. Pre-requisite: Admission to professional component or special permission of instructor.

NU 327 Pathophysiological Basis of Nursing 3 cr

The purpose of the course is to provide students the opportunity to acquire the theory and evidence applicable to the physiology and alterations in physiology of individuals across the lifespan. The emphasis of this course is alterations in cardiovascular, pulmonary, genitourinary, gastrointestinal, immune, neurological, musculoskeletal, and endocrine systems. Pre-requisite: Admission to professional component or special permission of instructor.

NU 390 Special Topics 1-4 cr

Study of a significant topic or problem in Nursing and the Health Professions. Course may be repeated for a total of four credits.

NU 394 Directed Study 1-4 cr

Individual study in a nursing area chosen in consultation with instructor.

NU 404 Evidence-Based Practice and Informatics 3 cr

This course is designed for Registered Nurse students to apply principles of research, evidence-based practice (EBP) and informatics to practice problems. The focus of the course is interpreting and incorporating research for the improvement of health care. Assignments relate EBP through practice integrated experiences. Emphasis is on critical appraisal of research and use of data in quality improvement.

NU 410 Concepts of Professional Nursing (W) 6 cr

A bridge course for the Registered Nurse student. Focus on the philosophy of the College of Nursing and on selected theories and concepts integrated throughout the curriculum. Emphasis is on professional nursing roles and strategies for health promotion and maintenance with individuals, families, and groups. Requires registered nurse licensure and admission to RN to BSN track.

NU 412 Decision Making and Delegation in Nursing Practice 4 cr

The purpose of the course is to provide students the opportunity to continue their personal leadership development within the context of providing professional nursing care to patients and families across the lifespan. Decision-making, delegation, and motivation competencies are emphasized. Pre-requisites: AHN 447, AHN 448. Co-requisites: NU 414, NU 460.

NU 414 Issues and Trends in Health Care 3 cr

The purpose of this course is to expose students to a comprehensive array of current issues and trends affecting nursing and health care. Emphasis is on the development of a current nursing workforce. National interest areas such as patient safety, etc. are a primary focus. Pre-requisites: AHN 447, AHN 448. Pre-requisites/Co-requisites: CMN 420, CMN 421. Co-requisites: NU 412, NU 460.

NU 415 Seminar in Issues and Trends 3 cr

The purpose of this course is to introduce Registered Nurse students to a comprehensive array of current issues and trends affecting nursing and health care in society. Emphasis is on the development of professional nursing contributions to the changing healthcare environment. The focus is on comprehending factors affecting policy generation and implementation. Pre-requisites: Completion of all non-nursing Pre-requisites.

NU 422 Healthcare Leadership and Collaboration 3 cr

The purpose of this course is to continue the professional development of Registered Nurse students through initiation leadership and collaborative roles in healthcare or community settings. The course focuses on professionalism, leadership roles and functions, management strategies, and emerging trends in nursing and health care. The emphasis of the course is on the professional nurse as a leader in improving health care. Activities include a practice integrated experience application of quality improvement process to promote optimal health care delivery.

NU 425 Health Assessment across the Lifespan 3 cr

The purpose of the course is to provide Registered Nurse students the opportunity to validate and improve nursing assessment skills. Emphasis is on skill sets necessary for assessment of the whole person, including physical, psychological, sociocultural, and spiritual aspects across the lifespan. The emerging role of genomics as a primary element of health history will be explored. Students will demonstrate practice integrated skills of obtaining a health history, performing physical assessments, and completion of comprehensive health assessments for health promotion and maintenance.

NU 427 Pathophysiology and Genomics 3 cr

The purpose of the course is to provide Registered Nurse students the opportunity to acquire the theory and evidence applicable to the physiology and alterations in physiology of individuals across the lifespan. The emphasis of this course is alterations in cardiovascular, pulmonary, genitourinary, gastrointestinal, immune, neurological, musculoskeletal, and endocrine systems. Special attention is given to emerging evidence regarding genomics and its contribution to understanding of pathophysiology.

NU 460 Practicum 5 cr

Culminating clinical practice course to provide students an in-depth learning experience in a selected area of nursing practice. The leadership, management, and caregiver roles of the professional nurse with patients and their families in a selected area of nursing practice is emphasized. Students are assigned to nurse preceptors and with faculty guidance focus on leadership and management, and application of the nursing process theories, concepts, research, issues and trends in caring for patients in a variety of preceptorship placements in acute and community settings. Pre-requisites: AHN 447, AHN 448. Pre-requisites/Co-requisites: CMN 420, CMN 421. Co-requisites: NU 412, NU 414.

NU 461 Integration of Professional Practice (Writing Course) 4 cr

The purpose of this course is to provide the Registered Nurses learning activity draws on prior work in evidence-based practice leadership to create a substantive activity contributing to health need or problem.

NU 490 Special Topics 1-4 cr

Study of a significant topic or problem in nursing and the health professions. This course may be repeated for a total of four credits.

NU 499 NU Honors Senior Project-H 1-6 cr

The purpose of the course is to provide students the opportunity to investigate scholarly undergraduate research, service-learning, or study

abroad experiences resulting in development of the written honors thesis. Nursing Honors Program requires special permission.

NU 500 Child and Adolescent Mental Health 1-3 cr

Provides students with an introduction to the normal child and family dynamics as well as introduces them to specific psychiatric disorders in children and adolescents and nursing interventions. Content includes specific psychiatric disorders and interventions within the framework of growth and development and family dynamics.

NU 501 Social Dynamics of Nursing 1-3 cr

Investigation of the influence of selected ideas, individuals, issues, and events that shape contemporary nursing.

NU 518 Advanced Nursing Assessment 3 cr

This course is designed to further develop the student's advanced knowledge and skills for obtaining and recording a systematic health history and advanced physical examination of individuals and families across the lifespan. The course involves the synthesis of nursing, biologic, psychologic, and sociocultural knowledge and theories as applied to the findings obtained in the comprehensive health assessment. The central objective is the development of cognitive and clinical skills needed to provide comprehensive care to individuals of all ages in primary, secondary, and tertiary care settings.

NU 520 Clinical Concepts and CNS Role II 3 cr

The purpose of this course is to provide a forum for the analysis, synthesis, and application of knowledge acquired in previous courses to the CNS role. The course focuses on the CNS's spheres of influence on health care incorporating the perspectives of social justice, fiscal stewardship, client advocacy, and evidence based practice. The emphasis is on maximizing the students' ability to identify problems, manage resources and fiscal outcomes, design and select therapeutic interventions, and evaluate products and devices for use with patients and health team members from diverse cultural and ethnic backgrounds. Potential for contributions and entrepreneurial opportunities within nursing will be addressed. Pre-requisites/Co-requisites: NU 524, NU 608, NU 610, NU 613.

NU 524 Clinical Concepts and CNS Role I 3 cr

Continued analysis and evaluation of advanced clinical concepts and the role of nursing in providing evidenced based care to facilitate positive health outcomes. Pre-requisites: NU 545, NU 578, NU 518. Pre-requisites/ Co-requisites: NU 607, AHN 525, MCN 525, MCN 527.

NU 530 Accelerated MSN Advanced Health Assessment 4 cr

Bridge course for the Accelerated MSN track. Advanced nursing assessment of the whole person including physical, psychological, sociocultural, and spiritual assessment of the adult and child. Emphasis is on the development of skill in obtaining and recording a comprehensive health history and performing health assessment for individuals from diverse heritages across the lifespan.

NU 531 Accelerated MSN Advanced Pathophysiology 4 cr

Bridge course for the Accelerated MSN track. Focuses on pathophysiology and cellular physiology theory and research of the cardiovascular, pulmonary, genitourinary, gastrointestinal, immune, neurological, integumentary, musculoskeletal, and endocrine systems. This course provides students with a foundation for providing nursing care to persons having acute, chronic and long-term health care problems.

NU 532 Accelerated MSN Advanced Pharmacology 4 cr

Bridge course for the Accelerated MSN track. Advanced clinical application of drug therapy and concepts relating to the mechanism of drug actions, interactions, and adverse reactions, including immunologic-idiosyncratic-allergic drug responses. Emphasis on pharmacokinetics, cultural/ethnic considerations, dosage, methods of administration, and adverse effects according to major classifications. Current research in pharmacology is also incorporated in course content.

NU 535 Clinical Nurse Leader Role and Competencies 3 cr

The purpose of this course is to explore the role and function of the clinical nurse leader. The course focuses on the implementation of the role that will vary across settings and facilities. The emphasis is on evidence-based practice and knowledge and skills that CNL requires for successful enactment of the role. Co-requisite: NU 536. Pre-requisites: NU 607, NU 518, NU 530, NU 531 or NU 545, NU 522 or NU 578.

NU 536 Clinical Nurse Leader Practicum I 5 cr

The purpose of this first of two capstone Clinical Nurse Leader courses is to provide students an in-depth preceptor-based clinical experience in a selected area of nursing practice. The focus of the course is on the CNL as caregiver, leader, and care manager. Emphasis is on the application of the nursing process, theories, concepts, research, issues and trends in providing care in complex patient situations and managing the care of a group of patients. Co-requisite: NU 535. Pre-requisites: NU 607, NU 518, NU 530, NU 531. Pre-requisites/ Co-requisites: NU 545, NU 578 or NU 532 can be taken at the same time.

NU 537 Clinical Nurse Leader Synthesis 3 cr

The purpose of this culminating synthesis course for the CNL role is to provide students an opportunity to analyze and evaluate actual CNL practice patterns. The course focuses on continuing to build the students competencies in clinical decision making, problem identification, resource management, and outcome measurement for a selected patient population at the point of care. The emphasis is on working with patients and health team members from diverse cultural or ethnic backgrounds, and accountability for coordination, delegation and supervision of care within a multidisciplinary team. Co-requisite: NU 538. Pre-requisites: NU 607, NU 608, NU 610, NU 613, NU 535, NU 536.

NU 538 Clinical Nurse Leader Practicum II 4 cr

The purpose of this second of two capstone Clinical Nurse Leader courses is to provide students an immersion experience in the CNL role in a selected area of nursing practice. The focus of the course is to further develop CNL competencies with emphasis on team leading and building, advocacy, communication, resource and outcomes management, and evidence-based practice. Co-requisite: NU 537. Pre-requisites: NU 535, NU 536.

NU 539 Introduction to Nursing Informatics 1-3 cr

The purpose of this course is to provide the student an introduction to nursing informatics and the evolving importance of the application and evaluation of information technology in nursing and health care. The emphasis of the course is to provide the students the expertise and knowledge to function effectively in the modern health care information technology (IT) environment.

NU 545 Physio-Pathological Basis of Advanced Nursing 3 cr

The purpose of this course is to provide the advanced practice nurse with knowledge of normal physiology and alterations in physiology in individuals across the life span. The focus is theory and research applicable to organ systems and cellular events. Emphasis is on regulatory and compensatory functions in health and in pathophysiological conditions.

NU 552 Human Sexuality and Nursing 3 cr

Focus is on the development of a theoretical basis for advanced nursing practice with clients having sexual concerns. Emphasis is on developing self awareness and on strategies for advanced nursing practice.

NU 556 Informatics and Quality of Care Improvement 3 cr

The purpose of this course is to focus on quality improvement models and methods which will use client outcome measures across a broad range of health care settings. Emphasis will be placed on Continuous Quality Improvement (CQI) methods and their relationships with current health care systems. Pre-requisites: NU 539, ISC 527 or ISC 560, ISC 545 or ISC 562, NU 506, NU 507, NU 508, NU 513, NU 565. Co-requisite: NU 557

NU 557 Clinical Informatics Practicum I 2 cr

This clinical course allows students to integrate concepts and theories in clinical informatics in selected health care settings. This practicum offers students an opportunity to work closely with a health care vendor and integrate concepts/theories in clinical informatics. Additionally students will begin in learn how to configure and customize operating systems. Students will also begin to identify their site for Clinical Informatics Practicum II. Pre-requisites: NU 539, ISC 560 or ISC 527, ISC 562 or ISC 545, NU 607 NU 608, NU 610, NU 613, NU 565. Co-requisite: NU 556.

NU 558 Seminar in Nursing Informatics 3 cr

This course will provide students the opportunity to discover the responsibilities of the Nursing Informatics Specialist's role by applying legal/ethical concepts to selected case studies in a variety of situations. Co-requisite: NU 559. Pre-requisites: NU 539, NU 556, NU 557,

ISC 527 or ISC 560, ISC 545 or ISC 562, NU 506, NU 507, NU 508, NU 513, NU 565.

NU 559 Clinical Informatics Practicum II 2 cr

This clinical course allows students to integrate and apply informatics competencies in the nurse informatics specialty roles while working closely with a guided preceptor. This role may take place within a variety of health care settings. Co-requisite: NU 558. Pre-requisites: NU 539, NU 556, NU 557, ISC 527 or ISC 560, ISC 545 or ISC 562, NU 607, NU 608, NU 610, NU 613, NU 565.

NU 561 Nursing Administration Concepts and Theory 3 cr

The purpose of this course is to provide a forum for analysis and synthesis of selected theories, issues and trends, and research for the nurse administrator role. Emphasis is placed on development of a framework for practice for the role of nurse administrator, organizational structure, and nursing model in the changing sociopolitical economic environment. Co-requisite: NU 566.

NU 562 Nursing Administrative Concepts and Resource Management Field Study 3 cr

The purpose of this course is to examine concepts and methods of administration applying these concepts and methods in supervised field activities. The focus is identification of health goals and management of physical, financial, and human resources in healthcare systems. Emphasis is on organization leadership, interdisciplinary team functioning, and political collaboration to meet health care needs of vulnerable populations in culturally diverse communities. Pre-requisite/Co-requisite: NU 607.

NU 565 Nursing Administration Finance 3 cr

The purpose of this course is synthesis of the fiscal processes in health care systems to include basic accounting, financial decision-making concepts, statement analysis, and information systems in advanced nursing and healthcare management. Pre-requisite/Co-requisite: NU 607. Pre-requisite: NU 562. Co-requisite: HSC 571.

NU 566 Nursing Administration Field Study 3 cr

The purpose of this field experience course is to provide students an opportunity to explore and analyze the structure, regulation, and operation of a selected health care system. Focus is on systems organization, and communications analysis in a selected health care organization. Pre-requisite: NU 565. Co-requisite: NU 561.

NU 567 Nursing Administration Internship 4 cr

The purpose of this culminating course is to provide a preceptor and faculty facilitated experience in the nurse administrator role with a focus on the application and synthesis of knowledge and skills acquired in all previous courses. Pre-requisite: NU 566. Pre-requisites/ Co-requisites: NU 613 and NU 608 and NU 610. Co-requisite: NU 568.

NU 568 Nursing Administration Seminar 3 cr

The purpose of this course is to provide a forum for the evaluation of issues and trends encountered in health care. Emphasis is on critical analysis and management of these issues by nursing administration. Co-requisite: NU 567.

NU 578 Pharmacology for Advanced Practice Nurses 3 cr

The purpose of this course is to expand the pharmacological knowledge of the advanced practice nurse. The focus is the selection and monitoring of drug therapy for persons throughout the lifespan. Emphasis is on pharmacokinetics and pharmacotherapeutics of major drug classifi cations. Pre-requisite: NU 545.

NU 580 Health Care Problems of the Rural South 3 cr

Orientation of health care problems of the rural South. Opportunity to assess, develop, and implement nursing intervention techniques in selected settings.

NU 582 Consultation in Nursing Practice 3 cr

Focuses on the steps of the consulting process in advanced nursing practice with an emphasis on assessment, planning and the communication of findings. Theoretical frameworks and models for consultation are analyzed.

NU 590 Special Topics 1-6 cr

Study of significant topics or problems in nursing and the health professions. Content will vary. May be repeated.

NU 594 Directed Studies 1-9 cr

Directed study under the direction of a member of the graduate faculty.

NU 599 Thesis 1-3 cr

The purpose of this course is to provide an opportunity to complete a research study with the guidance of a graduate faculty committee. The focus is on research in advanced nursing practice.

NU 604 Project Planning and Development 3 cr

This course assists the student to learn the processes embedded in developing a doctoral synthesis project. The course will address all aspects of project planning and development as a preliminary step to the students' selection of a topic or phenomenon of interest for the project and will incorporate well-built questions, search strategies and outcomes, identification of resources needed, plan for evaluation and dissemination.

NU 607 Scientific Underpinnings of Advanced Nursing 3 cr

The course serves as the basis of the practice project by identifying and investigating the various phenomena of interest in the students' practice area. The primary focus of this course is to explore the structure and nature of the science of nursing practice. Students will engage in an evolutionary review of the philosophical and scientific trends in nursing practice and supportive theory development that form the underpinnings of modern nursing such as Systems Theory, Change Theory, Organizational Theories, etc. Findings from this review will be used as the foundation of a concept analysis which will form the basis of individual project to facilitate positive change in health care.

NU 608 Evidence Based Practice and Quality Improvement in Health Care Systems 3 cr

This course explores philosophical and foundational components of evidence-based practice for advance nursing practice. Concepts, models, and methods for developing advanced practice based on best evidence are applied. Developing the well-built question as well as understanding best search strategies are incorporated into this course. A statistical overview provides guidelines for review of research-based evidence, particularly related to the clinical and administrative practice question(s) and outcomes. Outcome evaluation methods are explored.

NU 610 Strategic Resource Management in Health Care 3 cr

The purpose of this course is to develop nurse leaders who have the knowledge and skills to influence strategic resource management in health care. The course focuses on major contextual factors and policy triggers that influence health policy making at various levels and their relationship to strategic resource management. The course emphasis is on developing essential competencies in strategic resource management related to a specific area of advanced practice.

NU 611 Translating Evidence into Practice Systems 3 cr

This course provides the methodological basis for translating evidence into practice systems in a variety of health care settings. Translating evidence involves locating, evaluating, synthesizing, channeling, applying, and explaining appropriate findings from laboratory and experimental settings to improve the efficiency and effectiveness of nursing care in many different settings. In this course students will use applied techniques with an emphasis on ethics and the protection of human subjects. Pre-requisite: NU 608.

NU 612 Clinical Prevention and Population Health 3 cr

This course focuses on global, national, regional and local health issues and the policies that stem from those issues across the lifespan with all populations. Health surveillance measures and determinants of health are used to characterize geographical locations and population groups. Effective health promotion and disease and accident prevention strategies are explored. Using an evidence-based practice approach, students develop strategic intervention strategies to address the strategies, including effective means of communicating health information with the public. Bioethical issues related to the distribution of resources and health disparities together with appropriate health education strategies (cultural adaptations and health literacy), and access to care are explored. Pre-requisite: NU 608.

NU 613 Organizational and Systems Leadership 3 cr

The course provides a theoretical foundation to advancing leadership in the transformation of healthcare organization, healthcare systems and community-based care. The view of the current health care delivery system is broadened by an analysis of the forces that have shaped the system, including scientific discoveries, technological advances, genetics, social justice issues, and the development of health professions and institutions. Nursing knowledge is influenced by these multiple factors; thus, the course

provides students with tools to lead others in meeting the many challenges the health care system brings. Collaboration, relationship building, credibility and modeling are integrated into practice modeling. Innovation and creative change models are analyzed as they relate to leadership competency and leadership skill sets. Emotional intelligence competencies relative to transformation leadership provide a model for analyzing leadership, change, and strategic planning within organizations and population/ systems of care delivery. Changes in the roles of health care providers and consumers are assessed from economic, social, organizational, political, ethical, legal, and technological perspectives.

NU 615 Program Evaluation and Improvement of Clinical Outcomes 3 cr

This course provides the DNP student with the knowledge and skills to develop, implement and evaluate programs that improve health outcomes. The course focuses on program evaluation frameworks including health standards, outcomes measures, and variance models for specific patient types. The emphasis in the course is on evaluation as a strategic planning tool to achieve positive changes in health status; to initiate quality improvement and patient safety initiatives, to engage in risk anticipation and management, to improve resource utilization and reduce health care costs, and to facilitate organizational and system level changes. Pre-requisites: NU 607, NU 608 and NU 611.

NU 616 Data and Decision Making in Complex Health Care Systems 3 cr

This course focuses on information systems and current technology in the management of health care outcomes. The course prepares the graduate to be proficient in the evaluation and use of technology and information systems appropriate to a specialized area of advanced nursing practice and to use information systems and technology-based resources to support clinical and administrative decision making.

NU 617 Residency I 1 cr

The first of three residency courses. The student initiates the DNP role within a selected area of advanced nursing practice. Students work with experts in their field of interest and with a faculty facilitator to refine and initiate their DNP synthesis project. The course focuses on assisting students to identify and explore issues and trends, implementation strategies, and evaluation methodologies for the synthesis project. The residency site will depend upon the student's career trajectory and approval by the facilitating faculty.

NU 618 Adult-Geron Acute Care Residency II (Emergency Specialty) 4 cr

Provides Adult-Gerontological Acute Care Nurse Practitioner students enrolled in the Advanced Emergency Nursing (Family NP/ Adult-Gerontological Acute Care) Dual Role specialty track the opportunity to fully express all DNP competencies. The student, guided by the faculty facilitator, will implement the scholarly doctoral system's change project.

NU 619 Adult-Geron Acute Care Residency III (Emergency Specialty) 4 cr

Final course in residency series as the Adult-Gerontological Acute Care Nurse Practitioner student who is enrolled in the Advanced Emergency Nursing (Family NP/Adult-Gerontological Acute Care) Dual Role specialty track continues to implement and evaluate project plan. Provides student the opportunity to fully express all DNP competencies. The student, guided by the core faculty and advisor completes quality improvement evidence-based system's change project.

NU 620 Instructional Design and Technology for Nurse Educators 3 cr

The purpose of this course is to provide students the opportunity to design and implement instruction for diverse learners, and evaluate the quality and effectiveness of instruction, especially related to cultural sensitivity. Analysis and synthesis of theories and concepts related to instructional design in nursing practice and education is basic to the process. Emphasis is on integrating technology into the design, implementation, and evaluation of instruction that is based on the evidence that supports nursing education as well as the requirements of the institution, the program and accrediting agencies.

NU 621 Curriculum and Outcomes Evaluation in Nursing Education 3 cr

Analysis and synthesis of theories and concepts related to curriculum development and evaluation in nursing. Emphasis is on institutional purposes, goals, nursing curricula, evaluation, and nursing education research.

NU 622 Nurse Education Role Synthesis 2 cr

The purpose of this course is to engage the student in an analysis of concepts and theories basic to the nurse educator role in academic and in practice settings. Emphasis is on current issues and trends in nursing education, the role of the DNP nurse educator, and professional, social, political, legal, cultural, and other issues related to nursing education. Pre-requisites: NU 620 and NU 621. Co-requisite: NU 623.

NU 623 Nurse Education Role Synthesis Practicum 3 cr

The purpose of this course is the synthesis of nursing education theory in practicum experience. Focus is on the application of nursing education theory in developing, teaching, and evaluating an education unit, exemplifying the nurse educator role, and adhering to institutional and legal guidelines. Pre-requisites: NU 620 and NU 621. Co-requisite: NU 622.

NU 656 Nursing Informatics Project Planning and Development 3 cr

This course assists the Nursing Informatics DNP student to learn the processes embedded in developing a doctoral synthesis project. The course will address all aspects of project planning and development as a preliminary step to the Nursing Informatics student's selection of a topic or phenomenon of interest for the project and will incorporate well-built questions, search strategies and outcomes, identification of resources needed, plan for evaluation and dissemination.

NU 657 Nursing Informatics Residency I 3 cr

Theories of leadership, motivation, power, and change are used to influence change in health care organizations. This course will implement evidence-based clinical models and evaluate their effectiveness in health outcomes. The Nursing Informatics student will synthesize, critique, and apply evidence to support quality clinical or organizational practices.

In this mentored and supervised experience, the Nursing Informatics student will work with the primary faculty advisor to complete projects and advance their selected practice area. The Nursing Informatics student will have access to and authority for expanded scope of practice to master the DNP competencies. Residency sites will depend upon the Nursing Informatics student's career trajectory and approval by collaborating faculty. During the residency semester, student must participate in scheduled scholarly seminars online. A total of 180 clinical hours of direct practice/management is required.

NU 658 Nursing Informatics Residency II 3 cr

Provides Nursing Informatics students the opportunity to fully express all DNP competencies. The Nursing Informatics student, guided by the faculty facilitator, will implement the scholarly doctoral system.

NU 659 Nursing Informatics Residency III 3 cr

Final course in residency series as Nursing Informatics student continues to implement and evaluate project plan. Provides Nursing Informatics student the opportunity to fully express all DNP competencies. The Nursing Informatics student the opportunity to fully express all DNP competencies. The Nursing Informatics student, guided by the core faculty and advisor completes quality improvement evidence-based system's change project.

NU 661 Executive Administration Project Planning and Development 3 cr

This course assists the Executive Nursing Administration DNP student to learn the processes embedded in developing a doctoral synthesis project. The course will address all aspects of project planning and development as a preliminary step to the Executive Nursing Administration students' selection of a topic or phenomenon of interest for the project and will incorporate well-built questions, search strategies and outcomes, identification of resources needed, plan for evaluation and dissemination.

NU 662 Executive Administration Residency I 3 cr

Theories of leadership, motivation, power, and change are used to influence change in health care organizations. This course will implement evidence-based clinical models and evaluate their effectiveness in health outcomes. The Executive Nursing Administration student will synthesize, critique, and apply evidence to support quality clinical or organizational practices.

In this mentored and supervised experience, the Executive Nursing Administration student will work with the primary faculty advisor to complete projects and advance their selected practice area. The Executive Nursing Admin-

istration student will have access to and authority for expanded scope of practice to master the DNP competencies. Residency sites will depend upon the student's career trajectory and approval by collaborating faculty. During the residency semester, Executive Nursing Administration student must participate in scheduled scholarly seminars online. A total of 180 clinical hours of direct practice/management is required.

NU 663 Executive Administration Residency II 3 cr

Provides Executive Nursing Administration students the opportunity to fully express all DNP competencies. The student, guided by the faculty facilitator, will implement the scholarly doctoral system's change project.

NU 664 Executive Administration III 3 cr

Final course in residency series as Executive Nursing Administration student continues to implement and evaluate project plan. Provides Executive Administration student the opportunity to fully express all DNP competencies. The Executive Nursing Administration student, guided by the core faculty and advisor completes quality improvement evidence-based system's change project.

NU 690 Special Topics 1-6 cr

Selected topics in Nursing Science and/or Nursing Education.

NU 694 Directed Study and Research 1-6 cr

Directed study and research facilitated by a member of the graduate faculty.

OCCUPATIONAL THERAPY (OT)

OT 201 Introduction to Occupational Therapy 3 cr

An introduction to the occupational therapy profession and the scope of occupational therapy practice. Includes self assessment and development strategies to enhance students' readiness for the professional component of the occupational therapy curriculum. Familiarizes students with the functions, policies and services of the University, College and Department and includes an exploration of related allied health professions.

OT 499 Senior Honors Project - (H, W) 3-6 cr

Under the advice and guidance of a faculty mentor, honors students will identify and carry out a research project relevant to the field of Occupational Therapy study that will lead to a formal presentation at the annual Honors Student Colloquium. The senior project will be judged and graded by three faculty members chaired by the honors mentor. This course is required for Honors recognition and may be repeated for up to six credit hours. Pre-requisites: Permission of the department chair and completion of an approved project prospectus.

OT 500 Occupation in Context 3 cr

An in-depth, interdisciplinary study of the form, function and meaning of human occupation in a variety of environments including the therapeutic context. Includes an introduction to the occupational science literature and discussion of the impact of occupation on health and well-being. Special fee.

OT 502 Occupational Development I 3 cr

Study of human occupational development, including developmentally appropriate roles, tasks and activities. Covers prenatal period through adolescence. Emphasis is on normal human development, with some consideration of abnormal development.

OT 503 History and Philosophy of Occupational Therapy 3 cr

Explores the history and development of occupational therapy within the context of national and international events. Philosophies inherent to the field will be explored with an overview of the life-span approach to "occupation". Includes discussion of official documents guiding the profession and legislative changes affecting the current and future practice of the profession. Students will be required to learn terminology utilized by occupational therapists and demonstrate a beginning awareness of occupational performance analysis.

OT 504 Neuroscientific Bases of Occupational Performance 3 cr

Study of the neural development, chemistry, structure, function and pathology of the nervous system. Emphasizes the application of basic science knowledge as it relates to human occupational performance. Special fee.

OT 505 Scientific Inquiry I 3 cr

An introduction to qualitative and quantitative research concepts and statistical methods with emphasis on evidence-based practice and outcomes research. Includes library search strategies, critical analysis of scientific literature, application of statistical methods and research designs, and scientific writing skills.

OT 510 Theoretical Foundations of Occupational Therapy (W) 3 cr

Introduction to the prevalent theories and fundamental concepts guiding occupational therapy. Includes similarities and differences among major theories. Emphasizes application of these theories to professional practice in occupational therapy. Special fee.

OT 512 Occupational Development II (W) 3 cr

Study of human occupational development, including developmentally appropriate roles, tasks and activities. Covers young adulthood through senescence and death. Emphasis is on normal human development, with some consideration of abnormal development. This course includes a writing component and partially satisfies requirements for (W) courses.

OT 517 Occupational Evaluation I 3 cr

An overview of the evaluation process in occupational therapy. Includes the theoretical basis of evaluation, selection of appropriate data gathering methods, use of standardized and non-standardized assessment tools, interpretation of results and documentation of evaluation findings. Special fee.

OT 519 Professional Development Seminar I 2 cr

Introduction to professional behavior and interpersonal dynamics in a seminar format. Emphasizes self-awareness, self-assessment, communication issues and the value of life-long learning. Also includes medical terminology.

OT 520 Occupational Intervention I 5 cr

Occupational therapy intervention for persons with developmental and acquired impairments and disabilities affecting self care skills. A life-span approach will be taken with emphasis on occupational performance components and context. Therapeutic interventions will emphasize problem-solving, critical reasoning, and occupational performance synthesis to enhance occupational performance and adaptation. Special fee.

OT 521 Practicum I 1 cr

Observation and limited participation in clinical and community-based settings. Emphasis on assessment and intervention in performance of occupations related to self-care.

OT 524 Biomedical and Phenomenological Perspectives on Disability I 3 cr

Biomedical etiology, diagnostic procedures, prognosis, and medical management including pharmacotherapies of selected disorders are presented and contrasted with phenomenological perspectives based on personal narratives. Includes the identification of the consequences of the disorders and their impact on occupational performance.

OT 525 Documentation 3 cr

Overview of basic professional writing skills including: reporting evaluation data, intervention plans, progress notes, and discharge summaries. Includes understanding the varied purposes of documentation as well as legal and ethical issues in documentation.

OT 527 Occupational Evaluation II 3 cr

Orientation to and practice in the use of both standardized and non-standardized assessment tools appropriate for evaluating persons with developmental and acquired impairments and disabilities affecting occupational performance. Special fee.

OT 530 Occupational Intervention II 5 cr

Occupational therapy intervention for persons with developmental and acquired impairments and disabilities affecting play/ leisure skills. A life-span approach will be taken with emphasis on occupational performance components and context. Therapeutic interventions will emphasize problem-solving, critical reasoning, and occupational performance synthesis to enhance occupational performance and adaptation. Special fee.

OT 531 Practicum II 1 cr

Observation and limited participation in clinical and community-based settings. Emphasis on assessment and intervention in performance of occupations related to play/leisure.

OT 534 Biomedical and Phenomenological Perspectives on Disability II 3 cr

Biomedical etiology, diagnostic procedures, prognosis, and medical management including pharmacotherapies of selected disorders are presented and contrasted with phenomenological

perspectives based on personal narratives. Includes the identification of the consequences of the disorders and their impact on occupational performance.

OT 536 Management 3 cr
Explores the application of the principles of organizational management to the development and administration of occupational therapy programs in the emerging health care environment.

OT 538 Group Dynamics 2 cr
An analysis of group intervention theories, techniques and strategies. Includes discussion of therapeutic use of self, group dynamics, leadership and stages of group development. Students will learn how to design group interventions for a variety of populations.

OT 539 Professional Development Seminar III 2 cr
Designed to facilitate students' transition from didactic and part-time fieldwork components of the curriculum to the required full-time fieldwork experience. Emphasizes professional behavior, clinical reasoning and ethical issues.

OT 540 Occupational Intervention III 5 cr
Occupational therapy intervention for persons with developmental and acquired impairments and disabilities affecting work skills. A life-span approach will be taken with emphasis on occupational performance components and context. Therapeutic interventions will emphasize problem-solving, critical reasoning, and occupational performance synthesis to enhance occupational performance and adaptation. Special fee.

OT 541 Practicum III 1 cr
Observation and limited participation in clinical and community-based settings. Emphasis on assessment and intervention in performance of occupations related to work.

OT 544 Musculoskeletal Assessment 2 cr
Study of structures and functions of the human body with an emphasis on the limbs and back. Instruction includes assessment of the biomechanical functions of upper and lower extremities. Special fee.

OT 545 Scientific Inquiry II 3 cr
The application of qualitative and quantitative research concepts and statistical methods in the development and implementation of a scholarly project. Includes data collection and preliminary analysis. Special fee.

OT 546 Supervision 2 cr
Application of the principles of supervision with special emphasis on the appropriate roles and use of the Certified Occupational Therapy Assistant (COTA), aides and non-OT personnel.

OT 550 Level II Fieldwork (A) 6 cr
A directed experience in evaluation, planning and implementing occupational therapy services under the supervision of an experienced, certified occupational therapist. Designed to emphasize critical reasoning, entry-level skill acquisition and integration of didactic knowledge with practice. Special fee.

OT 555 Level II Fieldwork (B) 6 cr
A directed experience in evaluation, planning and implementing occupational therapy services under the supervision of an experienced, certified occupational therapist. Designed to emphasize critical reasoning, entry-level skill acquisition and integration of didactic knowledge with practice. Special fee.

OT 558 Technology and Environmental Interventions in OT 3 cr
An introduction to technology and environmental intervention (TEI: including but not limited to assistive, electronic, information, and rehabilitative) strategies used to increase, maintain or improve functional capabilities of individuals with disabilities and/or to design and implement accessible environments to support full participation in life activities. This course is designed to meet the basic level of competency in TEI for the entry level occupational therapist. Special fee.

OT 559 Professional Leadership 3 cr
Explores concepts and theories of leadership and emphasizes the importance of leadership in context, interdisciplinary teaming and the nature of change processes and diffusion of innovations. Also includes a discussion of issues of professional concern including but not limited to: OT's role in emerging practice areas, health disparities, occupational justice, health care reform and current controversies in the field.

OT 570 Community-Based Intervention 3 cr
Occupational therapy intervention for clients in community settings. A life-span approach will be taken with emphasis on occupational performance areas and contexts. Community interventions will emphasize problem-solving, critical reasoning and occupational analysis to enhance performance and adaptation. Includes health promotion and disease/disability prevention strategies, innovative program development, evaluation and funding strategies, and community health concepts.

OT 575 Advanced Professional Writing 3 cr
Covers a variety of types of professional writing useful to occupational therapists including: grant proposals; journal articles; books; client education materials; and presentation proposals and papers. Includes both the form and content of a range of technical documents as well as the processes of writing, peer review and critique.

OT 580 Level II Fieldwork (C) 4 cr
A directed experience in evaluation, planning and implementing occupational therapy services under the supervision of an experienced, certified occupational therapist. Designed to emphasize critical reasoning, entry-level skill acquisition and integration of didactic knowledge with practice.

OT 585 Level II Fieldwork (D) 4-12 cr
A directed experience in evaluation, planning and implementing occupational therapy services under the supervision of an experienced, certified occupational therapist. Designed to emphasize critical reasoning, entry-level skill acquisition and integration of didactic knowledge with practice.

OT 590 Special Topics 1-6 cr
A variable topics course covering areas not available in other occupational therapy courses. A subtitle identifying the topic will be entered on the student's record.

OT 598 Independent Study in Occupational Therapy 1-6 cr
Special studies directly relevant to the practice of occupational therapy. The student will select an area of interest in which they wish to become more proficient. A faculty member will provide guided study, supervision and assistance in developing appropriate learning experiences.

PHYSICIAN ASSISTANT STUDIES (PA)

PA 510 Clinical Medicine I 4 cr
Clinical Medicine I (PA 510) is the introductory course in a four part series covering primary care clinical medicine. It is designed to incorporate and integrate topics and content both horizontally and vertically throughout the didactic and clinical curricula. The course is divided into lecture and lab sections that will be graded separately and will provide opportunities for the student to develop critical thinking skills essential to patient evaluation and management. The use of patient simulations is included. Introductory subject matter covered during this first course will include physical examination skills and use of medical instruments, patient history taking, patient counseling, patient education, interpersonal and communication skills, and epidemiology. Additional topics will include an introduction to behavioral medicine, professionalism, inter professional education, medical research methods, introduction to medical literature; introduction to laboratory diagnosis and introduction to nutrition. Finally, medical and social topics addressed will include the primary care medical home, rural and medically undeserved populations, social determinants of health, healthy people 2020, public health issues, and community health care.

PA 511 Human Gross Anatomy 4 cr
This is a course in gross anatomy of human body systems utilizing human cadavers and prosections. Emphasis is placed on the relationships between structure and function. Special fee.

PA 512 Physiology 6 cr
Physiology (PA 512) is the scientific basis of medicine. This course will provide the PA student with sufficient in-depth knowledge of cellular and organ physiology necessary for understanding of normal and abnormal human body function and for advancement to courses in pathophysiology, pharmacology, and clinical medicine. This course is divided into six sections which present the basic scientific concepts of human physiology with clinical applications and relevance to disease states: 1) cellular, neuromuscular, autonomic, and cardiac physiology; 2) circulatory physiology; 3) respiratory physiology; 4) renal, electrolyte, and acid-base physiology; 5) gastrointestinal and metabolic physiology; 6) endocrinology.

PA 513 Physician Assistant (PA) Issues I 2 cr
Physician Assistant (PA) Issues I (PA 513) is the introductory course in a four part series covering commonly encountered issues and their impact on physician assistant practice. This series is designed to incorporate and integrate topics and content both horizontally

and vertically throughout the didactic and clinical curricula. The course will utilize a variety of teaching strategies. Introductory subject matter covered during the first course will include factors affecting the development of the profession and the role of the PA in today's health care system, physician-PA team relationship, credentialing, political issues, policies and regulations governing the scope of PA practice; PA and other pertinent professional organizations; introduction to evidence-based medicine (EBM), introduction to the health insurance portability and accountability act (HIPPA); introduction to primary care medicine with a focus on rural and medically undeserved areas (MUAs); introduction to inter professional education and collaboration; introduction to principles and practice of medical ethics; introduction to blood borne pathogens and tuberculosis; and policies and procedures governing sexual harassment and harassment in the workplace.

PA 514 Introduction to Infectious Diseases 1 cr

This course is designed to provide PA students a solid foundation in basic immunology, microbial genetics, structure, nutrition and basic host-parasite relationships. The course will place particular emphasis on the role and application of these subject matters in disease manifestations as well as use/development of diagnostic and treatment modalities. Vulnerability of special populations and interactions between various environmental, social and behavioral factors with the human host in relationship to infection control and treatment will also be emphasized.

PA 520 Clinical Medicine II 9 cr

Clinical Medicine II (PA 520) is the second course in a four part series covering primary care clinical medicine and surgery topics. It is designed to incorporate and integrate topics and content both horizontally and vertically throughout the didactic and clinical curricula. The course is divided into lecture and lab sections that will be graded separately and will provide opportunities for the student to develop critical thinking skills essential to patient evaluation and management. The use of standardized patients, patient simulations and clinical experiences are included. Topics will include a continuation of physical examination skills, patient history taking, patient counseling, patient education, epidemiology, history of the PA Profession, professionalism, interpersonal and communication skills, inter professional education, medical research methods, and researching medical literature, the primary care medical home, rural and medically under served populations, social determinants of health, healthy people 2020, public health issues, and community health care. Specific topics covered in PA 520 include dermatology, ophthalmology, ENT, cardiovascular medicine, EKG, pulmonary medicine, nephrology, and GU medicine. Imbedded in this course will be topics in infectious disease and diagnostic data that will align with the subject matter covered during this semester.

PA 521 Pathophysiology I 4 cr

Pathophysiology I (PA 521) is the first course in a three-part series that covers the alterations in normal physiology that occur in human disease states. This course will provide the PA student with sufficient in-depth knowledge of pathophysiology necessary for the understanding of abnormal human body function and for advancement to subsequent courses in pathophysiology, pharmacology, and clinical medicine. Topics will include an overview of cellular pathophysiology, followed by specific topics that align with the organization of the clinical medicine series: cardiovascular pathophysiology, EKG, pulmonary pathophysiology, and renal/GU pathophysiology.

PA 522 Pharmacology I 4 cr

Pharmacology I (PA 522) is the first course in a three-part series that covers the basic scientific concepts of drug classification, mechanism of action, toxicity, and clinical use of drugs. Introductory topics will include the laws and regulations governing the use of pharmaceuticals, prescriptive practices, basic science and properties of drug molecules, drug interactions, and clinical pharmacology of the autonomic nervous system. Specific topics will align with the organization of the clinical medicine series; cardiovascular drugs, pulmonary drugs, drug therapy of renal and genitourinary diseases.

PA 525 Physician Assistant (PA) Issues II 2 cr

Physician Assistant (PA) Issues II (PA 525) is the second in a four part series covering commonly encountered issues and their impact on physician assistant practice. This series is designed to incorporate and integrate topics and content both horizontally and vertically throughout the didactic and clinical curricula. The course will utilize a variety of teaching strategies. Subject matter covered during this second course will include factors affecting diversity and inclusion; cultural competence; health care delivery systems, workforce shortage; health disparities; health literacy; public health, primary care medicine with a focus on veterans, rural and medically under served medicine, evidence-based medicine, professionalism, social determinants of health, health promotion, disease prevention, health beliefs and patient expectations.

PA 530 Clinical Medicine III 9 cr

This is the third in a series of four courses in patient assessment. In this course the student will study: 1) History and Physical Exam, 2) Gastroenterology, 3) General Surgery, 4) Genitourinary medicine, 5) Pediatric medicine, 6) Obstetrics/Gynecology, 7) Endocrinology, 8) Orthopaedics, and 9) continuation of Medical Research Methods.

PA 531 Pathophysiology II 4 cr

Pathophysiology II (PA 531) is the second course in a three-part series that covers the alterations in normal physiology that occur in human disease states. This course will provide the PA student with sufficient in-depth knowledge of pathophysiology necessary for understanding of abnormal human body function and for advancement to subsequent courses in pathophysiology, pharmacology, and clinical medicine. Topics will align with the subject matter in Clinical Medicine II (PA 530): neurology, rheumatology, endocrinology, hematology, oncology, gastrointestinal, and psychiatric disorders.

PA 532 Pharmacology II 6 cr

Pharmacology I (PA 532) is the first course in a three-part series that covers the basic scientific concepts of drug classification, mechanism of action, toxicity, and clinical use of drugs. Introductory topics will include the laws and regulations governing the use of pharmaceuticals, prescriptive practices, basic science and properties of drug molecules, drug interactions, clinical pharmacology of the autonomic nervous system, and the therapeutic use of antimicrobials in human infections. Specific topics will align with the organization of the clinical medicine series: cardiovascular agents, pulmonary agents, therapy of rheumatic diseases, and psychotherapeutic agents.

PA 534 Physician Assistant (PA) Issues III 2 cr

Physician Assistant (PA) Issues III (PA 534) is the third in a four part series covering commonly encountered issues and their impact on physician assistant practice. This series is designed to incorporate and integrate topics and content both horizontally and vertically throughout the didactic and clinical curricula. The course will utilize a variety of teaching strategies. Introductory subject matter covered during this third course will include topics coding and billing, medical documentation, spirituality and health, epidemiology, transition from didactic to clinical year, Heath care Cost, Advanced Directives, End of Life Issues, interprofessional team-based patient-centered care, healthcare in various clinical settings (homelessness, migrant, correctional, inner city), and primary care medicine with a focus on veterans, rural and medically underserved medicine, evidence-based medicine, medical documentation and professionalism.

PA 540 Clinical Medicine IV 9 cr

This is the fourth in a series of four courses in patient assessment. In this course the student will study: 1) History and Physical Exam, 2) Nephrology, 3) Geriatric Medicine, 4) Emergency Medicine, 5) Hematology/Oncology, 6) Neurology, 7) continuation of Medical Research Methods.

PA 541 Pathophysiology III 2 cr

Pathophysiology III (PA 541) is the third course in a three-part series that covers the alterations in normal physiology that occur in human disease states. This course will provide the PA student with sufficient in-depth knowledge of pathophysiology necessary for understanding of abnormal human body function and for advancement to subsequent courses in pharmacology and clinical medicine. Topics will align with the subject matter in Clinical Medicine III (PA 540): common geriatric and pediatric conditions, obstetric and gynecological diseases, and selected topics regarding surgical procedures and common emergency room presentations.

PA 542 Pharmacology III 4 cr

Pharmacology III (PA 542) is the third course in a three-part series that covers the drug therapy of human disease states. This course will provide the PA student with sufficient in-depth knowledge of pharmacology necessary for concurrent and future courses in clinical

medicine. Topics will align with the subject matter in Clinical Medicine III (PA 540): geriatrics, pediatrics, gynecology, surgery, emergency medicine.

PA 543 Physician Assistant (PA) Issues IV 2 cr

Physician Assistant (PA) Issues IV (PA 543) is the final course in a four part series covering commonly encountered issues and their impact on physician assistant practice. This series is designed to incorporate and integrate topics and content both horizontally and vertically throughout the didactic and clinical curricula. The course will utilize a variety of teaching strategies. Introductory subject matter covered during this final course series will introduce new topics and re-visit prior topics of discussion in other PA Issues courses. Topics will include, interpersonal and communication skills, palliative and rehabilitative care, personal bias and stereo typing, patient compliance and health outcomes, violence identification and prevention, response to illness, injury and stress, patient safety prevention of medical errors, death/dying and loss, human sexuality, patient education and counseling, and primary care medicine with a focus on veterans, rural and medically underserved medicine, evidence-based medicine, medical documentation and professionalism.

PA 550 Internal Medicine Preceptorship 4 cr

The student is assigned to a clinical setting, often in the inpatient setting, to obtain knowledge, skills and attitudinal/behavioral professional components pertaining to general internal medicine. These competencies are to be obtained while engaging in all aspects of patient care through: the medical interview, history and physical exam, critical thinking, knowledge base, diagnosis and treatment plan, patient education, as well as appropriate health maintenance and disease prevention measures.

PA 555 Psychiatry Preceptorship 4 cr

The student is assigned to a clinical setting, often in the inpatient setting, to obtain knowledge, skills and attitudinal/behavioral professional components pertaining to general internal medicine. These competencies are to be obtained while engaging in all aspects of patient care through: the medical interview, history and physical exam, critical thinking, knowledge base, diagnosis and treatment plan, patient education. Students will also be expected to interact on an interdisciplinary team to provide care to patients with Psychiatric needs, including awareness of social and community services.

PA 560 Pediatrics Preceptorship 8 cr

The student is assigned to a pediatric setting in order to obtain knowledge, skills and attitudinal/behavioral professional components pertaining to general pediatric medicine. These competencies are to be obtained while engaging in all aspects of patient care through: the medical interview, history and physical exam, critical thinking, knowledge base, diagnosis and treatment plan, patient and family education, anticipatory-guidance, as well as appropriate health maintenance and disease prevention measures.

PA 570 Primary Care/ Family Practice Preceptorship 8 cr

The student is assigned to a primary care setting in order to obtain knowledge, skills and attitudinal/behavioral professional components pertaining to general family practice medicine across the life span. These competencies are to be obtained while engaging in all aspects of patient care through: the medical interview, history and physical exam, critical thinking, knowledge base, diagnosis and treatment plan, patient education, appropriate health maintenance and disease prevention measures.

PA 580 General Surgery Preceptorship 4 cr

The student is assigned to a hospital-surgical setting in order to gain exposure to all realms of the general surgery experience. These experiences are to include: pre-operative, intra-operative, and post-operative care. Furthermore, students are expected to further develop patient care skills through: the medical interview, history and physical examination, critical thinking, enhancement of medical knowledge, patient and family counseling, and understanding the role of a PA within the hospital team.

PA 590 OB/GYN Preceptorship 4 cr

The student is assigned to hospital in-patient and out-patient ambulatory care settings in order to gain exposure to all reams of the women's health across the life span. These experiences are to include: pre-natal, post-natal, pre-operative, intra-operative, post-operative care, annual wellness exam, and emergent care exams. Furthermore, students are expected to further develop patient care skills through: the medical interview, history and physical examination, critical thinking, enhancement of medical knowledge, patient and family counseling, and understanding the role of a PA within the hospital team.

PA 591 Emergency Medicine Preceptorship 4 cr

The student is assigned to an emergency department setting in order to gain exposure to patients requiring critical, emergent and non-emergent care. Furthermore, students are expected to further develop patient care skills through: the medical interview, history and physical examination, critical thinking, enhancement of medical knowledge, patient and family counseling, and understanding the role of a PA within the emergency department team.

PA 592 Elective Clinical Preceptorship I 4 cr

The student will choose from a variety of available elective rotations in order to engage in all aspects of patient care including: the medical interview, history and physical exam, critical thinking, knowledge base, diagnosis and treatment plan, patient education, appropriate health maintenance and disease prevention measures. The goal of elective rotations is to provide the student the opportunity to explore areas of interest for further employment or increase knowledge in areas of weakness.

PA 593 Elective Clinical Preceptorship II 8 cr

The student will choose from a variety of available elective rotations in order to engage in all aspects of patient care including: the medical interview, history and physical exam, critical thinking, knowledge base, diagnosis and treatment plan, patient education, appropriate health maintenance and disease prevention measures. The goal of elective rotations is to provide the student the opportunity to explore areas of interest for further employment or increase knowledge in areas of weakness.

PA 595 Summative Evaluation 3 cr

PA 595 is designed to evaluate student learning at the end of the 27 month PA Training program. The assessment used in this course will help determine the level at which students achieved the expectations for their learning as prescribed and to identify instructional areas that may need additional attention. The summative assessments include: 1) comprehensive examination, 2) OSCE with standardized patient, 3) on-line Board Review and 4) Capstone Project.

A comprehensive written examination will be administered as a final evaluation of the student's progress. This test is also designed to prepare the graduate for the NCCPA exam.

PHYSICAL EDUCATION ACTIVITY AND PROFESSIONAL PHYSICAL EDUCATION (PE)

PE 100 Concepts of Health and Fitness 3 cr

An introductory course designed to show students the contributions of physical activity to preventive health. Students learn how to evaluate their physical and nutritional needs, and to design individual programs for healthy living.

PE 101 PE Activity 1 cr

Instruction and practice of basic sport and activity skills. A varying content course that gives students choices from designated semester offerings. May be repeated for credit.

PE 102 Weight Training 1 cr

A progressive resistance training course designed to improve muscular strength and muscular endurance. May be repeated for credit.

PE 103 PE Activity 1 cr

Instruction and practice of sport and activity skills. A varying content course that gives students choices from designated semester offerings. May be repeated for credit. An additional fee will be charged for these activities.

PE 104 PE Activity 1 cr

Instruction and practice of basic sport and activity skills. A varying content course that gives students choices from designated semester offerings. May be repeated for credit. An additional fee will be charged for these activities.

PE 105 PE Activity 1 cr

Instruction and practice in basic sport and activity skills. A varying content course that gives students choices from designated semester offerings. May be repeated for credit. An additional fee will be charged for these activities.

PE 106 Gymnastics 1 cr

Instruction and practice in gymnastics skills. A varying-content course treating different skill levels in gymnastics. May be repeated for credit.

PE 107 PE Activity 1 cr
Instruction and practice of basic sport and activity skills. A varying content course that gives students choices from designated semester offerings. May be repeated for credit. An additional fee will be charged for these activities.

PE 108 Ballroom Dancing 1 cr
Knowledge, skills, and techniques associated with various forms of Ballroom dancing through demonstration, practice, and partnering.

PE 109 Swing Dancing 1 cr
Knowledge, skills, and techniques associated with various forms of Swing dancing through demonstration, practice, and partnering.

PE 110 Dance 1 cr
Instruction and practice in dance. A varying-content course treating different types of dance such as but not limited to: social, folk, square, and dance performance. May be repeated for credit.

PE 112 Latin Dancing 1 cr
Knowledge, skills, and techniques associated with various forms of Latin dancing through demonstration, practice, and partnering.

PE 113 Creative Dance 1 cr
An introduction to the dance as an art form; the vocabulary for movement as a means of self-expression. May be repeated for credit.

PE 114 Aerobics 1 cr
Aerobic exercise is a physical fitness program that offers complete and effective conditioning. It involves jogging, jumping, lunging, kicking, and stretching to music.

PE 115 Ballroom and Swing Dancing 1 cr
Knowledge, skills, and techniques associated with various forms of Ballroom and Swing dancing through demonstration, practice, and partnering.

PE 116 Cajun and Swing Dancing 1 cr
Knowledge, skills, and techniques associated with various forms of Cajun and Swing dancing through demonstration, practice, and partnering.

PE 117 Ballet 1 cr
Instruction and practice in ballet. A varying-content course treating the different skill levels of ballet with emphasis on body placement through barre and centre exercises. May be repeated for credit.

PE 118 Jazz 1 cr
Instruction and practice in jazz dancing. A varying-content course treating the various skill levels of jazz with emphasis on correct body placement through isolation and locomotor techniques. May be repeated for credit.

PE 119 Modern Dance 1 cr
Instruction and practice in modern dance. A varying-content course with exposure to various skill levels and modern dance styles. May be repeated for credit.

PE 120 Tennis (Basic) 1 cr
Instruction and practice in beginning and intermediate tennis. May be repeated for credit.

PE 121 Golf (Basic) 1 cr
Instruction and practice in beginning golf. May be repeated for credit.

PE 122 Bowling 1 cr
Instruction and practice in beginning bowling. Requires special fee. May be repeated for credit.

PE 123 Archery 1 cr
Instruction and practice in beginning archery. May be repeated for credit.

PE 124 Latin and Swing Dancing 1 cr
Knowledge, skills, and techniques associated with various forms of Latin and Swing dancing through demonstration, practice, and partnering.

PE 125 Badminton 1 cr
Instruction and practice in beginning and intermediate badminton. May be repeated for credit.

PE 126 Ballroom and Latin Dancing 1 cr
Knowledge, skills, and techniques associated with various forms of Ballroom and Latin dancing through demonstration, practice, and partnering.

PE 127 Country Western/ Partner Dancing 1 cr
Knowledge, skills, and techniques associated with various forms of Country Western/Partner dancing through demonstration, practice, and partnering.

PE 128 Dance Performance 1 cr
Knowledge, skills, and techniques associated with various forms of Dance Performance through demonstration and practice.

PE 129 Folk and Square Dancing 1 cr
Knowledge, skills, and techniques associated with various forms of Folk and Square dancing through demonstration, practice, and partnering.

PE 130 Beginning Swimming 1 cr
Instruction and practice in beginning swimming and water safety. May be repeated for credit.

PE 131 Intermediate Swimming 1 cr
Instruction and practice in intermediate swimming and water safety. May be repeated for credit.

PE 132 Step Aerobics 1 cr
A physical activity class which includes the instruction and practice of Step Aerobics. The course is designed to improve cardiovascular and muscular endurances and improve coordination.

PE 133 Muscle Toning and Conditioning 1 cr
Muscle Toning and Conditioning is a physical activity course in which the student, through active participation, will develop knowledge and skills sufficiently adequate to tone the body and improve cardio-respiratory fitness using weights, body bars, resistance tubes, and other equipment.

PE 134 Karate I 1 cr
A beginning course in Karate designed to develop physical fitness, self-discipline, the fundamentals and techniques of blocking, punching, striking, kicking, and stances.

PE 135 Karate II 1 cr
An intermediate course in Karate designed as a continuation of Karate I with the introduction of additional blocks, kicks, and footwork. Self-discipline and physical fitness continue to be stressed.

PE 136 Karate III 1 cr
An advanced course in Karate designed as a continuation of Karate II with the addition of more advanced and versatile concepts of speed, distance, timing, and footwork. Vigorous training methods are used and self-discipline is stressed.

PE 138 Tai Chi 1 cr
Tai Chi training presents basic concepts and techniques to enhance physical fitness and develop mental discipline for stress reduction and personal wellness.

PE 139 Yoga 1 cr
The purpose of this course is to introduce the basic concepts of yoga theory, teach safe yoga posture, and to help participants in developing balance and fitness, as well as manage stress wisely.

PE 141 Softball 1 cr
Instruction and practice in softball. May be repeated for credit.

PE 142 Volleyball 1 cr
Instruction and practice in volleyball. May be repeated for credit.

PE 143 Basketball 1 cr
Instruction and practice in basketball. May be repeated for credit.

PE 144 Soccer 1 cr
Instruction and practice in soccer. May be repeated for credit.

PE 145 Jogging 1 cr
Instruction and practice in the activity of jogging designed to improve cardiovascular endurance.

PE 146 Bicycling 1 cr
An introductory course to bicycling for leisure and fitness emphasizing the selection and care of bicycles, safety concerns, apparel, route selection, bike handling skills, and development of a bicycle fitness program.

PE 147 Racquetball 1 cr
Instruction and practice in racquetball. May be repeated for credit.

PE 148 Intermediate Golf 1 cr
Instruction and practice in intermediate golf. Demonstrable beginner golf skills necessary.

PE 149 Ultimate Frisbee 1 cr
Fundamental skills, rules, and strategies with Frisbees with opportunities for participation.

PE 155 Martial Arts 1 cr
Instruction and practice in the various forms of Martial Arts. A varying-content course treating different skill levels of karate, judo, kung-fu, etc. Requires special fee. May be repeated for credit.

PE 157 ICA-Varsity Sports 1 cr
Restricted to members of South Alabama intercollegiate athletic teams by special permission of the respective coaches. Includes but not limited to: basketball, soccer, baseball,

track, golf, tennis, and volleyball. May be repeated for credit with the exception of education majors.

PE 166 Movement, Rhythms, and Developmental Activities 3 cr
Movement exploration experiences, developmental games, rhythmic and dance activities are explained, developed, and practiced.

PE 201 Orientation to Health and Physical Education 3 cr
An overview of the fields of Health, Physical Education and Athletic Training. An introduction to the Department of HPELS followed by a survey of philosophical and historical aspects, and professional preparation standards of the specific fields.

PE 231 ARC Lifeguard Training 3 cr
Prepares the student for American Red Cross Lifeguard, CPR for the Professional Rescuer, and first aid certification. Emphasis is placed on emergency action plans, life guarding techniques, and all forms of victim rescue. Pre-requisite: Strong swimmers only. See instructor for specific skill requirements.

PE 278 Sport and Human Behavior 3 cr
A study of the psychological and sociological aspects of sport and their relationship to human behavior.

PE 282 Introduction to Athletic Training 3 cr
Survey of the basic techniques and practices of athletic training. Study includes prevention, recognition, care, and treatment of athletic injuries. Development of basic athletic training skills in the use of preventive and protective techniques of adhesive tape application.

PE 296 Observation in Athletic Training I 1 cr
An opportunity to observe and gain practical skills required in athletic training or the broad field of sports medicine. A minimum of 30 hours of clinical work and observation during afternoon and evening hours and a weekly seminar required.

PE 297 Observation in Athletic Training II 1 cr
A continuation of PE 296 providing students with additional opportunity to observe and master practical skills required in athletic training or the broad field of sports medicine. A minimum of 30 hours of clinical work and observations during afternoon and evening hours and a weekly seminar required.

PE 351 Sports Skills 3 cr
The development of skills and the understanding of fundamentals and strategies in selected individual, dual, and team sports. Field Experiences required. Proof of background check, fingerprinting, and liability insurance required. PE (P-12) majors only. Instructor permission required.

PE 370 Basic Motor Learning 3 cr
Study of the psychological, experimental, developmental, and social aspects of learning in the psychomotor domain.

PE 372 Coaching Gymnastics 3 cr
History, theory, and fundamentals of coaching and officiating gymnastics.

PE 373 Coaching Volleyball 3 cr
History, theory, and fundamentals of coaching and officiating volleyball.

PE 374 Coaching Soccer 3 cr
History, theory, and fundamentals of coaching and officiating soccer.

PE 375 Coaching Football 3 cr
History, theory, and fundamentals of coaching and officiating football.

PE 376 Coaching Basketball 3 cr
History, theory, and fundamentals of coaching and officiating basketball.

PE 377 Coaching Baseball 3 cr
History, theory, and fundamentals of coaching
and officiating baseball.

PE 378 Coaching Track and Field 3 cr
History, theory, and fundamentals of coaching
and officiating track and field.

PE 380 Kinesiology 3 cr
Theory and application of the mechanical and anatomical principles of human movement.

PE 381* Evaluation and Measurement in Health and Physical Education 3 cr
Elementary statistical procedures, evaluation, and interpretation, and the use of tests and other measurement devices in health and physical education. A Pre-requisite for student teaching.

PE 385* Evaluation and Treatment of Athletic Injuries I 3 cr
A study of athletic injuries to the lower extremities and lumbar spine. Prevention, evaluation, and management of these injuries will be explored along with common surgical procedures associated with these sports related injuries and conditions.

PE 386* Evaluation and Treatment of Athletic Injuries II 3 cr
Prevention, evaluation, and management of injuries to the head, neck, upper extremities, and the trunk will be discussed in detail. Field and clinical strategies for the identification of signs and symptoms will be explored along with common surgical procedures used to treat upper extremity and axial injuries.

PE 396* Practicum in Athletic Training II 1 cr
A practical and clinical application of techniques utilized in the evaluation and treatment of athletic injuries to the lower extremities and lumbar spine. A minimum of 200 hours of clinical work during afternoon and evening hours and a weekly seminar is required.

PE 397* Practicum in Athletic Training II 1 cr
A practical and clinical application of techniques utilized in the evaluation and treatment of athletic injuries to the upper extremities, axial skeleton, thorax, and abdomen. A minimum of 200 hours of clinical work during afternoon and evening hours and a weekly seminar is required.

PE 428 Portfolio Assessments 0 cr
Professional portfolio assessments will be collected and monitored.

PE 429* School Laboratory Experience 0-3 cr
Professional laboratory experiences involving observation and participation at a local public schools. Co-Requisite: PE 452.

PE 430* Student Teaching-Early Childhood/Elementary 4 cr
Observation and supervised teaching with opportunity for study and discussion of problems and issues encountered at the elementary level. Students will be placed with a person holding a valid teaching certificate in the appropriate field. Pre-requisite: Admission to teacher candidacy.

PE 452* Methods of Teaching Physical Education (W) 3 cr
Organizing materials and developing methods of teaching physical education in elementary, middle, and high schools. Field experience required. Co-Requisite: PE 429.

PE 460* Student Teaching-Secondary 1-9 cr
Observation and supervised teaching with opportunity for study and discussion of problems and issues encountered in the secondary schools. Students will be placed with a person holding a valid teaching certificate in the appropriate field. Pre-requisite: Admission to teacher candidacy.

PE 461 Physical Education for Atypical Children and Youth 3 cr
Principles and techniques for adapting physical education activities to meet the needs of children with special problems.

PE 470* Student Teaching in the P-12 Program 9 cr
Observation and supervised teaching with opportunity for study and discussion of problems and issues encountered in the P-12 program. Students will be placed with a person holding a valid teaching certificate in the appropriate field. Pre-requisite: Permission of the department is required.

PE 474 Sport and Fitness Conditioning 3 cr
Study of the theory, principles, methods, and techniques in the development, implementation, and evaluation of various strength and conditioning programs designed to enhance athletic performance and improve physical fitness. The conditioning needs of various populations with disease and degenerative conditions will be examined.

PE 475 Organizations and Administration of Health and Physical Education (W) 3 cr
Planning, policies, administrative and management functions and duties in health and physical education programs.

PE 476 Physiology of Exercise 3 cr
The study of the body's physiological responses and adaptations to exercise and training.

PE 477 Water Safety Instructor 3 cr
Trains prospective instructor candidates for American Red Cross Water Safety Instructor

Certification. Candidates will learn how to teach all levels of swimming and basic diving to students of all ages. How to organize classes, use of lesson plans and practice teaching skills. Pre-requisite: Proficient swimmer in all seven strokes. See instructor for specific skill requirements.

PE 478 Coaching Theory 3 cr

Introduction to the profession of coaching. Topics include: physical, mental, and organizational preparation, teaching strategies (individual and team aspects), legal liability, officiating, and national guidelines.

PE 479* Fitness Assessment and Exercise Prescription 3 cr

Through didactic study and laboratory participation, the student will develop the knowledge base and clinical skills needed to assess physical fitness and plan exercise prescriptions for apparently healthy individuals. Completion of PE 380 and PE 476 is recommended.

PE 480* Therapeutic Exercise 3 cr

Theory, current research, principles, application and techniques of rehabilitation used to treat injuries to athletes and the physically active across the life span are studied. Psychological and physical parameters of rehabilitation and exercise conditioning are presented.

PE 481* Therapeutic Modalities in Athletic Training 3 cr

Theory, current research, principles, application and techniques of various therapeutic modalities used in treating athletes and the physically active are studied.

PE 482 Advanced Athletic Training 3 cr

Advanced and contemporary topics, issues, and application in athletic training. Pre-requisites: PE 282, PE 380.

PE 484 Applications in Sport Conditioning 3 cr

Through didactic study and physical activity participation, the student will develop the knowledge base and skills in fundamental and advanced exercise theory and techniques in sport and fitness conditioning with application to program design and periodization of training. Pre-requisite: PE 474.

PE 490 Special Topics in HPELS 3 cr

A varying content course treating different aspects of health, physical education, and leisure studies. May be repeated for credit when course content varies.

PE 494 Directed Study in Health, PE and Leisure Studies 1-3 cr

Directed research. Pre-requisite: Permission of department. No more than two directed studies can be counted toward the Bachelor's Degree and Class B Certification.

PE 495* Internship in HPELS 1-12 cr

Observation and supervised practicum experiences in a professional setting. May be repeated for credit not to exceed 12 hours. Special permission required.

PE 496* Practicum in Athletic Training III 1 cr

A practical and clinical experience to allow students to develop and master skills, methods, and techniques associated with various therapeutic exercise, rehabilitation and reconditioning programs commonly used by athletic trainers serving the physically active. A minimum of 200 hours of clinical work during afternoon and evening hours and a weekly seminar is required.

PE 497* Practicum in Athletic Training IV 1 cr

A practical and clinical experience to allow students to develop and master skills, methods, and techniques associated with various therapeutic modalities in rehabilitation and reconditioning programs commonly used by athletic trainers serving the physically active. A minimum of 200 hours of clinical work during afternoon and evening hours and a weekly seminar is required.

PE 498 Seniors Honors Project 3-6 cr

Under the advice and guidance of a faculty mentor, honors students will identify and carry out a research project, relevant to the fields of Health, Physical Education and Leisure Studies that will lead to a formal presentation at the annual Honors Student Colloquium. The senior project will be judged and graded by a three faculty committee chaired by the honors mentor. This course is required for Honors recognition and may be repeated for up to six credit hours. Pre-requisites: Participant in honors program and junior level status.

PE 499* Clinical Internship in Athletic Training 6 cr

This course provides supervised clinical experiences in a traditional athletic training setting. The student will serve as a team trainer for an athletic team for an entire sport season. A minimum of 300 hours of clinical work during afternoon and evening hours and a weekly seminar is required.

***Only for students admitted to candidacy.**

PHYSICS (PH)

PH 101 Introduction to Astronomy 4 cr

This is a descriptive survey course of elementary astronomy with laboratory intended for both non-science and science majors. Topics covered include a description of the celestial sphere, a tour of the Solar System, techniques for measuring and classifying stars, stellar evolution, white dwarfs, black holes, neutron stars, galaxies, and Big Bang cosmology. Students must take PH 101L concurrently and pass the lab. The PH 101L is a component of the PH 101 course grade. Fee. **Core Course**. Co-requisite: PH 101L.

PH 101L Introduction to Astronomy Lab

Laboratory course for the Introduction to Astronomy course. Student must pass this laboratory course to receive a passing grade in the PH 101 course. Students must take PH 101L concurrently and pass the lab. The PH 101L is a component of the PH 101 course grade. Co-requisite: PH 101.

PH 104 Concepts of Physics 4 cr

A descriptive overview of the entire field of physics with laboratory, including the concepts of scalars and vectors, Newton's laws, momentum and energy conservation, rotational motion, fluids, heat and thermodynamics, sound, electricity and magnetism, optics, atomic and nuclear physics, relativity, and elementary particle physics. This course is intended to provide the non-scientist with substantial insight into the physical behavior of matter and energy. Extensive demonstrations accompany the presentation of material to illustrate key concepts. This course does not satisfy any preprofessional physics requirements. Students must take PH 104L concurrently and pass the lab. The PH 104L grade is a component of the PH 104 course grade. Fee. **Core Course.** Co-requisite: PH 104L.

PH 104L Concepts of Physics Lab

Laboratory course for the Concepts of Physics course. Student must pass this laboratory course to receive a passing grade in the PH 104 course. Students must take PH 104L concurrently with PH 104 and pass the lab. The PH 104L grade is a component of the PH 104 course grade. Co-requisite: PH 104.

PH 107 Contemporary Topics in Physics 1 cr

Intended for physics majors in their first year or others interested in physics as a possible major. This course will survey current "hot topics" in physics, basic useful techniques in physics problem-solving, physics as a career, and research in physics at USA. This course is not intended to satisfy the science requirements within the College of Arts and Sciences.

PH 114 Physics with Algebra/ Trigonometry I (C) 5 cr

First semester of a two-semester introductory course in algebra/trigonometry-based physics with laboratory and recitation. This course covers mechanics and thermodynamics: one and two-dimensional motion, vectors, Newton's laws of motion, work and energy, momentum and collisions, circular motion, rotational motion, properties of solids and fluids, the laws of thermodynamics, kinetic theory of matter, simple harmonic motion, and wave motion. The laboratory uses computerized data acquisition and analysis for most of the experiments. Students must take PH 114L concurrently and pass the lab. The PH 114L grade is a component of the PH 114 course grade. Pre-requisite: 21 ACT score on Mathematics or MA 112. Fee. **Core Course**. Co-requisite: PH 114L.

PH 114L Physics with Algebra/ Trigonometry I Lab

Laboratory course for the first semester of a two-semester introductory sequence in algebra/ trigonometry-based physics. Student must pass this laboratory course to receive a passing grade in the PH 114 course. Students must take PH 114L concurrently with PH 114 and pass the lab. The PH 114L grade is a component of the PH 114 course grade. Co-requisite: PH 114.

PH 114 Physics with Algebra/ Trigonometry I (C) (Honors Course) 5 cr

First semester of a two-semester introductory honors course in algebra/trigonometry-based physics with laboratory and recitation. This course covers mechanics and thermodynamics: one and two-dimensional motion, vectors, Newton's laws of motion, work and energy,

momentum and collisions, circular motion, rotational motion, properties of solids and fluids, the laws of thermodynamics, kinetic theory of matter, simple harmonic motion, and wave motion. The laboratory uses computerized data acquisition and analysis for most of the experiments. The honors component consists of extra problems, projects or work assigned by the instructor by the end of the first week of classes. All honors students will meet with the instructor who will give an extra work syllabus. Students must take PH 114L honors concurrently and pass the lab. The PH 114L honors grade is a component of the PH 114 honors course grade. Pre-requisites: 21 ACT score on Mathematics or MA 112, also permission of the Department Chair or good standing in the University Honors Program. Fee. **Core Course**. Co-requisite: PH 114L (honors).

PH 114L (Honors) Physics with Algebra/ Trigonometry I Lab - H

Honors laboratory course for the first semester of a two-semester introductory honors sequence in algebra/trigonometry-based physics. Student must pass this laboratory course to receive a passing grade in the PH 114 honors course. Students must take PH 114L honors concurrently with PH 114 honors and pass the lab. The PH 114L honors grade is a component of the PH 114 honors course grade. Co-requisite: PH 114 (honors).

PH 115 Physics with Algebra/ Trigonometry II (C) 5 cr

Second semester of a two-semester introductory course in algebra/trigonometry-based physics with laboratory and recitation. This course covers electrostatics, DC circuits, RC circuits, magnetic fields and forces, Faraday's Law, AC circuits, geometrical optics, interference and diffraction of light, the special theory of relativity, quantum physics, and atomic and nuclear physics. The laboratory uses computerized data acquisition and analysis for most of the experiments. Students must take PH 115L concurrently and pass the lab. The PH 115L grade is a component of the PH 115 course grade. Pre-requisite: PH 114. Fee. **Core Course**. Co-requisite: PH 115L.

PH 115L Physics with Algebra/ Trigonometry II Lab

Laboratory course for the second semester of a two-semester introductory sequence in algebra/trigonometry-based physics. Student must pass this laboratory course to receive a passing grade in the PH 115 course. Students must take PH 115L concurrently with PH 115 and pass the lab. The PH 115L grade is a component of the PH 115 course grade. Co-requisite: PH 115.

PH 115 Physics with Algebra/ Trigonometry II (C) (Honors Course) 5 cr

Second semester of a two-semester introductory honors course in algebra/ trigonometry-based physics with laboratory and recitation. This course covers electrostatics, DC circuits, RC circuits, magnetic fields and forces, Faraday's Law, AC circuits, geometrical optics, interference and diffraction of light, the special theory of relativity, quantum physics, and atomic and nuclear physics. The honors component consists of extra problems, projects or work assigned by the instructor by the end of the first week of classes. The laboratory uses computerized data acquisition and analysis for most of the experiments. All honors students will meet with the instructor who will give an extra work syllabus. Pre-requisites: PH 114-H, also permission of the Department Chair or good standing in the University Honors Program. Students must take PH 115L honors concurrently and pass the lab. The PH 115L honors grade is a component of the PH 115 honors course grade. Fee. **Core Course**. Co-requisite: PH 115L (honors).

PH 115L (Honors) Physics with Algebra/Trigonometry II Lab - H

Honors laboratory course for the second semester of a two-semester introductory honors sequence in algebra/trigonometry-based physics. Students must take PH 115L honors concurrently and pass the lab. The PH 115L honors grade is a component of the PH 115 honors course grade. Co-requisite: PH 115 (honors).

PH 194 Directed Studies: Variable Content Lab 1 cr

A directed studies course to substitute for a laboratory credit for students who have successfully completed an introduction to astronomy or concepts of physics course at another university without the laboratory. Students taking this course must get approval of the Physics Department Chair. This course may be taken up to two times (once for each course). Fee.

PH 201 Calculus-Based Physics I (C) 4 cr

First semester of a two-semester introductory course in calculus-based physics with recitation and laboratory. This course covers: one and two-dimensional motion, vectors, Newton's laws of motion and their applications, work and energy, momentum and collisions, circular motion, rotational motion, properties of materials, simple harmonic motion, wave motion and topics in thermodynamics. The laboratory uses computerized data acquisition and analysis for most of the experiments. Pre-requisites: MA 125, and concurrently taking MA 126 if not already taken. Fee. **Core Course.** Co-requisite: PH 201L .

PH 201L Calculus-Based Physics I Lab

Laboratory course for the first semester of a two-semester introductory sequence in calculus-based physics. Student must pass this laboratory course to receive a passing grade in the PH 201 course. Students must take PH 202L concurrently with PH 201 and pass the lab. The PH 201L grade is a component of the PH 201 course grade. Co-requisite: PH 201.

PH 201 Calculus-Based Physics I (C) (Honors Course) 4 cr

First semester of a two-semester introductory honors course in calculus-based physics with recitation and laboratory. This course covers: one and two-dimensional motion, vectors, Newton's laws of motion and their applications, work and energy, momentum and collisions, circular motion, rotational motion, properties of materials, simple harmonic motion, wave motion and topics in thermodynamics. The laboratory uses computerized data acquisition and analysis for most of the experiments. The honors component consists of extra problems, projects or work assigned by the instructor by the end of the first week of classes. All honors students will meet with the instructor who will give an extra work syllabus. Pre-requisites: MA 125 and concurrently taking MA 126 if not already taken, also permission of the Department Chair or good standing in the University Honors Program. Students must take PH 201L honors concurrently and pass the lab. The PH 201L honors grade is a component of the PH 201 honors course grade. Fee. **Core Course**. Co-requisite: PH 201L (honors).

PH 201L (Honors) Calculus-Based Physics I Lab - H

Honors laboratory course for the first semester of a two-semester introductory honors sequence in calculus-based physics. Student must pass this laboratory course to receive a passing grade in the PH 201 honors course. Co-requisite: PH 201 (honors).

PH 202 Calculus-Based Physics II (C) 4 cr

Second semester of a two-semester introductory course in calculus-based physics with laboratory. This course covers electrostatic fields and Gauss' law, electric potential, electric circuits, magnetic fields, Ampere's law. Faraday's law, inductance, Maxwell's equations, electromagnetic waves and optics. The laboratory uses computerized data acquisition and analysis for most of the experiments. Students must take PH 202L concurrently and pass the lab. The PH 202L grade is a component of the PH 202 course grade. Pre-requisites: PH 201 and MA 126. Fee. **Core Course**. Co-requisite: PH 202L .

PH 202L Calculus-Based Physics II Lab

Laboratory course for the second semester of a two-semester introductory sequence in calculus-based physics. Students must take PH 202L concurrently with PH 202 and pass the lab. The PH 202L grade is a component of the PH 202 course grade. Co-requisite: PH 202.

PH 202 Calculus-Based Physics II (C) (Honors Course) 4 cr

Second semester of a two-semester introductory honors course in calculus-based physics with laboratory. This course covers electrostatic fields and Gauss' law, electric potential, electrical circuits, magnetic fields, Ampere's law, Faraday's law, inductance, Maxwell's equations, electromagnetic waves and optics. The laboratory uses computerized data acquisition and analysis for most of the experiments. The honors component consists of extra problems, projects or work assigned by the instructor by the end of the first week of classes. All honors students will meet with the instructor who will give an extra work syllabus. Students must take PH 202L honors concurrently and pass the lab. The PH 202L honors grade is a component of the PH 202 honors course grade. Pre-requisites: PH 201-H and MA 126, also permission of the Department Chair or good standing in the University Honors Program. Fee. **Core Course.** Co-requisite: PH 202 L (honors).

PH 202L (Honors) Calculus Based Physics II Lab - H

Honors laboratory course for the second semester of a two-semester introductory honors

sequence in calculus-based physics. Students must take PH 202L honors concurrently and PH 202 honors and pass the lab. The PH 202L honors grade is a component of the PH 202 honors course grade.

PH 290 Special Topics 1-4 cr
Topics of current issue interest but not available in regularly scheduled sophomore level courses. This course may be repeated once for credit when the content varies. May be taken twice for up to 8 hours.

PH 290 Special Topics (Honors Course)
This course is an honors seminar on the history of astronomy. The course objective is two-fold: to learn the evolution of the human race's understanding of the universe and of its place in the universe by studying the lives and discoveries of astronomers in the past and to gain an understanding of the universe and its contents including planets, stars, and galaxies by becoming familiar with their properties and processes.

PH 294 Directed Studies: Variable Content Lab 1 cr
A directed studies course to substitute for a laboratory credit for students who have successfully completed a calculus or algebra-based physics lecture course at another university without the laboratory. Students taking this course must get the approval of the Physics Department Chair. This course may be taken up to two times (once for each of the missing laboratories). Pre-requisite: Permission of the Department Chair. Fee.

PH 301 Introductory Astrophysics 3 cr
Application of the principles of physics to the study of astronomical phenomena. Topics include celestial mechanics, stars and stellar evolution, the Milky Way and other galaxies, and cosmological models. Prior knowledge of astronomy is not required. Pre-requisites: MA 125 and either PH 115 or PH 202.

PH 303 Modern Physics (C) 4 cr
This course, with laboratory, surveys physics of the twentieth century. Topics covered include special relativity, wave-particle concepts, the Schrödinger equation and quantum theory of the hydrogen atom, atomic spectra and structure, molecular spectra, the solid state, nuclear structure, radioactivity, and elementary particles. The accompanying laboratory includes experimental investigations of important topics in the subject of Modern Physics. Computerized numerical and graphical analysis of data is extensively used in the laboratory. Laboratory reports are written with word processors and submitted in a format consistent with articles submitted to student research journals. Students must take the JagSkills training modules for Microsoft Word, Excel, and Powerpoint and present the certification found on the "My Progress" page of JagSkills to pass the PH 303 Modern Physics Laboratory. Students must take PH 303L concurrently and pass the lab. The PH 303L grade is a component of the PH 303 course grade. Pre-requisites: MA 125 and either PH 115 or 202. Co-requisite: PH 303L.

PH 303L Modern Physics Lab
Laboratory course for the Modern Physics course. Students must take the JagSkills training modules for Microsoft Word, Excel, and Powerpoint and present the certification found on the "My Progress" page of JagSkills to pass the the PH 303 Modern Physics Laboratory. Students must take PH 303L concurrently with PH 303 and pass the lab. The PH 303L grade is a component of the PH 303 course grade. Co-requisite: PH 303.

PH 346 Classical and Modern Optics 3 cr
Wave motion, reflection, refraction, dispersion, diffraction, interference phenomena, Fourier spectroscopy, lasers and other modern applications of optics. Pre-requisites: PH 202 and MA 125 or the equivalent.

PH 348 Electricity and Magnetism I 3 cr
First of a two-semester sequence in electromagnetism. Topics include a review of vector analysis. Coulomb's law, Gauss' law, calculation of the scalar potential, electric fields in matter, the Biot-Sarvart law, Ampere's law, the vector potential, magnetostatics in matter, electrodynamics, Faraday's law, inductance, Maxwell's correction to Ampere's law and Maxwell's equations. Pre-requisites: MA 227 and either PH 115 or PH 202.

PH 349 Electricity and Magnetism II 3 cr
Second of a two-semester sequence in electromagnetism. Topics include electromagnetic wave propagation in free space, electromagnetic wave propagation in materials, reflection and transmission at interfaces, wave guides, electromagnetic radiation, optical dispersion, and electrodynamics extended to the special theory of relativity. Pre-requisite: PH 348.

PH 354 Electronics 3 cr
This course is intended to provide a theoretical and practical background in electronics. Topics include AC circuits, diode circuits, single-stage amplifiers, op-amps and feedback, and digital electronics. This course is not intended to satisfy the technical elective requirements for Electrical Engineering. This course will include periodic laboratory work. Pre-requisites: MA 126 and either PH 115 or PH 202.

PH 366 Physical Mechanics I 3 cr
First course in a two-semester sequence in classical mechanics. Topics include motion of particles in one-dimension, one-dimensional motion theorems, harmonic oscillations, damped oscillations, forced oscillations, kinematics in multiple dimensions, momentum and energy theorems, the central force problem, motion under inverse square law forces, planetary obitual motion, Rutherford scattering, conservation theorems for multi-particle systems and their applications, collisions, coupled-harmonic oscillators, and rigid body rotation about a fixed axis. Pre-requisites: MA 227 and PH 202.

PH 367 Physical Mechanics II 3 cr
Second course in a two-semester sequence in classical mechanics. Topics include: moving and rotating coordinate systems, Lagrange's equation and applications, Hamiltonian formulation, inertia and stress tensors, rotations of rigid bodies and the theory of small oscillations. Pre-requisite: PH 366.

PH 385 Experimental Physics (W) (C) 3 cr
A course in the methods and techniques of experimental physics. A number of experiments in the area of classical mechanics, atomic physics, molecular physics, and nuclear physics will be performed and analysis is required. A written report for each experiment that clearly and precisely explains the experiment's theory, technique and analysis is required. Computerized numerical and graphical analysis of data is extensively used in the laboratory. Laboratory reports are written with word processors and submitted in a format consistent with articles submitted to student research journals. Pre-requisite: PH 303 (or taken concurrently). Co-requisite: PH 385L.

PH 385L Experimental Physics Lab
Laboratory course for the Experimental Physics course. Students must take PH 385L concurrently with PH 385 and pass the lab. The PH 385L grade is a component of the PH 385 course grade. Co-requisite: PH 385.

PH 390 Special Topics 1-3 cr
Topics of current interest not available in a regularly scheduled course. This course may be repeated once for credit when content varies. May be taken twice for up to 6 hours.

PH 411 Computational Methods (C) in Physics 3 cr
Use of computers in physics research (industrial, applied or basic) is now common. This course will introduce advanced undergraduate physics students to computer solutions of physics problems. Particular attention will be paid to problems that have no analytic solutions and may only be solved numerically. This course will introduce several numeric methods and apply them to specific problems from quantum mechanics, electrodynamics, and mechanics. Students will write a series of programs in the Fortran or the C programming language and use them to solve undergraduate level physics problems. Pre-requisites: MA 238, CIS 210 or CIS 227, and PH 303.

PH 448 Elementary Quantum I Mechanics 3 cr
The first course of a two-semester sequence in Quantum Mechanics. Topics include an introduction to Hilbert space and operators, the quantum state and observables, the Heisenberg uncertainty principle, time evolution of the quantum state, application of the Schrödinger equation to one-dimensional systems, and the solution of the hydrogen atom. Pre-requisites: MA 238 and either PH 303 or CH 302.

PH 449 Elementary Quantum Mechanics II 3 cr
The second course of a two-semester sequence in Quantum Mechanics. Topics include a continuation in the mathematical formulation of quantum mechanics, angular momentum, perturbation theory, identical particles and spin, collision theory and the semi-classical treatment of radiation. This course is recommended for students anticipating graduate study in physics. Pre-requisite: PH 448.

PH 463 Thermodynamics and Statistical Mechanics 3 cr
An in depth course in thermodynamics and statistical mechanics. Topics include simple thermodynamics systems, work, heat and the first law of thermodynamics, ideal gases, the

second law of thermodynamics, entropy, enthalpy, Helmhotz and Gibbs functions TdS equations, heat capacity, partition function, equipartition of energy, statistical distribution of molecular speeds, thermal properties of solids, higher order phase transitions, chemical equilibrium, Bose-Einstein statistics, Thomson effect, Nuclear Magnetism and the third law of thermodynamics. Pre-requisites: PH 202 and MA 227.

PH 494 Directed Studies 1-3 cr

Directed research under the supervision of a faculty member. Topics generally coincide with the research interest of the supervising faculty member. Areas of directed research may include atomic collisions, experimental molecular spectroscopy, experimental matter physics or experimental particle physics. Pre-requisite: Permission of the Physics department chair. May be taken three times for up to 9 hours.

PH 499 Senior Thesis (Honors Course) 3 cr

A written thesis that is part of the Honors Senior Project which is submitted to partially satisfy the requirements for a Degree in Physics with distinction. The Senior Thesis will be written on research done in collaboration with an Honors Physics Faculty member in the junior/senior year. The Senior Thesis will be reviewed by a committee of Honors Physics Faculty. Upon approval by the committee the Senior Honors candidate will present the Senior Thesis at the Honors Student Colloquium. This course may be repeated once for credit. Pre-requisite: The Honors candidate must have developed in the last semester of the previous year a prospectus with the Physics Faculty Mentor and presented this prospectus at the Annual Honors Student Colloquium, also permission of the Physics Department Chair.

PHARMACOLOGY (PHA)

PHA 546 Literature Reports 1 cr

Students and faculty participate in a supervised reading of the current literature and meet periodically (usually once a week) to interact in a discussion of the selected article or topic. The goal of this course is to maintain the faculty's and students' level of information at a "state of the art" in both methods and theory in the discipline and to develop critical skills in reviewing the literature.

PHA 547 Directed Studies 1-6 cr

Students participate in research under the direction of a graduate faculty member. The student may pursue independent research or participate in a literature project.

PHA 590 Special Topics 1-3 cr

Each course provides in-depth tutorial exposure to specific areas in the discipline. Student and/or faculty presentations followed by group discussions (usually in the Socratic mode) examine the subject matter in an area of current interest either to one student or to a group of students. Credits and titles are arranged with an individual faculty member.

PHA 640 Molecular and Cellular Pharmacology 3 cr

In this course, the central themes of signal transduction from cellular receptor to amplified response, structure-activity relationships, and drug design are studied comprehensively. Specific topics include receptor-ligand interactions, receptor structure and coupling mechanisms, the biochemical and molecular aspects of G-proteins, protein phosphorylation mechanisms, molecular modeling and protein crystallography. Pre-requisites: Biochemistry.

PHA 643 Molecular and Cellular Toxicology 3 cr

This course is concerned with the mechanisms by which toxic substances exert their effects at the molecular and cellular level. Detailed analysis of the processes by which toxic materials are metabolized to toxic intermediates is addressed. The mode of action of how toxic compounds interact with structural proteins and other macromolecules, enzymes and receptors, and the genome is included. Examples of toxicity of the heart, liver, lung, pancreas, and brain, including teratogenic, mutagenic, and carcinogenic effects are discussed at the mechanistic level. Pre-requisites: Biochemistry.

PHA 646 Research Seminar 1 cr

Students and faculty present a research topic for discussion before members of the department. The presentations are usually scheduled on a rotational basis. The student may present research data for critique by the faculty.

PHA 799 Research/Dissertation 1-6 cr

Independent research by the student under the sponsorship of the graduate faculty in individual departments in the Basic Medical Sciences. Pre-requisite: Approved formal research proposal.

PHILOSOPHY (PHL)

Any course whose title contains the word "introduction" may be taken as a first course. The department recommends that students take no more than two such introductory courses. Often after a single such course, students should proceed to follow their interests with 200- and 300-level courses.

PHL 110 Introduction to Philosophy 3 cr

An introduction to philosophical analysis and criticism through a survey of the major branches of philosophy. Topics may include, but are not limited to: the mind/body problem, theory of knowledge, skepticism, ethics, political philosophy, aesthetics, and philosophy of religion. Fulfils the General Education Requirement.

PHL 120 Critical Thinking 3 cr

This course will examine complex types of reasoning, including statistical judgment, decision making, and causal and analogical thinking. Emphasis will be placed on the analysis of concrete examples of reasoning in various fields. Students will learn how to evaluate arguments, fallacies, common errors, and biases in reasoning and decision making. Fulfills the General Education Requirement.

PHL 121 Introduction to Logic 3 cr

Studies arguments: what they are, how to identify them, and how to judge their quality; and examines inductive and deductive arguments in both their informal and formal aspects. Fulfils the General Education Requirement. MA 110 or equivalent is recommended.

PHL 131 Introduction to Ethics 3 cr

Examines ideas about good and bad, right and wrong, and moral obligation through a survey of major ethical systems in western philosophy. The course includes consideration of how these ideas apply to moral problems and issues. Fulfils the General Education Requirement.

PHL 231 Social Ethics 3 cr

Readings and analyses of ethical issues in society. Topics may include euthanasia, sexual equality, sexual morality, censorship, world hunger, animal rights, the environment, and capital punishment. Fulfils the General Education Requirement.

PHL 233 Philosophy of Love and Friendship (W) 3 cr

Love and friendship are investigated by a philosophical analysis of concepts embraced by the terms. Examples of the concepts are drawn from common life, religion, history, and literature.

PHL 240 Western Philosophy: Classical 3 cr

Survey of classical Greek philosophy. The philosophers surveyed may include Presocratic philosophers, Socrates, Plato, Aristotle, and Hellenistic philosophers. Fulfills the General Education Requirement. Identical with CLA 240. Credit cannot be received for both PHL 240 and CLA 240.

Survey of Greek, Roman, and Medieval philosophy with emphasis on classical Greek philosophy. Core Course. Identical with CLA 240. Credit cannot be received for both CLA 240 and PHL 240.

PHL 242 Western Philosophy: Medieval 3 cr

A survey of Medieval Western Latin, Jewish and Islamic philosophers. Identical with REL 242. Credit cannot be received for both PHL 242 and REL 242.

PHL 245 Western Philosophy: Renaissance/Enlightenment (C)(W) 3 cr

Survey of Western philosophy from F. Bacon to Kant with emphasis on the empiricists, rationalists, and Kant.

PHL 251 Philosophy and Cognitive Science 3 cr

A survey of central concepts and issues in cognitive science, including an informal introduction to automata theory, intelligent systems architecture, and the philosophical issues arising out of computational models of language and cognition.

PHL 290 Special Topics 1-3 cr

Different themes and issues of philosophical significance will be studied as announced. May be repeated for a maximum of 9 hours.

PHL 310 Classical Mythology 3 cr

Through the disciplines of English and Philosophy, this course will provide an introduction to myths and to the literature that

recounts the myths, legends, and folktales of ancient Greece and Rome. Not only will this course offer a survey of Greek and Roman myth, but also it will look at how different writers treat the material and why their treatments vary. Pre-requisites: EH 101 and EH 102. Identical with CLA 310, EH 310 and REL 310. Credit cannot be received for both PHL 310 and either EH 310 or REL 310 or CLA 310.

PHL 311 Political Philosophy I: Classical and Medieval 3 cr

An examination of the central themes of classical Western political philosophy through the reading and discussing of the primary works of such thinkers as Plato, Aristotle, Augustine, and Aquinas. Pre-requisites: PSC 130, or Equivalent, or Permission of Instructor. Identical with CLA 311 and PSC 311. Credit cannot be received for both PHL 311 and either PSC 311 or CLA 311.

PHL 312 Political Philosophy II Renaissance and Enlightenment 3 cr

An examination of the central themes of classical Western political philosophy through the reading and discussing of the primary works of such thinkers as Machiavelli, Hobbes, Locke, and Rousseau. Pre-requisites: PSC 130, or Equivalent, or Permission of Instructor. Cross-listed as PSC 312. Credit cannot be received for both PHL 312 and PSC 312.

PHL 313 Political Philosophy III 19th Century (W) 3 cr

An examination of the central themes of classical Western political philosophy through the reading and discussing of the primary works of such thinkers as Hegel, Mill, Marx and Nietzsche. Pre-requisites: PSC 130, or Equivalent, or Permission of Instructor. Cross-listed as PSC 313. Credit cannot be received for both PHL 313 and PSC 313.

PHL 321 Symbolic Logic 3 cr

A study of sentential and predicate logics and related topics.

PHL 327 Philosophy of Science 3 cr

Studies such topics as method and explanation in the sciences; the demarcation between science and the pseudoscience; realist and anti-realist views about scientific theories; the logic scientific change; confirmation; reduction; laws of nature; underdetermination; and society, science, and values.

PHL 331 Alienation 3 cr

Alienation, a fundamental element in human existence, is analyzed in the philosophy of Marx, Hegel, Dostoevsky, Nietzsche and Sartre, and then used to interpret characters and situations in selected novels and films.

PHL 333 Biomedical Ethics (W) 3 cr

Ethical analyses of problems and issues in the biomedical and health-related fields. Topics may include genetic research and technology, abortion, health care, experimentation, and death and dying.

PHL 334 Man and Technology 3 cr

Examines the most common impacts that technology is envisioned to have on both the spirit of the human person and the environment in which that person lives. Both the technologist and antitechnologist arguments will be explored.

PHL 336 Legal Theory 3 cr

Explores theoretical issues and problems in the area of law, including theories about the nature of law, legal validity, the relations between morality and law, and our obligation to obey the law. Specific problems, such as legal moralism, are also examined. Cross-listed as CJ 336. Credit cannot be received for both PHL 336 and CJ 336.

PHL 337 Liability and Punishment 3 cr

Explores theoretical issues and problems in the areas of law (especially criminal law) concerning liability and punishment. Topics to be examined include diminished capacity, theories of punishment, and capital punishment. Cross-listed as CJ 337. Credit cannot be received for both PHL 337 and CJ 337.

PHL 339 Philosophy of Culture 3 cr

Acquaints students with Cassirer's philosophy of culture, with emphasis on the unity of human experience as ramified into myth, language, religion, art, history, science, and politico social life.

PHL 345 Anglo-American Philosophy Since Kant 3 cr

An examination of selected themes and issues in Anglo-American philosophy since 1800. Topics may include pragmatism, ideal language philosophy, and ordinary language philosophy.

PHL 348 19th Century Continental Philosophy and Literary Theory 3 cr

An examination of selected themes and issues in 19th Century Continental Philosophy and Literary Theory. Topics may include Idealism, Romanticism, Existentialism, Marxism, and Freudianism. Identical with EH 348 and LG 348. Credit cannot be received for both PHL 348 and either EH 348 or LG 348. (For LG credit, students will be required to do some course work in their language of concentration.)

PHL 349 20th Century Continental Philosophy and Literary Theory 3 cr

An examination of selected themes and issues in 20th Century Continental Philosophy and Literary Theory. Topics may include Phenomenology, Existentialism, Hermeneutics, Structuralism, and Post-Structuralism. Identical with EH 349 and LG 349. Credit cannot be received for both PHL 349 and either EH 349 or LG 349. (For LG credit, students will be required to do some course work in their language of concentration.)

PHL 351 Philosophy of Religion (W) 3 cr

Investigates the nature of religion, including religious experience, religious language, arguments for the existence of God, and the problem of evil. Identical with REL 351. Credit cannot be received for both PHL 351 and REL 351.

PHL 352 World Religions 3 cr

Major Eastern and Western religions emphasizing their historical development, their theological structure, and their philosophical implications. Identical with REL 352. Credit cannot be received for both PHL 352 and REL 352.

PHL 354 Philosophies of India 3 cr

Introduces the major religions and philosophies of India by way of the classical Realist/Anti-Realist debate in India. Study of the major religious doctrines of theistic and non-dualist Vedanta, Buddhism, and Jainism, and their philosophical articulation in the Nyaya, Advaita Vedanta, Madhyamaka, and other schools. Identical with REL 354. Credit cannot be received for both PHL 354 and REL 354.

PHL 355 Chinese Philosophy 3 cr

Introduces the major classical religious and philosophical systems of China by way of an examination of early Confucianism, Mohism, Yangism, Legalism, Taoism, and Chinese Buddhism. Particular emphasis will be placed upon the role of these schools in the development of Chinese religion, morality, and political organization. Identical with REL 355. Credit cannot be received for both PHL 355 and REL 355.

PHL 361 Philosophy of Mind 3 cr

A study of the concept of consciousness and related concepts (e.g., mind, self, thinking) as applied to man, other animals, non-terrestrials, and machines.

PHL 370 Philosophy of Art 3 cr

Acquaints students with main issues in aesthetics, both ancient and modern. Includes such issues as the nature and function of art, the creative process, the work of art, and the criteria of aesthetic judgment and appreciation. Identical with ARH 370. Credit cannot be received for both PHL 370 and ARH 370.

PHL 390 Special Topics 1-3 cr

Different figures or topics of philosophical significance will be studied as announced. May be repeated, when content varies, for a total of six hours. May be repeated for a maximum of 9 hours.

NOTE: The Department requires at least one lower-level philosophy course or junior standing as a Pre-requisite for 400-level courses.

PHL 421* Literary Criticism to 1900 (W) 3 cr

Classical, Neoclassical, Romantic, and Victorian literary theory. Pre-requisites: EH 101 and 102. Identical with EH 421. Credit cannot be received for both PHL 421 and EH 421.

PHL 422* Literary Criticism Since 1900 (W) 3 cr

Modern and contemporary literary theory. Pre-requisites: EH 101 and 102. Identical with EH 422. Credit cannot be received for both PHL 422 and EH 422.

PHL 431 Advanced Ethical Theory 3 cr

Problems in traditional and recent value theory and ethics.

PHL 441 Theory of Knowledge 3 cr

Examines knowledge, its scope and limits. Topics may include the conditions, criteria, and grounds for knowledge, and theories of truth and meaning.

PHL 461 Metaphysics 3 cr

Studies philosophical theories about the nature of reality, including such topics as what is real, change, the nature of things, universals, and such views as monism, materialism,

realism, and idealism. Pre-requisites: PHL 240, PHL 245, PHL 321.

PHL 467 Mathematical Logic 3 cr
An introduction to formal first-order logic, first-order metatheory, and its extensions. Topics include axiom systems and their models, completeness, compactness, and recursive sets and functions. Identical with MA 467. Credit cannot be received for both PHL 467 and MA 467. Pre-requisites: PHL 321 or any 300-level or higher MA course.

PHL 490 Special Topics 1-3 cr
An investigation of issues and concepts in philosophy for advanced undergraduates and graduate students. May be repeated, when content varies, for a total of six hours. Pre-requisites: Junior, senior or graduate standing.

PHL 492 Seminar 1-3 cr
An investigation of issues and concepts in philosophy for advanced undergraduates and graduate students. May be repeated, when content varies, for a total of six hours. Pre-requisites: Junior, senior or graduate standing.

PHL 494 Directed Studies 1-3 cr
Directed research in philosophy under the guidance of a member of the department. Credit according to the magnitude of the individual project. May be repeated, if content varies, for a total of six hours. Pre-requisites: Junior or senior standing and approval of directing professor and department chair. Pre-requisites: Junior, senior or graduate standing.

PHL 499 Honors Thesis 3 cr
Extended research paper prepared under direction of thesis advisor plus two-person committee selected by advisor in consultation with student. Pre-requisites: The student must have developed a proposal for the thesis in consultation with the advisor, and received permission for the work from the committee. In addition, the student must be a senior major or minor, have completed the logic and history of philosophy requirements, have at least two courses at the 300-level or higher, and have at least a 3.3 GPA in Philosophy. Credit for this course is only given as an addition to the hours required for the major.

PHL 590 Special Topics 1-3 cr
Study of individuals or topics of philosophical significance. May be repeated for credit when content varies, for a maximum of 6 hours. Enrollment is limited to students in disciplines other than philosophy.

PHL 594 Directed Studies 3 cr
Directed research in philosophy under the guidance of a member of the department. May be repeated, if content varies, for a total of six hours. Prerequisite: Graduate Student in Department conferring a Graduate Degree (hence not open to Philosophy majors in any Concentration in Philosophy).

PHYSIOLOGY (PHS)

PHS 557 Directed Studies 1-6 cr
Students participate in research under the direction of a graduate faculty member. The student may pursue independent research or participate in a literature project.

PHS 590 Special Topics 1-3 cr
Each course provides in-depth tutorial exposure to specific areas in the discipline. Student and/or faculty presentations followed by group discussions (usually in the Socratic mode), examine the subject matter in an area of current interest either to one student or to a group of students. Credits and titles are arranged with an individual faculty member.

PHS 651 Advanced Cardiovascular Physiology 5 cr
This is an advanced course covering cardiac function and metabolism, peripheral circulation, and microcirculation. The objective is to provide the student with a thorough understanding of cardiovascular physiology at both the organ and cellular level. Pre-requisite: IDL 580

PHS 656 Research Seminar 1 cr
Students and faculty present a research topic for discussion before members of the department. The presentations are usually scheduled on a rotational basis. The student may present research data for critique by the faculty.

PHS 799 Research/Dissertation 1-6 cr
Independent research by the student under the sponsorship of the graduate faculty in individual departments in the Basic Medical Sciences. Pre-requisite: Approved formal research proposal.

POLITICAL SCIENCE (PSC)

NOTE: It is not recommended that freshmen register for any 300 or 400 level Political Science course.

PSC 101 Introduction to Political Science: Honors 3 cr
The course is an intellectual investigation of the traditional and behavioral approaches to the five broad areas of sub-fields that constitute the academic study of political science, namely, political theory, American government, comparative politics, international relations, and public administration.

PSC 130 Introduction to U.S. Government 3 cr
Stresses formation and principles of the United States Constitution and roles of Congress, the President, and the Courts in the American system of government. Considers popular participation in politics, rights and responsibilities of citizens, and current public problems. Core Course: PSC and CJ majors must pass with a "C" or better.

PSC 230 Current Political Issues 3 cr
An examination of the perennial political questions as they arise in current political issues and the arguments supporting different positions on the issues.

PSC 232 State and Local Governments 3 cr
An overview of state and local government systems. An analysis of administration and politics within states and localities and an examination of state and local governmental action.

PSC 250 Comparative Politics 3 cr
Introduction into the basic differences and similarities of the major political systems of the world. Emphasis is placed upon governmental structures and processes. PSC majors must pass with a "C" or better.

PSC 251 World Leaders 3 cr
This course introduces students to the concept of leadership and focuses on the lives and achievements of a number of influential 20th century leaders.

PSC 270 International Relations 3 cr
A survey of theoretical and substantive aspects of international relations. Topics covered include power and alternative to power, war and peace, money and trade, international organization and law, North-South relations, environment and technology, human rights, and the like. PSC majors must pass with a "C" or better.

PSC 301 Public Policy 3 cr
Examination of selected functions and policies of the U.S. Government, with special emphasis on the relationship between politics and the socioeconomic environment. Emphasis is placed upon the political, economic, and historical variables as they affect contemporary public policy output. Pre-requisites: PSC 130 and sophomore standing or above.

PSC 310 Research Methods 3 cr
Examines the concepts and techniques of systematic political analyses and research methodology. (Identical to CJ 310.) PSC and CJ majors must pass with a "C" or better. Pre-requisite: Sophomore standing or above.

PSC 311 Political Philosophy I: Classical and Medieval 3 cr
An examination of the central themes of classical Western political philosophy through the reading and discussing of the primary works of such thinkers as Plato, Aristotle, Augustine, and Aquinas. Cross-listed as PHL 311. Credit cannot be received for both PSC 311 and PHL 311. PSC majors must pass with a "C" or better. Pre-requisite: Sophomore standing or above.

PSC 312 Political Philosophy II: Renaissance and Enlightenment 3 cr
An examination of the central themes of modern Western political philosophy through the reading and discussing of the primary works of such thinkers as Machiavelli, Hobbes, Locke, and Rousseau. Cross-listed as PHL 312. Credit cannot be received for both PSC 312 and PHL 312. PSC majors must pass with a "C" or better. Pre-requisite: Sophomore standing or above.

PSC 313 Political Philosophy III: 19th Century (W) 3 cr
An examination of the central themes of modern Western political philosophy through the reading and discussing of the primary works of such thinkers as Hegel, Mill, Marx, and Nietzsche. Cross-listed as PHL 313. Credit cannot be received for both PSC 313 and PHL 313. PSC majors must pass with a "C" or better. Pre-requisites: EH 102 and sophomore standing or above.

PSC 330 Judicial Process 3 cr
The study of the American judicial process at the federal and state court levels. (Identical to CJ 330). Pre-requisite: Sophomore standing or above.

PSC 331 Constitutional Law (W) 3 cr
Principles of constitutional powers and liberties will be examined through an analysis of decisions and opinions by the US Supreme Court. (Identical to CJ 331). Pre-requisites: EH 102 and sophomore standing or above.

PSC 338 Parties and Political Participation 3 cr
Examines the nature of participation in the political process with special emphasis on political parties, interest groups and voting. Pre-requisite: Sophomore standing or above.

PSC 340 Race, Gender and Politics 3 cr
This course is designed to provide students with a critical examination of race and gender in the political system. Politics and government reflect ideological judgments about who gets what, when, and how. As such, government has legitimized only certain individuals as political actors, certain identities as politically relevant, certain relationships as important, and certain practices as the means by which one might change political status. Pre-requisite: Sophomore standing or above.

PSC 345 Women and Politics 3 cr
The central premise of this course is that politics cannot be fully understood without including gender as an analytical construct. From the founding to the present, politics and government reflect ideological judgments about who gets what, when, and how. As such, government has legitimized only certain individuals as political actors and certain identities as politically relevant. This course sets out to discover how gender matters in U.S. politics. Pre-requisite: Sophomore standing or above.

PSC 347 Public Opinion and Political Participation 3 cr
The formation, composition, distribution, and measurement of public opinions and its effect upon public policy. Pre-requisite: Sophomore standing or above.

PSC 360 Politics of Europe 3 cr
Comparative study of the political institutions and policies of the European countries, with a special focus on Great Britain, France, Germany, and Russia. Pre-requisite: Sophomore standing or above.

PSC 363 Politics of Latin America 3 cr
Comparative study of the political institutions and policies of the Latin American countries. Pre-requisite: Sophomore standing or above.

PSC 364 Politics of Africa (W) 3 cr
Comparative study of the political institutions and policies of the countries of Sub-Sahara Africa. Pre-requisites: EH 102 and sophomore standing or above.

PSC 365 Middle East Politics (W) 3 cr
Comparative study of the political institutions and policies of the countries of North Africa and the Middle East. Pre-requisites: EH 102 and sophomore standing or above.

PSC 368 Politics of South Asia (W) 3 cr
Comparative study of the political institutions and policies of the South Asian countries. Pre-requisites: EH 102 and sophomore standing or above.

PSC 372 American Foreign Policy 3 cr
The traditional features, the formulation, the instruments, and the general trends of American diplomacy. Pre-requisite: Sophomore standing or above.

PSC 390 Special Topics 3 cr
Study of a significant topic or problem in political science. May be repeated up to two times when content varies. Only six credit hours may be applied to the Political Science major. Pre-requisite: Sophomore standing or above.

PSC 401 Public Administration (W) 3 cr
National, state, and local administration, with special attention to the relationship between formal agency structure and policy execution. (Identical to PSC 501). Pre-requisites: EH 102 and sophomore standing or above.

PSC 421 American Political Thought I (W) 3 cr
An examination of the central themes of American political thought through the reading and discussing of the primary works of such thinkers as Roger Williams, Hamilton, Madison, Jefferson, Thoreau, Calhoun, and Lincoln. Pre-requisites: EH 102 and sophomore standing or above.

PSC 422 American Political Thought II (W) 3 cr
An examination of the central themes of American political thought through the reading and discussing of the primary works of such thinkers as Tocqueville, Sumner, Veblen, Lippmann, Niebuhr, Martin Luther King, Jr. and Malcolm X. Pre-requisites: EH 102 and sophomore standing or above.

PSC 436 The Politics and Process of Urban Government 3 cr
A study of Urban growth with an analysis of the major problems facing large cities of this country. Political, administrative, social, and economic aspects will be covered. Pre-requisite: Sophomore standing or above.

PSC 437 Legislative Process in the United States 3 cr
Principles, procedures, and problems of law making, with special attention given to the U.S. Congress. Pre-requisite: Sophomore standing or above.

PSC 438 The American Presidency (W 3 cr
A study of the presidency in its institutional context, with an emphasis on competing strategies of executive decision making and leadership. Pre-requisites: EH 102 and sophomore standing or above.

PSC 450 Advanced Studies in Comparative Politics 3 cr
Advanced study in the area of comparative politics. May be repeated when subject matter varies. Pre-requisites: PSC 250 and sophomore standing or above.

PSC 452 The Muslim World 3 cr
This course will introduce students to Islam and Islamism in the Muslim world. In doing so, the course will cover politics, economics and sociocultural environment in Muslim countries; discuss the meaning, characteristics, causes and consequences of Islamism; profile a few of the most prominent Islamic organizations; cover the biographies of the most prominent Muslim leaders and Islamists, and offers suggestions for ameliorating relations between the Muslim world and the West in a way that promotes mutual understanding, peace, rather than misunderstanding and conflict. Pre-requisite: junior or senior standing. Pre-requisite: Sophomore standing or above.

PSC 470 Advanced Studies in International Relations 3 cr
Advanced study in the field of international relations. May be repeated for credit when subject matter varies. Pre-requisites: PSC 270 and sophomore standing or above.

PSC 473 International Law 3 cr
This course covers major issues, cases and topics in public and private international law. Topics covered include individuals and corporations, diplomatic relations, extraterritorial jurisdiction, human rights, economic relations, treaty systems, environmental law, arbitration and adjudication, and the use of force. (Identical to CJ 473 and IS 473). Pre-requisite: Sophomore standing or above.

PSC 475 International Political Economy 3 cr
An integrative course that combines material from political science, economics, international relations, and general business studies. Topics covered include public policy towards multinational corporations, issues of globalization, theoretical issues about international political economy, trade and finance, and the like (Identical to IS 475). Pre-requisite: Sophomore standing or above.

PSC 481 Public Policy and Aging 3 cr
Examines government response to the growing number of older Americans. The course examines the policy process and focuses on such issues as retirement, pensions, health care, housing, social services, and intergenerational issues. Elder advocacy and the long term political consequences of demographic changes are also addressed. Pre-requisite: Sophomore standing or above.

PSC 490 Special Topics 3 cr
Study of a significant topic or problem in political science. May be repeated up to two times when the content varies. Only six credit hours may be applied to the Political Science major. Pre-requisite: Sophomore standing or above.

PSC 492 Capstone Seminar in Political Science (W) 3 cr
Required course for all political science majors and serves as the comprehensive experience in political science. The course will be taught at the senior level and will focus on public policy issues at the national and international levels. In addition the course requirements, including a major research paper, students must take the ETS field test in political science and receive a satisfactory score. Political Science majors must pass with a "C" or better. This course serves as a capstone course for political science majors. Pre-requisites: Senior Political Science Major, and EH 102. Taught in the fall semester.

PSC 494 Directed Studies 1-3 cr
Under the guidance of a faculty member, the student will pursue directed research or

readings on an approved topic in political science. May be repeated for a maximum of three credit hours. Pre-requisites: Senior standing, PSC major, and a minimum GPA of "B" in PSC and overall.

PSC 496 Professional Studies: Internship 3-12 cr

Relates the intern's classroom studies with occupational and professional experiences in an approved government or para-governmental agency. Written reports required. Course may be repeated for a maximum of twelve hours' credit. Only three hours apply to the political science curriculum. Pre-requisites: Open only to political science majors and minors with advanced standing with permission of department chair. S/U grading only.

PSC 497 Practicum in Polling 3 cr

Supervised experience in all aspects of the survey research process including but not limited to literature review, research design, questionnaire development, sampling techniques, interviewing, data analysis, interpretation and presentation of findings. Pre-requisites: PSC 130, PSC 310, S/U grading only, and permission of the professor.

PSC 498 Practicum in Policy Studies 3-9 cr

Students will be exposed to a variety of experiences associated with the operations of a fully operational research center, including in-service and management training, consulting, sponsored research, organizational assessments, strategic and programming planning, operations, program evaluations, intergovernmental fiscal processes including the research for funding, and grant writing. Research assignments will include basic research design, survey and focus group instrument development, administration of surveys, handling focus groups, curriculum preparation and administration, data manipulation and analysis, and report writing. Only three hours of PSC 498 can be applied toward the requirements for the political science major or minor curriculum at the University of South Alabama. Pre-requisites: PSC 130, PSC 310, or permission of professor, S/U grading only.

PSC 499 Honors Thesis (W) 3 cr

The research and writing of a major paper in the field of political science. Pre-requisite: USA Honors Program.

(NOTE: PSC 130, Introduction to U.S. Government, or its equivalent and permission of graduate director or department chair, are Pre-requisites for each of the following courses.)

PSC 500 Public Administration Organization Theory and Concepts of Public Management 3 cr

A review and examination of the several principal, traditional, and contemporary theories of organization, policy making, and administration. Field problems and case studies are stressed.

PSC 501 Public Administration 3 cr

National, state, and local administration, with special attention to the relationship between formal agency structure and policy execution. (Identical to PSC 401).

PSC 510 Intergovernmental and Interorganizational Relations 3 cr

A review of the political, fiscal and administrative relationships between various levels of government in America. In addition, the emerging nexus to 3d sector non-profit organizations will be examined.

PSC 520 Research Methods and Design 3 cr

Social science research methodologies will be used to help students develop skills for policy analysis and decision making in the public service. Stresses the understanding of research methods and data collection in a Public Administration setting. Theoretical development and elaboration, and an overview of the variety of research designs used in social science research will be included.

PSC 530 Quantitative Analysis 3 cr

Focus is on application of statistical analysis techniques to Public Administration problems and issues. Computer analysis and interpretation of descriptive statistics will be emphasized. Topics will include fundamentals of probability, sampling, hypothesis testing, point estimation, association, correlation, and multi variate analysis.

PSC 537 Legislative Process in the United States 3 cr

Principles, procedures, and problems of law making, with special attention given to the U.S. Congress.

PSC 540 Public Human Resource Management 3 cr

This course will cover contemporary topics in public personnel administration, including public-employee unionization, relevance of the traditional civil-service approach, the challenge of employee productivity and motivation, equal opportunity, and public service ethics.

PSC 541 Leadership: Theory and Practice 3 cr

This course will provide the analytical and intellectual thought and careful examination and reflection of the core issues in the practice of leadership. Models and influences on leadership will be critically examined.

PSC 550 Managing the Public Budget 3 cr

This course emphasizes the political management and public-policy implications of budget reform. The conceptual framework for program and performance budgeting will be explored, as well as the increasing congressional role in federal budget policy.

PSC 560 Comparative Public Administration 3 cr

A study of the operation of government systems throughout the World-their history, features, similarities, and differences.

PSC 570 Administrative Law 3 cr

This course emphasizes the relationship between administrative processes of government and the legal system. Attention is given not only to the administrative process involving formal adjudication, rule making, and judicial review, but also to those processes involving formal and unreviewed discretionary action. Students propose legal resolutions to contemporary administrative issues.

PSC 572 Environmental Law 3 cr

This course will introduce the student to some of the fundamental concepts of environmental law. It will utilize the philosophy and history of environmental law as it has developed from the Common Law of England to provisions of a Municipal Code.

PSC 576 Administration Issues in Criminal Justice in the Mental Health System 3 cr

An overview of the relevant federal and state laws, federal regulations, and court rulings that address the issues of criminal justice for preserving the rights of those citizens who suffer from mental illness.

PSC 580 Public Policy Analysis and Evaluation 3 cr

A practical introduction to policy analysis and program evaluation including a general overview of conceptual frameworks by which evaluations are conducted and an examination of the various qualitative and quantitative techniques by which policy outcomes and programs are analyzed. Designed to develop skills necessary for conducting evaluations and assessing the validity and credibility of evaluations conducted by others.

PSC 581 Public Policy and Aging 3 cr

Examines government response to the growing number of older Americans. The course examines the policy process and focuses on such issues as retirement, pensions, health care, housing, social services, and intergenerational issues. Elder advocacy and the long term political consequences of demographic changes are also addressed.

PSC 585 Health Policy 3 cr

This course focuses on two distinct aspects of American health policy. First the policy making process is examined in the context of health care and the major decision making powers (congress, presidency, bureaucracy, and special interests). Second, existing health care policies are examined with an emphasis on the implications for access, financing, and quality of care.

PSC 586 Health Administration 3 cr

Applications of management principles to health care organizations with a focus on governance and leadership, human resources, control systems, strategic planning, and accountability.

PSC 587 Health Politics and the Elderly 3 cr

This course focuses on the health policy process and issues impacting the elderly, with particular attention given to the politics of legislation, financing mechanisms, and strategies for reform.

PSC 590 Special Topics 3 cr

Study of a significant topic in Public Administration. May be repeated for credit when the content varies.

PSC 594 Directed Studies 1-6 cr

Under the guidance of a faculty member, student will pursue directed study of approved topics in public administration. For non-thesis students.

PSC 596 Professional Studies Internship in Public Administration 3-9 cr max

Relates the participants' classroom studies to occupational and professional experiences in an approved public agency. Written reports required. May be taken for a total of nine hours. (For further details, see section on internship.)

PSC 597 Practicum in Polling 3 cr

Supervised experience in all aspects of the survey research process including but not limited to literature review, research design, questionnaire development, sampling techniques, interviewing, data analysis, and interpretation and presentations of findings. Pre-requisite: permission of professor.

PSC 598 Practicum in Policy Studies 3-9 cr

Students will be exposed to a variety of experiences associated with the operations of a fully operational research center, including in-service and management training, consulting, sponsored research, organizational assessments, strategic and program planning, operations, program evaluation, intergovernmental fiscal processes including the search for funding, and grant writing. Research assignments will include basic research design, survey and focus groups, curriculum preparation and administration, data manipulation and analysis, and report writing. Only three hours of PSC 598 can be applied toward the requirements for the MPA program at the University of South Alabama. Pre-requisite: permission of the professor.

PSC 599 Thesis 3-6 cr

Completion and oral defense of a master's thesis based upon original research. May be repeated for up to six credit hours. A minimum of six hours credit is required to meet degree requirements. Pre-requisite: Approval of research prospectus, including IRIB or Animal Use and Care Committee approval, if applicable.

PSYCHOLOGY (PSY)

PSY 120 General Psychology 3 cr

A survey of the basic theories, concepts, principles, and research findings in the field of Psychology. **Core Course**. Fee.

PSY 121 Honors General Psychology (H) 3 cr

This course will provide a survey of the basic theories, concepts, principles, and research findings in the field of Psychology. Along with the broad overview provided by the course, students will participate in a more in-depth examination of selected special topics (e.g. those topics generating controversy in the research community and in our society) as selected by the instructor. By contrast with the PSY 120 General Psychology course already being taught, the Honors General Psychology course will provide a more thorough coverage of selected copies. Pre-requisite: Special permission.

PSY 220 Research Design and Analysis I 3 cr

Research methods in psychology with an emphasis on the experimental method. Pre-requisite: PSY 120 or PSY 121. Co-requisite: PSY 221.

PSY 221 Research Design and Analysis I: Laboratory 1 cr

Laboratory in research methods in psychology with an emphasis on the experimental method. Pre-requisites: PSY 120 or PSY 121, and EH 102. Co-requisite: PSY 220. Fee.

PSY 250 Life Span Development 3 cr

An overview of human development from conception to death. Special emphasis will be placed on cognitive and social development. **Core Course**.

PSY 270 Psychology of Black Experience 3 cr

Theories and principles of psychology pertaining to the experience of black Americans. Includes the development of the black psychological perspective, African-American historical developments and philosophy, identify development and determinants of the black personality, and contemporary issues in the black community.

PSY 290 Special Topics 1-3 cr

Selected topics in psychology. May be repeated for credit when course content varies. Pre-requisite: PSY 120 or PSY 121.

PSY 310 Biological Psychology 3 cr

An introductory survey of research and theory in neuroscience as it applies to the understanding of behavior. Focus will be on understanding basic mechanisms of neuron function and general coverage of topics such as sensory and motor systems, motivation and emotions, learning and memory, language and thinking, and mental disorders. Pre-requisite: PSY 120 or PSY 121.

PSY 317 Applied Behavior Analysis I: Introduction 3 cr

An introduction to the Principles of Behavior intended as a Pre-requisite to the specific strategies and procedures practiced by Behavior Analysts. This course will present the historical and scientific foundations of Behavior Analysis as applied in educational and other human service settings. Pre-requisites: PSY 120 or PSY 121 and PSY 220 or Education Teacher candidacy.

PSY 320 Research Design and Analysis II (C) (W) 3 cr

Experience in applying methodological and statistical concepts introduced in PSY 220 and ST 210, as well as instruction in additional topics such as research and analysis. The course will emphasize the use of computers in conducting behavioral research (e.g., literature searches, collecting data, analyzing data, writing research reports). Pre-requisites: PSY 120 or PSY 121, and PSY 220 and ST 210, and EH 102 or EH 105. Co-requisite: PSY 321. Fee.

PSY 321 Research Design and Analysis II: Laboratory 1 cr

Laboratory in research methods in psychology with an emphasis on applying methodological and statistical concepts introduced in PSY 220 and PSY 320. Pre-requisites: PSY 120 or PSY 121, and PSY 220/221, and ST 210, and EH 102. Co-requisite: PSY 320. Fee.

PSY 340 Abnormal Psychology 3 cr

Nature and development of deviant behavior. Pre-requisite: PSY 120 or PSY 121.

PSY 350 Child and Adolescent Development 3 cr

The developmental and psychosocial aspects of childhood and adolescence. Pre-requisites: PSY 120 or PSY 121.

PSY 394 Directed Study 1-3 cr

Specific topics and research findings introduced through the reading of appropriate professional and scientific literature. Pre-requisite: PSY 120 or PSY 121.

PSY 395 Psychology Practicum 3 cr

Supervised experience in an area of psychology. May include supervised placement in an applied setting. Pre-requisite: PSY 120 or PSY 121 and instructor approval.

PSY 412 History and Systems of Psychology (W) 3 cr

The historical foundations of modern psychology and the development of major theories in psychology. Pre-requisites: PSY 120 or PSY 121, and EH 102 or EH 105.

PSY 416 Cognition 3 cr

An overview of psychological research and theory in cognitive psychology. The course will emphasize how people gather, process, represent, and use information to guide thought and action. This course is an approved elective for students seeking gerontology certification. Pre-requisites: PSY 120 or PSY 121 and PSY 220.

PSY 418 Applied Behavior Analysis II: Methods 3 cr

Behavioral assessment techniques and operant and respondent methods for deceleration of inappropriate behavior will be covered. Operant methods for accelerating appropriate behaviors, teaching new behaviors, and maintaining behaviors will be covered. Data-based decision making strategies will be used in developing and altering individual programs. Pre-requisites: PSY 417.

PSY 419 Applied Behavior Analysis III: Advanced Applications 3 cr

Behavioral assessment techniques and experimental designs for the evaluation of behavior change programs will be covered. Data-based decision making strategies for formative program evaluation and modification are also included. Pre-requisites: PSY 417.

PSY 420 Psychology of Learning 3 cr

Theories, experimental findings, and methods of investigation in learning. Pre-requisites: PSY 120 or PSY 121 and PSY 220.

PSY 428 Perception 3 cr

A critical analysis of the main theories and research trends in sensation and perception. This course will include computer simulations and demonstrations, and will also emphasize computer applications for data collection, data analysis, and for reporting results. This course is an approved elective for students seeking gerontology certification. Pre-requisites: PSY 120 or PSY 121, PSY 220; PSY 310 or permission of instructor. Fee.

PSY 435 Social Psychology 3 cr

A survey and analysis of major theoretical and experimental topics of interest in social

psychology, such as how we perceive others, attitude, interpersonal attraction, aggression, prejudice and altruism. Pre-requisite: PSY 120 or PSY 121.

PSY 440 Psychology of Personality 3 cr
A survey and critical analysis of major historical and current theories about personality. The course will also examine research relevant to the different approaches and consider various techniques of personality assessment. Pre-requisite: PSY 120 or PSY 121.

PSY 456 Adult Development and Aging 3 cr
The developmental and psychosocial aspects of adulthood and late life. This course is an approved elective for gerontology certification. Pre-requisite: PSY 120 or PSY 121.

PSY 460 Industrial Psychology 3 cr
Application of psychological principles and techniques to business, industry, and government. Pre-requisite: PSY 120 or PSY 121.

PSY 465 Introduction to Measurements and Tests 3 cr
Theories and principles of psychological testing. Pre-requisites: PSY 120 or PSY 121 and ST 210.

PSY 470 Intellectual Disabilities 3 cr
The study of theories and research in intellectual disabilities and related areas. Pre-requisite: PSY 120 or PSY 121.

PSY 475 Comparative and Evolutionary Psychology 3 cr
A critical analysis of the main theories and research trends in comparative and evolutionary psychology. Pre-requisites: PSY 120 or PSY 121 and PSY 220.

PSY 480 Health Psychology (W) 3 cr
Current theories, research and applications in health psychology. This course is an approved elective for students seeking gerontology certification. Pre-requisites: PSY 120 or PSY 121 and PSY 220, and EH 102 or EH 105.

PSY 485 Psychology of Gender 3 cr
The study of psychological research on gender differences and theories regarding the origins of these differences. Pre-requisite: PSY 120 or PSY 121.

PSY 490 Special Topics 1-3 cr
Selected topics in psychology. May be repeated for credit when course varies. Pre-requisite: PSY 120 or PSY 121.

PSY 492 Seminar 1-3 cr
A survey of basic theories, concepts, principles, and research findings in a particular focal topic in psychology. Students will study topics in depth by reading and presenting research reports, review papers and book chapters, and through active in-class discussion of the reading materials. Pre-requisites: PSY 120 or PSY 121, PSY 220, and permission of department chair.

PSY 494 Directed Studies 1-3 cr
Directed study and research. Pre-requisite: PSY 120 or PSY 121.

PSY 499 Honors Senior Thesis 3-6 cr
Student conducts an independent research project under the supervision of a faculty sponsor. Recommended for psychology majors planning graduate school. Permission of department chair is required prior to registration. Pre-requisites: PSY 120 or PSY 121, 3.3 GPA, PSY 220, and senior status, or approval of department chair.

NOTE: Enrollment in psychology graduate courses is normally limited to those students admitted to the Psychology Graduate Program. Requests for permission to enroll from other graduate students will be considered on an individual basis if space is available. Such requests should be directed to the department chair. All practicum courses are limited to students formally admitted to the applied psychology concentration. Pre-requisites and Co-requisites for specific courses are listed by each course. A grade of "B" is required in a Pre-requisite course before enrollment in the subsequent course will be allowed.

PSY 500 Proseminar in Psychology 1 cr
Research presentations will be given by faculty and advanced graduate students. In addition, discussion of project and thesis requirements and procedures will take place. Required of all students registered for PSY 501, PSY 502 and PSY 503.

PSY 501 Research Design and Stats I 3 cr
Theories and principles of research design and elements of modern statistics. Introduction to computer programs for statistical analysis will be included. Co-requisite: PSY 500. Fee.

PSY 502 Research Design and Stats II 3 cr
Theories and principles of advanced research design and elements of modern statistics. The use of computer applications such as SPSS to analyze empirical data sets will be covered. Co-requisite: PSY 500. Fee.

PSY 503 Quantitative Methods II 3 cr
Elements of modern statistics with emphasis on application to psychological research. Multivariate statistical techniques to include multiple regression, multivariate analysis of variance, discriminant, canonical, and factor analysis will be discussed. Pre-requisite: PSY 502. Co-requisite: PSY 500. Fee.

PSY 510 Physiological Psychology 3 cr
This course provides a foundation in the techniques of advanced psychophysiological methods. The course covers the history of psychophysiology, including the electrical properties of cells, and major organ systems, with particular emphasis on the electro-encephalogram (EEG) and neuroimaging techniques. Students are introduced to the principles of psychophysiological recording, common applications of psychophysiology, safety and ethics in psychophysiological research, instrumentation, and research design issues in psychophysiology. Relevant statistical treatment of psychophysiological data will be discussed, including multiple regression, complex ANOVA, scaling of data, and non-parametric alternatives such as boot-strapping.

PSY 514 Learning 3 cr
A survey of research and theory in learning.

PSY 516 Cognitive Psychology 3 cr
An advanced survey of research and theory in cognitive psychology. Topics include pattern recognition, attention, memory, language processing, decision making, and problem solving. This course is an approved elective for students seeking gerontology certification.

PSY 520 Personality Research and Theory 3 cr
A critical analysis and evaluation of major theories and current research trends in personality.

PSY 522 Social and Personality Psychology 3 cr
This course provides a foundation for conducting quantitative research in personality and social psychology. Topics covered will include (a) measurement of personality and individual differences (e.g., narcissism, self-esteem), (b) measurement of cognitive and behavioral outcomes in laboratory and non-laboratory settings (e.g. decision-making, implicit cognitions), and (c) data analytic techniques (e.g. testing for mediation/moderation, structural equation modeling).

PSY 524 Lifespan Development 3 cr
Analysis of theories, research methods, and major findings of sensory, perceptual, social, and cognitive changes across the lifespan, from infancy to late life. Research in social and cognitive disabilities, the underlying mechanisms involved in thinking and learning processes, and age-related cognitive models are central to this course. This course is an approved elective for students seeking gerontology certification.

PSY 528 Sensation and Perception 3 cr
This course provides a multidisciplinary analysis of how the sensory systems analyze physical stimuli to support perception and successful actions. Consideration is given to how the anatomy and physiology of the major sensory systems extract information using low- and high-level mechanisms to create meaningful percepts. Other topics include psychophysics, comparative studies, communication, production and performance, face and object recognition, attention, and event perception. Fee.

PSY 530 Introduction to Applied Psychology and Ethics 3 cr
Theories, principles and techniques of interviewing, behavioral observation and classification of psychological disorders.

PSY 532 Psychopathology 3 cr
Current research and theoretical aspects of psychopathology in children and adults.

PSY 540 Psychometrics 3 cr
Theories and method of test construction and principles of measurement and evaluation in the behavioral sciences.

PSY 542 Cognitive Assessment 3 cr
Principles and methods of individual intelligence testing, including the administration of the Wechsler and the Stanford-Binet tests. Practical experience in the administration, interpretation and report writing of a psychological evaluation using intelligence tests. Pre-requisites: PSY 530 and PSY 540.

PSY 544 Practicum Assessment 3 cr
Theory, development and interpretation of selected personality assessment instruments.

Methods and procedures in administering and interpreting personality, aptitude and career interest tests. Pre-requisites: PSY 540 and PSY 542.

PSY 550 Evidence Based Clinical/ Counseling Practicum 3 cr

Study of the theoretical and empirical foundations of the major system of psychotherapeutic change.

PSY 552 Multicultural Issues in Psychology 3 cr

This course will focus on theoretical models, research, techniques, and interventions for working with culturally diverse populations in various settings. Specific issues to be addressed include world views, acculturation and acculturative stress, prejudice and prejudice-reduction techniques, racial/ethnic identity, culture and assessment, and the nature of multicultural competence in Psychology. Issues related to ethnic and racial identity will form the primary focus; however, other types of diversity (e.g., religion, gender, sexual orientation, physically challenged) will also be considered. Pre-requisites: PSY 506, PSY 530, PSY 532, and PSY 550.

PSY 554 Cognitive Behavior Therapy 3 cr

A follow up course to PSY 550, this course will survey theory, research and application of cognitive behavior therapy. Focus will be on treatment strategies and application to a variety of psychological disorders of adults and children. Pre-requisites: PSY 506, PSY 530, PSY 532 and PSY 550.

PSY 556 Practicum 3 cr

Supervised experience with adult and children clients. Includes case conference and seminars. May include supervised placement in an applied setting. May be repeated up to five times for a total of 18 credit hours. Pre-requisites: PSY 532 and PSY 550.

PSY 558 External Practicum 3-5 cr

Supervised placement in an applied setting. May be repeated up to four times for a total of 15 credit hours. Pre-requisites: PSY 552 and/or PSY 554.

PSY 570 Mental Retardation 3 cr

A study of theories and research in mental retardation and related areas.

PSY 572 Child Psychopathology 3 cr

The description and etiology of deviant behavior patterns in children and adolescents. Pre-requisite: PSY 532.

PSY 575 Comparative Psychology 3 cr

An in-depth analysis of the proximal and ultimate causes of animal and human behavior examined from the perspectives of comparative and evolutionary psychology, psychobiology and ethology. Relevant research in animal models of biological and cognitive systems, learning and motivation, lifespan development and related biopsychosocial factors will be included. **This course is an approved elective for students seeking gerontology certification.

PSY 590 Special Topics in Psychology 1-3 cr

Selected topics in psychology. May be requested for credit when course content varies for a total of 12 credit hours.

PSY 594 Directed Individual Study 1-3 cr

Individual study under the direction of a member of the graduate faculty. May be repeated for up to nine hours credit.

PSY 598 Project in Psychology 1-6 cr

Completion of a research project, program proposal, program evaluation, major literature review or other comparable experience under the direction of a member of the graduate faculty. IRB or Animal Use and Care Committee approval may be required for some projects. May be repeated for up to six hours credit. A minimum of three hours credit is required to meet degree requirements.

PSY 599 Thesis Research 1-6 cr

Completion and oral defense of a master's thesis based upon original research. May be repeated for up to nine hours credit. A minimum of six hours credit is required to meet degree requirements. Pre-requisite: Approval of research prospectus including IRB or Animal Use and Care Committee approval if applicable.

PHYSICAL THERAPY (PT)

PT 499 Senior Honors Project - (H, W) 3-6 cr

Under the advice and guidance of a faculty mentor, honors students will identify and carry out a research project relevant to the field of physical therapy study that will lead to a formal presentation at the annual Honors Student Colloquium. The senior project will be judged and graded by three faculty members chaired by the honors mentor. This course is required for Honors recognition and may be repeated for up to six credit hours. Pre-requisites: Permission of the department chair and completion of an approved project prospectus.

PT 600 Human Anatomy I 3 cr

A comprehensive study of human anatomy concentrating on the nervous, skeletal, arthrodial, muscular and circulatory systems of the superficial back, upper extremities, head, neck, and face. The laboratory consists of a dissection of the human body. Prosected material, skeleton models and diagnostic imaging will be introduced for each area of dissection. Special fee.

PT 601 Human Anatomy II 3 cr

A continuation of PT 600 with a comprehensive study of human anatomy concentrating on the nervous, skeletal, arthrodial, muscular and circulatory systems of the deep back, trunk, pelvis and lower extremity. The laboratory consists of a dissection of the aforementioned parts of the human body. Prosected material, skeleton models and diagnostic imaging will be introduced for each area of dissection. Special fee. Pre-requisite: PT 600.

PT 602 Life Span Human Development 2 cr

A study of the process of typical human development and aging across the life span, including neuromotor development in childhood and changes associated with aging. Pre-requisite: PT 682.

PT 603 Neuroscience in Physical Therapy 3 cr

A survey of the structure and function of the nervous system, with emphasis on principles related to physical therapy practice. Includes laboratory study of anatomic specimens. Pre-requisites: PT 601 and PT 682. Special Fee.

PT 604 Pathophysiology I 2 cr

A physiological approach to the study of pathological changes in the human body brought about by trauma or disease including cell injury, inflammation, immunopathology, neoplasia, infections, and the musculoskeletal and endocrine systems. Pre-requisite: PT 601.

PT 605 Human Learning and Patient Education 1 cr

The principles of human learning as they relate to physical therapy evaluation and intervention, with special emphasis on the role of patient education in the management of various clinical disorders. Pre-requisites: PT 673 and PT 687.

PT 606 Pharmacology in Rehabilitation 2 cr

A study of pharmacological principles in relation to rehabilitation, with emphasis on the possible benefits and side-effects of chemotherapeutic agents on patients receiving physical therapy treatment. Pre-requisites: PT 607 and PT 682.

PT 607 Pathophysiology II 2 cr

A physiological approach to the study of pathological changes in the human body brought about by trauma or disease including vascular, hematopoietic, nutritional, neurologic, urogenital, GI and hepatobiliary systems. Pre-requisite: PT 604.

PT 610 Principles of Research 2 cr

An introduction to research concepts and methods, critical analysis of the scientific literature, application of statistical methods and research designs, and basic scientific writing skills.

PT 611 Research Proposal Development 2 cr

The application of research concepts and methods in the preparation of a proposal for a team research project including preparation of the proposal for presentation in written and seminar formats. Pre-requisite: PT 610.

PT 612 Research Project 2 cr

The undertaking of a team research project, including analysis and preparation of the research results for presentation in paper and poster formats. Pre-requisite: PT 611. Special fee.

PT 613 Clinical Case Report 2 cr

This course allows the student to develop a clinical case report based on a patient the student has treated during a full-time internship, an administrative/education process or a clinical risk management situation. An in-depth analysis of research from recent publications related to the case is required. The student will prepare a written case report and a presentation in seminar format.

PT 614 Measurement in PT 1 cr

A course exploring theoretical aspects of measurement and the role of measurement in physical therapy. Pre-requisite: PT 610.

PT 620 Clinical Kinesiology 3 cr

A study of human movement as it relates to clinical physical therapy practice with an

emphasis on biomechanical principles of movement and surface anatomy palpation of the musculoskeletal system. Includes laboratory study. Pre-requisite: PT 601.

PT 621 Introductory PT Skills 4 cr

An introduction to the principles and techniques of patient care utilized in physical therapy practice. These basic therapeutic skills include, but are not limited to, positioning, draping, patient transfers, assistive gait devices, wheelchair use and basic examination. Techniques including goniometry, muscle strength and length testing, surface palpation, massage and soft tissue mobilization are presented. Includes laboratory study.

PT 622 Exercise Physiology 4 cr

A study of the effect of physical activity on human physiology with an emphasis on the musculoskeletal, cardiovascular/pulmonary, and endocrine systems. Modes of exercise, environmental considerations, and selected clinical populations are also covered in this course. Includes laboratory study.

PT 625 Therapeutic Intervention 4 cr

A study of specific techniques of therapeutic intervention in physical therapy practice including electrophysical agents and manual therapy techniques. The electrophysical agents unit will include the physical principles, physiological effects, therapeutic uses and clinical application of thermal, mechanical, electrical and photic energy. The manual intervention unit will include manual therapy techniques including soft tissue massage. Includes laboratory study. Pre-requisites: PT 621 and PT 622. Special fee.

PT 626 Health Promotion and Prevention in PT 1 cr

A course to focus on prevention of impairments, functional limitations or disabilities by identifying disablement risk factors and providing educational intervention to facilitate a positive change in the health behavior of patients. Pre-requisite: PT 622.

PT 627 Medical Screening 2 cr

A course focusing on the use of screening tests and clinical tools to enhance the therapist's role as an independent practitioner with the ability to identify medical conditions of concern that require referral to a physician. Pre-requisite: PT 607.

PT 628 Mobility, Orthotics and Prosthetics 2 cr

The study of human functional mobility, including pathological aspects of locomotion. The course will also address related topics including prosthetics and orthotics. Pre-requisites: PT 620 and PT 682.

PT 631 PT in Musculoskeletal Disorders I 4 cr

Etiology, diagnostic procedures and radiography, medical management, physical therapy evaluation, treatment and intervention of selected musculoskeletal disorders with an emphasis on the upper extremities. Includes the fundamentals, principles and practice of therapeutic exercise. Includes laboratory study, Pre-requisite: PT 601.

PT 632 PT in Musculoskeletal Disorders II 3 cr

A continuation of PT 631 that includes etiology, diagnostic procedures and radiography, medical management, physical therapy evaluation, treatment and intervention of selected musculoskeletal disorders with an emphasis on the lower extremities. Includes laboratory study. Pre-requisite: PT 631.

PT 633 PT in Musculoskeletal Disorders III 4 cr

A continuation of PT 632 that includes etiology, diagnostic procedures and radiography, medical management, physical therapy evaluation, treatment and intervention of selected musculoskeletal disorders with an emphasis on the lumbar spine and pelvis. Includes laboratory study. Pre-requisites: PT 632 and PT 682.

PT 634 PT in Musculoskeletal Disorders IV 3 cr

A continuation of PT 633 that includes etiology, diagnostic procedures and radiography, medical management, physical therapy evaluation, treatment and intervention of selected musculoskeletal disorders with an emphasis on the cervical and thoracic spine. (TMJ). Includes laboratory study. Pre-requisite: PT 633.

PT 635 PT in Musculoskeletal Disorders V 2 cr

Special topics in the management of musculoskeletal conditions - including ergonomics, sports medicine and musculoskeletal issues in obstetrics and gynecology. Includes laboratory study. Pre-requisite: PT 634.

PT 640 Neuromuscular PT Examination/Evaluation 4 cr

This course is a study of the principles and concepts of normal human movement and physical therapy examination in patients with diseases of the neuromuscular systems across the lifespan. The clinical decision-making essential in the evaluation of examination data is presented including prioritization of patient problems and formulation of functional goals and general PT plan of care. Specific components of the course include patient/client history, systems review, and tests and measurements, problem list development, and writing patient goals. Includes laboratory study. Pre-requisites: PT 602 and PT 603.

PT 641 Pediatrics Neuromuscular PT Examination/Evaluation 2 cr

This course prepares the student to provide services to children with special health care needs/disabilities and their families in a manner consistent with family-centered care; includes patient/family history, systems review, and tests and measurement, and opportunities for clinical decision-making and establishing a plan of care based on examination data on prognosis for a wide variety of diseases of pediatric diseases, conditions, and syndromes impacting typical development. Review of pediatric practice settings and legislation, medical management, pharmacologic treatment, radiographic imaging and other diagnostic testing related to neuromuscular disorders and developmental delay are included. Includes laboratory study. Pre-requisite: PT 640.

PT 642 Neuromuscular PT Intervention 4 cr

A course to follow PT 640 and PT 641 with added emphasis on principles and concepts of physical therapy intervention in patients with disorders of the neuromuscular systems. Includes laboratory study. Pre-requisite: PT 641.

PT 650 PT in Integumentary Disorders 4 cr

A study of the practice of physical therapy in management of skin disorders and underlying disease with an emphasis on the patient with open wounds, including burns. Includes laboratory study. Pre-requisite: PT 604.

PT 660 PT in Cardiovascular and Pulmonary Disorders 4 cr

A study of the principles and practice of physical therapy for patients with cardiovascular and pulmonary disease, including radiography, and medical and surgical management. Includes laboratory study. Pre-requisites: PT 607, PT 622 and PT 682.

PT 671 Clinical Case Studies I 1 cr

A course designed to provide opportunities to develop clinical judgment as part of patient management including examination, evaluation based on examination data, establishing a physical therapy diagnosis, consideration of patient prognosis and development of an individualized plan of care. Emphasis will be on musculoskeletal disorders of peripheral joints ethical and legal scenarios, and psycho-social concerns of the patient.

PT 672 Clinical Case Studies II 1 cr

A continuation of PT 671 designed to provide opportunities to develop clinical judgment as part of patient management including examination, evaluation based on examination data, establishing a physical therapy diagnosis, consideration of patient prognosis and development of an individualized plan of care. Disorders of each system including multi-system co-morbidities will be included. Pre-requisites: PT 671 and PT 682

PT 673 Clinical Case Studies III 1 cr

A continuation of PT 672 designed to provide opportunities to practice clinical judgment as part of patient management including examination, evaluation based on examination data, establishing a physical therapy diagnosis, consideration of patient prognosis and development of an individualized plan of care. Disorders of each system including multi-system co-morbidities will be included. Pre-requisite: PT 672.

PT 674 Clinical Synthesis and Patient Management 2 cr

A review and synthesis of physical therapy evaluation, intervention planning and application of intervention techniques in the management and education of patients with specific clinical disorders, emphasizing clinical decision making based upon clinical experience. Pre-requisites: PT 627, PT 635 and PT 642.

PT 675 Comprehensive Capstone 1 cr

Occurring in the final weeks of the curriculum, this is a continuation of PT 674 including an emphasis on comprehensive review and preparation for taking the National Physical Therapy Examination. All students must pass the comprehensive final capstone exam to be awarded the DPT degree. Pre-requisites: PT 674 and PT 683.

PT 680 Professional PT Practice (W) 2 cr
A study of physical therapy as a profession with emphasis on the patient management model, legal and ethical issues, psychosocial issues and PT/patient relationships. Licensure, practice issues, patient populations and professional interactions will be discussed.

PT 681 Clinical Practice Issues (W) 2 cr
An introduction to documentation of physical therapy patient/client management and a review of medical terminology. This course will include use of the Guide to Physical Therapist Practice. Preparation for full-time clinical internships will be addressed including use of the clinical assessment tool, use of OSHA guidelines for universal precautions and TB prevention, and use of risk management reports. Pre-requisite: PT 680.

PT 682 PT Internship I 6 cr
A planned learning experience of clinical education designed to integrate previous didactic knowledge in a full-time, supervised clinical internship in Physical Therapy practice settings. Pre-requisites: PT 601, PT 620, PT 625, PT 632 and PT 650. Special Fee.

PT 683 PT Internship II 8 cr
A continuation of PT 682, providing another planned learning experience, designed to integrate previous knowledge in a full-time, supervised clinical internship in Physical Therapy practice settings. Good academic standing with no required course retakes pending. Pre-requisites: PT 635, PT 642, PT 650, PT 660 and PT 682.

PT 684 PT Internship III 6 cr
A continuation of PT 682 and PT 683, providing another planned learning experience, designed to integrate previous knowledge in a full-time, supervised clinical internship in Physical Therapy practice settings. Good academic standing with no required course retakes pending. Pre-requisite: PT 683.

PT 685 Management of PT Practice 3 cr
A study of current organizational and management principles and issues related to health care delivery systems with special emphasis on the current and future roles of Physical Therapy. Pre-requisite: PT 687.

PT 686 PT Internship IV 6 cr
A continuation of PT 682, 683 and 684, providing another planned learning experience, designed to integrate previous knowledge in a full time, supervised clinical internship in physical therapy practice settings. Good academic standing with no required retakes pending. Pre-requisite: PT 684.

PT 687 Professional Topics in PT Practice 1 cr
This course entails a continuation of professional practice issues including such topics as health-care communication,

PT 697 DPT Directed Study 3 cr
Directed research or comprehensive review of evidence-based literature completed in a clinical area of interest under the supervision of a faculty mentor. The student will document incorporation of course content into their current clinical practice. This course may be repeated up to two times with a different focus-topic each time. Pre-requisite: PT 682.

PT 699 DPT Seminar 1 cr
An elective seminar to update information in specific areas of study. Course number may be repeated up to three times.

RADIOLOGIC SCIENCES (RAD)

DEGREE PROGRAM

RAD 300 Clinical Education I 2 cr
Hospital-based laboratory allowing the student additional clinical experience in RAD 312 and RAD 304 .

RAD 301 Clinical Education II 4 cr
Hospital-based laboratory allowing the student to apply those positioning techniques within a clinical setting as presented in RAD 307 and RAD 308.

RAD 302 Clinical Education III 3 cr
Hospital-based laboratory experience allowing the student increased responsibility in those areas covered in RAD 315 and RAD 307, 308, and 309, as well as bedside radiography.

RAD 304 Patient Care and Ethics Pertinent to Radiology 3 cr
This course is designed to give the student basic knowledge concerning patient care and ethical situations with which the radiologic technologist must be familiar. Class time is allotted for the student to practice certain techniques pertinent to obtaining vital signs, handling of patients, sterile technique, tray setup, first-aid measures, and general operating room and bedside radiography procedures.

RAD 307 Radiography of the Osseous System I 4 cr
This course includes the demonstration and practice in positioning and phantom radiography of the chest, general abdomino-pelvic viscera, and the upper and lower extremities to include shoulder and pelvic girdles. Special fee.

RAD 308 Radiography of the Osseous System II 4 cr
A continuation of RAD 307 to include the axial skeleton, sternum, sternoclavicular joints and introductory topics relating to special radiographic procedures. Special fee.

RAD 309 Radiography of the Osseus System III 3 cr
A continuation of RAD 308.

RAD 310 Radiation Biology 2 cr
A study of health physics and methods used to reduce exposure to personnel and patients in diagnostic and therapeutic radiology. The biological effects of ionizing radiation are stressed along with applied mathematical principles.

RAD 312 Principles of Radiographic Exposure 4 cr
A beginning study of the principles involved in image formation including radiographic films, film processing, and exposure factors affecting film quality.

RAD 315 Radiographic Contrast Media 2 cr
A detailed study of contrast media, preparation and administration, radiographic positions, technique, and anatomy and physiology of the organs studied.

RAD 318 Radiologic Physics 4 cr
A study of the fundamentals of magnetism, basic electricity, x-ray machine circuitry, x-ray protection, and radiation physics, to give the student a basic understanding of the principles underlying the production of x-rays and their interaction with matter.

RAD 320 Cross-Sectional Anatomy 2 cr
A study of cross-sectional anatomy as imaged in MRI and CT imaging.

RAD 324 Diagnostic Imaging 6 cr
A study of the principles and clinical applications of image intensification, vascular radiography, computerized tomography, ultrasound, and magnetic resonance imaging.

RAD 335 Pediatric and Geriatric Radiography 1 cr
A detailed study of the specialized equipment and accessories used in the handling of children and the elderly within the department of radiology.

RAD 403 Clinical Education IV 4 cr
Hospital-based laboratory allowing the student to obtain clinical experience in those areas presented in RAD 307, 308, 309 and RAD 315.

RAD 404 Clinical Education V 4 cr
Hospital-based laboratory allowing the student to gain additional clinical experience in RAD 307, 308, 309 and RAD 315.

RAD 405 Clinical Education VI 4 cr
Hospital-based laboratory allowing the student to gain increased clinical experience in general radiographic procedures.

RAD 411 Survey of Pathology 4 cr
A general survey of diseases designed to acquaint the student with certain changes that occur in disease and their application to radiologic sciences.

RAD 415 Diagnostic Imaging II 3 cr
Continuation of RAD 324. A study of the principals and clinical applications of image intensification, vascular radiography, computerized tomography, ultrasound, and magnetic resonance imaging.

RAD 417 Ultrasound Anatomy and Scanning Techniques: Abdomen 4 cr
This course is designed to provide the student with anatomy, pathology and scanning techniques of the abdomen and retroperitoneum. It includes clinical and laboratory demonstrations. Special Fee.

RAD 418 Ultrasound Anatomy and Scanning Techniques: OB/GYN - (W) 3 cr
This course is a continuation of RAD 417 and is designed to provide the student with anatomy, pathology and scanning techniques of obstetrics and gynecology. It includes clinical and laboratory demonstrations. Special Fee.

RAD 421 Ultrasound Physics 3 cr
A course designed to provide the student with the basics of ultrasound physics and instrumentation.

RAD 423 Ultrasound Clinical Education I 5 cr
Hospital-based laboratory allowing the student to gain clinical experience in ultrasound procedures, with emphasis on abdominal exams.

RAD 424 Ultrasound Clinical Education II 5 cr
A continuation of RAD 423, hospital-based laboratory allowing the student to gain clinical experience in ultrasound procedures, with emphasis on OB/GYN exams.

RAD 425 Ultrasound Clinical Education III 5 cr
A continuation of RAD 424, hospital-based laboratory allowing the student to gain clinical experience in ultrasound procedures, with emphasis on superficial structures and pediatrics.

RAD 427 Procedural Guidelines in Ultrasound - (W) 1 cr
This course is designed to review the guidelines for ultrasound exams, ethics in ultrasound, and preparation for the registry exam. Assigned student papers and oral presentations addressing ultrasound topics are required.

RAD 430 Health Care Communications and Information Management 3 cr
This course will provide knowledge of information technology and applications of IT in the healthcare setting. Topics of discussion will include how to foster interdisciplinary communication, development of action plans for areas that are compliant/non-compliant with organizational objectives, and utilization of electronic or manual systems.

RAD 432 Health Care Human Resource Management 3 cr
This course will enable student to develop an effective recruitment and staffing program, implement a retention program, conduct staff performance evaluations, establish and develop processes to expand employee competence, implement a leadership development program, develop a succession plan and create an employee recognition program.

RAD 433 Health Care Financial Management 3 cr
This course will provide the student with the knowledge of both fiscal and asset management in the daily operation of a health care organization with tools and techniques to include health care accounting and financial statements, making major capital investments, determining cost and using cost information in decision making, and budgeting and performance management.

RAD 435 Health Care Operations Management (W) 3 cr
Provide the knowledge to use surveys, focus groups, and interviews, use quality improvement methods, develop industry partnerships and develop new opportunities, develop marketing and public relations plans, develop policies and procedures to follow federal, state, and other regulatory guidelines, enforce policies and procedures with monitoring techniques, and finally, develop a quality management program.

RAD 437 Image Analysis 3 cr
Student radiographs taken during the clinical periods will be viewed and critiqued within the classroom.

RAD 440 MGT Management Preceptorship 1 cr
This course provides students with field experience in radiology management practices and procedures.

RAD 441 Clinical Education I 5 cr
Through structured sequential assignments in clinical education settings, concepts of team practice, patient-centered clinical practice, and professional development are presented. Course designed to provide development, application, analysis, integration, synthesis and evaluation of concepts and theories in radiation therapy.

RAD 442 Clinical Education II 6 cr
A continuation RAD 441. Through structured sequential assignments in clinical education settings, concepts of team practice, patient-centered clinical practice, and professional development are presented. Course designed to provide development, application, analysis, integration, synthesis and evaluation of concepts and theories in radiation therapy.

RAD 443 Clinical Education III 7 cr
A continuation of RAD 442. Through structured sequential assignments in clinical education settings, concepts of team practice, patient-centered clinical practice, and professional development are presented. Course designed to provide development, application, analysis, integration, synthesis and evaluation of concepts and theories in radiation therapy.

RAD 446 Orientation to Radiation Oncology (W) 3 cr
Examines the field of Radiation Oncology to include terminology, concepts of diagnosis and treatment, orientation to equipment and procedures, and the role of the radiation therapist. Ethical and legal concerns will also be discussed.

RAD 448 Radiation Therapy Physics 3 cr
Processes in radiation production, interaction, detection, and measurement, units, calibration, are presented. Routine and emergency protection procedures for radiation-producing devices and radioactive sources are emphasized. Includes discussions on quality assurance methods, treatment unit calibration, dose monitoring, beam verification, and radiation protection for the patient, health-care worker, and the public.

RAD 450 Patient Care in Radiation Oncology 1 cr
Fundamentals of oncology patient care with emphasis on physical and psycho-social needs assessment, treatment and disease side-effect management, nutritional care, and pain management.

RAD 452 Principles and Practice of Radiation Oncology I 3 cr
A study of techniques used for simulation and treatment delivery. Includes general and site-specific instruction, with attention given to technical details aimed at optimizing the dose delivery planned during simulation and accomplished during treatment. Time will be dedicated to demonstration of techniques.

RAD 453 Principles and Practice of Radiation Oncology II 3 cr
A continuation of RAD 452. An in-depth study of the principles of clinical radiation oncology to include etiology, diagnosis, pathology, staging, spread patterns, simulation and treatment techniques/options, adjuvant therapies, side effects, and outcomes by site or disease category. Time will be dedicated to demonstration of techniques.

RAD 454 Quality Management in Radiation Oncology 1 cr
Components of quality management in Radiation Oncology will be studied, to include quality control and assurance checks for the clinical aspects of patient care, medical records, treatment delivery and localization equipment and treatment planning equipment. The role of various team members in continuous quality improvement will be discussed as well as legal and regulatory implications.

RAD 455 Dosimetry and TX Planning I 3 cr
Content designed to examine factors that influence and govern clinical planning of patient treatment. Encompasses isodose characteristics, contouring of relevant structures, dosimetric calculations, compensations, and clinical application of treatment beams. Optimal treatment planning is emphasized.

RAD 456 Dosimetry and TX Planning II 2 cr
A continuation of RAD 455. Content designed to examine factors that influence and govern clinical planning of patient treatment. Encompasses isodose characteristics, contouring of relevant structures, dosimetric calculations, compensation, and clinical application of treatment beams. Optimal treatment planning is emphasized.

RAD 458 Cancer Management in Radiation Oncology 3 cr
This course examines special topics in Radiation Oncology and places emphasis on current literature related to various aspects of practice.

RAD 460 Vascular Radiography I 4 cr
Advance practice in, and in-depth study of, the principles of vascular radiography.

RAD 461 Vascular Radiography II 4 cr
Continuation of RAD 401 with increased focus on digital radiography, peripheral and intervention al radiography.

RAD 462 Vascular Radiography III (W) 4 cr
Continuation of RAD 461 with increased focus on digital radiography, peripheral and interventional radiography.

RAD 464 Computerized Tomography I 4 cr
Advanced practice in, and in-depth study of, computerized tomography.

RAD 465 Computerized Tomography II 4 cr

Continuation of RAD 405 with increased emphasis on 3-dimensional imaging reconstruction, biopsies and advanced CT techniques.

RAD 466 Computerized) Tomography III (W 4 cr

Continuation of RAD 465 with increased emphasis on 3-dimensional imaging reconstruction, biopsies and advanced CT techniques.

RAD 468 Magnetic Resonance Imaging I 4 cr

An in-depth study of the principles and clinical applications of MRI.

RAD 469 Magnetic Resonance Imaging II 4 cr

Continuation of RAD 409 with additional emphasis on instrumentation, abdominal and extremity joint procedures, and MRI angiography.

RAD 470 Magnetic Resonance Imaging III (W) 4 cr

Continuation of RAD 469 with additional emphasis on instrumentation, abdominal and extremity joint procedures, and MRI anigography.

RAD 472 Mammography I 4 cr

Advanced practice and in-depth study of breast imaging techniques.

RAD 473 Mammography II 4 cr

Continuation of RAD 413 to include needle biopsy and needle localization procedures, and emphasis on quality assurance and image processing.

RAD 474 Mammography III (W) 4 cr

Continuation of RAD 473 including needle biopsy and needle localization procedures, and emphasis on quality assurance and image processing.

RAD 494 Directed Independent Study in Radiography - (W) 2 cr

A comprehensive Registry Review to include written assignments and a presentation.

RAD 496 Radiologic Science Research 1 cr

Students will design and perform a research project directed to either the clinical or management aspect of radiology. A written report and oral presentation is required.

RAD 497 Radiologic Science Research 1 cr

A continuation of RAD 496.

RAD 499 Senior Honors Project (H, W) 3-6 cr

Under the advice and guidance of a faculty mentor, honors students will identify and carry out a research project relevant to the field of Radiologic Sciences study that will lead to a formal presentation at the annual Honors Student Colloquium. The senior project will be judged and graded by three faculty members chaired by the honors mentor. This course is required for Honors recognition and may be repeated for up to six credit hours. Pre-requisite: Permission of the department chair and completion of an approved project prospectus.

COLLEGE READING (RDG)

RDG 152 College Reading 2 cr

This course gives students the opportunity to develop and use reading strategies necessary for college success. This is a two credit hour course for those needing an intensive reading course.

RDG 153 College Reading and Study Skills 3 cr

This course gives students the opportunity to develop and use reading and study skill strategies necessary for college success.

READING EDUCATION (RED)

RED 110 Effective Reading, Language and Study Skills 3 cr

A laboratory experience to increase facility in reading, language, and study skills.

RED 330* Foundations of Reading Instruction (W) 3 cr

A course to orient the student to fundamentals in the teaching of reading and provides practice in basic skills.

RED 331* Teaching Reading 3 cr

A sequence course focusing on methodology, materials, and techniques for developing systematic instruction and diagnosis appropriate for early childhood and elementary children. Pre-requisites: RED 330, and RED 333; and EEC 290. Co-requisites: EEC 335, EEC 336, EEC 337, and EEC 335. This course has a field experience.

RED 333* Literature for Children (W) 3 cr

A course for the selection and use of literature based on the interests, abilities, a need of children from pre-kindergarten through the elementary school. Particular emphasis on creative ways of sharing books with children. Pre-requisite: EEC 290. Co-requisites: RED 330; EEC 332 and EEC 346. This course has a field experience.

RED 334 Literature for Young Child (W) 3 cr

A survey course dealing with methods of using literary materials with children in preschool through the primary grades. It is designed to assist preservice teachers to become widely acquainted with books and related materials for today's young children.

RED 348* Language Development in Early Childhood 3 cr

Emphasis on methods, materials, and special techniques for developing readiness for reading and initiating systematic reading instructions; involvement of principles of diagnostic teaching and integration with other language arts throughout the course.

RED 451* Content Area Literacy 3 cr

Methods and materials in the teaching of reading. Development of effective study and skills at the secondary level is stressed. Pre-requisites: SED 340 or SED 341. Co-requisites: SED 453 or SED 454 or SED 456 or SED 457.

RED 352* Literature for Adolescents 3 cr

Discussion and evaluation of literature for students in grades 7 through 12 with extensive reading, listening, and viewing of materials.

RED 458* Critical Reading in Content Field (W) 3 cr

An examination of non-fiction (and some fiction) which emphasizes critical reading skills. Various types of prose will be considered including that found in textbooks, newspapers and other periodicals, popular fiction, and nonfiction.

RED 530 Current Approaches to Reading Instruction 3 cr

A survey of major reading methods and approaches, followed by more detailed study and manipulation of certain components and specialized procedures which can improve and enhance instruction. Includes comparative study of reading methods used in other countries.

RED 531 Trends and Practices in Teaching Reading 3 cr

Begins with in-depth study of the nature of reading as a process and its place in the total school program and extends through assessments, methods, materials, and personalized procedures for pupils and teachers.

RED 533 Diagnosis and Correction of Reading Disabilities 3 cr

First, an intensive study of the diagnosis of reading disabilities: second, a survey of corrective and remedial techniques for eliminating the difficulties; the third, application of diagnostic and instructional techniques to specific type of disabilities. Pre-requisite: RED 531.

RED 534 Remedial and Clinical Procedures in Reading 3 cr

A practicum in remediating reading disabilities. Each student receives close supervision in work with actual cases of struggling readers at varying disability levels. Pre-requisite: RED 533.

RED 541 Literacy in the Content Areas 3 cr

This course includes the methods and materials for literacy-based instruction in the content areas. The incorporation of literacy-based activities such as reading, writing and thinking; and the use of strategies to promote student comprehension are emphasized. Pre-requisite: Admission to teacher education.

RED 544 Word Recognition Skills in Teaching Reading 3 cr

Designed to provide background, theory, and practice in the mastery of the techniques of teaching phonics, structural analysis, context clues, and dictionary skills as aspects of a meaningful reading process.

RED 545 Literature for Children and Adolescents 3 cr

Provides a comprehensive survey of books written for children and adolescents, and makes appropriate interspersions of periodicals and other media. Through varied class activities, with emphasis on techniques for encouraging literary enjoyment, the student will increase skill in making children's literature an integral part of the school curriculum.

RED 548 Literacy Coaching 3 cr

Includes an in-depth study of coaching techniques of reading instruction and/or diagnosis under the supervision of a reading teaching or supervisor and a college supervisor.

RED 557 Practicum in Reading Education 1 to 9 cr

Experiences in working in the area of reading instruction and/or diagnosis under the supervision of a reading teacher or supervisor and a college supervisor.

RED 560 Materials Workshop in Reading 3 cr

A topical workshop in which participants have experiences in creating, designing, constructing and using instructional materials and activities. This work will emphasize reading and language arts. Pre-requisites: Consent of the instructor. No more than six hours of workshop credit may be applied to a graduate degree in education.

RED 590 Special Topics 3 or 6 cr

Guided investigation of topics in reading education, such as curriculum revision, course or program design, newly evolved trends in reading education, and implications of research in reading education. No more than six hours may apply toward a degree program.

RED 594 Directed Study and Research 1 to 3 cr

Students explore through directed study research problems and issues of special interest or significance in reading education. No more than three semester hours of any departmental 594 courses can be applied toward a degree program. Pre-requisite: Permission of the department chair.

RED 595 Internship: Reading Education 1-9 cr

The internship is a supervised learning experience in a work setting similar to that in which an educator will eventually be employed. The internship provides students with an opportunity to apply the theories and concepts learned during the graduate program.

RED 599 Thesis 1-9 cr

A student selects a project, study, or investigation which is related to reading education. The project will form the basis for the thesis. A thesis committee will provide direction during the investigation and during the writing of the thesis.

RED 611 Theories of Language Development in the Teaching of Reading 3 cr

Emphasizes theories of language acquisition and development. Includes linguistics, language development of the culturally different child, and application of theory to classroom practices in reading and related areas. Requires special permission.

RED 612 Sociological Influences in Reading Instruction 3 cr

Focuses upon the history of reading instruction, sociological factors influencing reading, reading in relation to other media of communication, and ways of applying these findings in classroom and clinical practice. Requires special permission.

RED 613 Administering and Supervising the Reading Program 3 cr

Analyzes and interprets administrative and supervisory roles and functions as they relate to the total school program, elementary through high school. Stress is upon facilitating and enhancing all aspects of the programs. Requires special permission.

RED 615 Diagnosis and Remediation of Severe Reading Disabilities 3 cr

Provides laboratory experiences in studying severe cases of reading disabilities and in developing plans and procedures for their remediation. Requires special permission.

RED 630 Psychological Factors in Teaching Reading 3 cr

Relates pertinent psychological concepts and principles to (1) current definitions of the reading process, (2) methods of teaching, and (3) special procedures for reluctant and disabled readers. The student may apply these concepts and principles in regular or laboratory settings.

RED 640 Research in Reading 3 cr

A critical analysis and evaluation of the significant research studies in reading from which reading concepts emerge and from which implications for teaching and further research may be drawn.

RED 690 Special Topics 3 cr

Guided investigation of topics in reading education, such as curriculum revision, course or program design, newly evolved trends in reading education, and implications of research in reading education.

RED 694 Directed Study and Research 1 or 3 cr

Students explore through directed study problems and issues of special interest or significance in reading education. No more than three semester hours of any departmental 694 courses can be accepted toward a degree program. Pre-requisite: Permission of the department chair.

RED 699 Research Project 1 or 3 cr

The student will conduct a supervised Research Project, relating to an issue or timely topic in the field of reading. May be taken more than one semester. Pre-requisite: Permission of the department chair.

***Only for students admitted to teacher candidacy.**

RELIGION (REL)

REL 100 Introduction to the Study of Religion 3 cr

As a general introduction to the academic study of religion, REL 100 examines the function of religion in relation to human beliefs, social practices, and culture in general. The course surveys a broad number of important debates in the history of religious studies, such as the definition of religion, the insider/outsider problem, theories on the origins of religions, the comparison of religious, religion's psychological, sociological, and political functions, and the manner in which human communities authorize systems of behavior. Fulfills the General Education Requirement.

REL 200 Survey of the Hebrew Bible/ Old Testament 3 cr

An introduction or survey of the literature and social world of the Hebrew Bible/Christian Old Testament. As a way of further illuminating these materials, attention will also be given to the history and religion of Israel as well as the other peoples of the ancient Near East. Fulfills the General Education Requirement.

REL 201 Survey of the New Testament 3 cr

This course is an introductory survey of the New Testament, including the life and ministry of Jesus Christ, apostolic history, related Greco-Roman history and archeology, principal critical issues, and the unity and diversity of New Testament theology. Fulfills the General Education Requirement.

REL 242 Western Philosophy: Medieval 3 cr

A survey of medieval Western Latin, Jewish and Islamic philosophers. Identical with PHL 242. Credit cannot be received for both REL 242 and PHL 242.

REL 290 Special Topics 3 cr

Different themes and issues of significance in religion will be studies as announced.

REL 310 Classical Mythology 3 cr

Through the disciplines of English and Philosophy, this course will provide an introduction to myths and to the literature that recounts the myths, legends, and folktales of ancient Greece and Rome. Not only will this course offer a survey of Greek and Roman myth, but also it will look at how different writers treat the material and why their treatments vary. Pre-requisites: EH 101 and EH 102. Cross-listed with EH 310 and PHL 310. Credit cannot be received for both REL 310 and either EH 310 or PHL 310. Identical with CLA 310, EH 310 and PHL 310. Credit cannot be received for both REL 310 and either CLA 310, EH 310 or PHL 310.

REL 331 History of England to 1603 3 cr

The history of England from the Roman occupation to the Age of the Tudors. Identical with HY 331. Credit cannot be received for both REL 331 and HY 331.

REL 343 Witchcraft and Magic in Medieval and Early Modern Europe 3 cr

The history of beliefs and practices concerning witches, magic and witch-hunting in Medieval and Early Modern Europe. Identical with HY 343. Credit cannot be received for both REL 343 and HY 343.

REL 347 The Holocaust 3 cr

The history of the systematic mass murder of Europe's Jews and other groups by Nazi Germany during World War II. Identical with HY 347. Credit cannot be received for both REL 347 and HY 347.

REL 351 Philosophy of Religion (W) 3 cr

Investigates the nature of religion, including religious experience, religious language, arguments for the existence of God, and the problem of evil. Identical with PHL 351. Credit cannot be received for both REL 351 and PHL 351.

REL 352 World Religions 3 cr

Major Eastern and Western religions emphasizing their historical development, their

theological structure, and their philosophical implications. Identical with PHL 352. Credit cannot be received for both REL 352 and PHL 352.

REL 353 Reformation Europe 3 cr
The role of religious change in the 16th and 17th centuries. Identical with HY 353. Credit cannot be received for both REL 353 and HY 353.

REL 354 Philosophies of India 3 cr
Introduces the major religions and philosophies of India by the way of the classical Realist/ Anti-Realist debate in India. Study of the major religious doctrines of theistic and non-dualist Vedanta, Buddhism, and Jainism, and their philosophical articulation in the Nyaya, Advaita Vedanta, Madhyamaka, and other schools. Identical with PHL 354. Credit cannot be received for both REL 354 and PHL 354.

REL 355 Chinese Philosophy 3 cr
Introduces the major classical religious and philosophical systems of China by way of an examination of early Confucianism, Mohism, Yangism, Legalism, Taoism, and Chinese Buddhism. Particular emphasis will be placed upon the role of these schools in the development of Chinese religion, morality, and political organization. Identical with PHL 355. Credit cannot be received for both REL 355 and PHL 355.

REL 364 History of Islamic Civilization to 1473 3 cr
This course will cover the political, social, and cultural history of Islamic Civilization from its beginnings in the Arabian Peninsula in the sixth century to the Ottoman conquest of Constantinople in 1453. Pre-requisite: Junior or Senior status. Identical with HY 364. Credit cannot be received for both REL 364 or HY 364.

REL 365 History of Islamic Civilization from 1473 3 cr
This course will cover the political, social, and cultural history of Islamic Civilization from the Ottoman conquest of Constantinople in 1453 to the present day. Pre-requisite: Junior or Senior status. Identical with HY 365. Credit cannot be received for both REL 365 and HY 365.

REL 373 Religion in American History (W) 3 cr
Examines the role of Religion in United States history from the colonial era to the present. Grade of "C" or above in EH 102. Identical with HY 373. Credit cannot be received for both REL 33 or HY 373.

REL 390 Special Topics 3 cr
Different figures or topics of significance in religion will be studied as announced. May be repeated, when content varies, for a total of six hours.

REL 420 Sociology of Religion (W) 3 cr
An analysis of religion as a social institution with emphasis on modern western societies. Topics include the functions of religion for society and individuals, changing patterns of religious belief and practice, and the relationship between religion and other social institutions. Identical with SY 420. Credit cannot be received for both REL 420 and SY 420.

REL 465 Studies in the History of Islamic Civilization 3 cr
This course will cover specific topics in the history of Islamic Civilization. May be repeated for credit when content varies. Pre-requisite: Junior or Senior status. Identical with HY 465. Credit cannot be received for both REL 465 or HY 465.

REL 492 Seminar 3 cr
An investigation of issues and concepts in religion for advanced undergraduates and graduate students. May be repeated, when content varies, for a total of six hours. Junior, senior, or graduate standing.

REL 494 Directed Studies 1-3 cr
Directed research in religion under the guidance of a member of the department. Credit according to the magnitude of the individual project. May be repeated, if content varies, for a total of three hours. Pre-requisites: Junior or senior standing and approval of directing professor and department chair.

REL 499 Honors Thesis (W) 3 cr
Extended research paper prepared under the direction of thesis advisor plus two-person committee selected by advisor in consultation with student. Pre-requisites: The student must have developed a proposal for the thesis in consultation with the advisor, and received permission for the work from the committee. In addition, the student must be a senior major or minor, have completed the Common Core, and have at least a 3.3 GPA in the Religion Concentration of the Philosophy major. Credit for this course is only given as an addition to the hours required for the major.

REL 594 Directed Studies 3 cr
Directed research in religion under the guidance of a member of the department. May be repeated, if content varies, for a total of six hours. Prerequisite: Graduate Student in Department conferring a Graduate Degree (hence not open to Philosophy majors in any Concentration in Philosophy).

ENGINEERING, SYSTEMS (SE)

SE 601 Systems Engineering Fundamentals 3 cr
Systems engineering fundamentals are the focus of this course, including structure of complex systems, system development process, requirements development and analysis, engineering design and development, design validation, integration and test, standard systems engineering documentation, change management and process improvement. Fee

SE 602 Risk and Failures Analyses 3 cr
Systems engineering risk and failure analyses are the focus of this course, including risk analysis needs, risk analysis methods, performance requirement analysis, trade studies, failure analysis needs, failure tracking, and failure analysis methods. Fee.

SE 603 Integration, Test and Evaluation 3 cr
Systems engineering integration, test, and evaluation are the focus of this course, including interface control documents, design reviews, requirements management, allocation of test methods to requirements, test plans, test procedures, test execution, failure tracking and resolution. Fee.

SE 604 Software Systems Engineering 3 cr
Software systems engineering is the focus of this course, including software development methodologies, software development tools, change management, concept development, software requirement development and allocation, coding and unit test, program technical interfaces, software engineering management. Fee.

SE 605 Systems Engineering Project Management 3 cr
Systems engineering project management is the focus of this course, including managing system development and risks, work breakdown structure, systems engineering management plan, design reviews, budget and schedule analyses, negotiation and conflict resolution, contracts, customer interactions, team selection, and failure resolution. Fee.

SECONDARY EDUCATION (SED)

SED 340* Fundamentals of Teaching (W) 3 cr
Theories and practices of planning for instruction. Conducted as a system for individually guided mastery. Pre-requisites: Admission to candidacy and completion of 100% of general studies course work and 75% of teaching field course work.

SED 341* Teaching Skills (W) 3 cr
Study and practice of selected instructional skills and classroom management focusing on middle level education and the transition to secondary education. Pre-requisites: junior standing and admission to candidacy.

SED 342* Secondary Field Experiences 1 cr
Supervised practice in teaching curriculum areas in middle and high school classroom settings during the semester in which block courses are taken. Pre-requisite: SED 340. Co-requisites: SED 341, EPY 455, RED 451, and SED 453 or SED 454 or SED 456 or SED 457.

SED 350* Introduction to Teaching in the Middle School 3 cr
A study of the concerns of the pre-service middle school teachers, including program development, characteristics of the mid-adolescent learners, nature of student-oriented instruction, and facilitation of learning of exceptional youth within the regular learning groups. Pre-requisites: Junior standing.

SED 453* Teaching Language Subjects in Secondary Schools 3 cr
Assists students in organizing materials and developing methods of teaching language subjects in secondary schools. Includes field component. Pre-requisites: Admission to candidacy; SED 340 or SED 555 and SED 559. Co-requisites: RED 451, EPY 455, SED 341, SED 342. This course has a required field experience.

SED 454* Teaching Mathematics in Secondary Schools 3 cr
Assists the student in organizing materials and in developing methods of teaching mathematics in secondary schools. Pre-requisites: Admission to candidacy, completion of two-thirds of teaching field, and SED 340 or SED 555 and SED 559. Co-requisites: RED 451, EPY 455, SED 341, SED 342. This course has a required field experience.

SED 455* Teaching Music in Secondary Schools 3 cr

Assists the student in organizing materials and in developing methods of teaching music in secondary schools. Pre-requisites: Admission to candidacy, completion of two-thirds of teaching field, and SED 340 or SED 555. Co-requisite: SED 341 or SED 559.

SED 456* Teaching Science in Secondary Schools 3 cr

Assists the student in organizing materials and in developing methods of teaching science in secondary schools. Pre-requisites: Admission to candidacy, completion of two-thirds of teaching field and SED 340 or SED 555 and SED 559. Co-requisites: RED 451, EPY 455, SED 341, SED 342. This course has a required field experience.

SED 457* Teaching Social Studies in Secondary Schools 3 cr

Assists the student in organizing materials and in developing methods of teaching social studies in secondary schools. Pre-requisites: Admission to candidacy, completion of SED 340 or SED 555 and SED 559. Co-requisites: RED 451, EPY 455, SED 341, or SED 559, SED 342. This course has a required field experience.

SED 459 Creative Experience in Oral Language 3 cr

Background in the theory and function of oral language, and techniques for developing oral and dramatic communicative skills. Emphasis will be on everyday oral language, rather than on formal speech or theater.

SED 462* Student Teaching in the Middle School 12 cr

Observation and supervised teaching in the middle schools with opportunity for study and discussion of the problems and issues encountered. Students will be placed with a person holding a valid teaching certificate in the appropriate field. Pre-requisites: Admission to candidacy, SED 340 and SED 341, appropriate methods course(s), and completion of three-fourths of teaching field(s).

SED 464* Student Teaching in the High School 9 cr

Observation and supervised teaching in high schools with opportunity for study and discussion of the problems and issues encountered. Students will be placed with a person holding a valid teaching certificate in the appropriate field. Pre-requisites: Admission to candidacy, SED 340 and SED 341, appropriate methods course(s), and completion of three-fourths of teaching field(s).

SED 465* Student Teaching in the High School 3 cr

Observation and supervised teaching with opportunity for study and discussion of problems and issues encountered in the N-12 program. Students will be placed with a person holding a valid teaching certificate in the appropriate field. Pre-requisites: Admission to candidacy and an appropriate methods course.

SED 466 Student Teaching Language Arts in HS 9 cr

Observation and supervised teaching in high schools with opportunity for study and discussion of the problems and issues encountered. Students will be placed with a person holding a valid teaching certificate in the appropriate field. Pre-requisites: Admission to candidacy, SED 340 and SED 341, SED 342, SED 453, and completion of three-fourths of teaching field(s)

SED 467 Student Teaching Social Studies in HS 9 cr

Observation and supervised teaching in high schools with opportunity for study and discussion of the problems and issues encountered. Students will be placed with a person holding a valid teaching certificate in the appropriate field. Pre-requisites: Admission to candidacy, SED 340 and SED 341, SED 342, SED 457, and completion of three-fourths of teaching field(s).

SED 468 Student Teaching Science in HS 9 cr

Observation and supervised teaching in high schools with opportunity for study and discussion of the problems and issues encountered. Students will be placed with a person holding a valid teaching certificate in the appropriate field. Pre-requisites: Admission to candidacy, SED 340 and SED 341, SED 342, SED 456, and completion of three-fourths of teaching field(s).

SED 469 Student Teaching Math in HS 9 cr

Observation and supervised teaching in high schools with opportunity for study and discussion of the problems and issues encountered. Students will be placed with a person holding a valid teaching certificate in the appropriate field. Pre-requisites: Admission to Candidacy, SED 340 and SED 341, SED 342, SED 454, and completion of three-fourths of teaching field (s).

SED 470* Student Teaching in the N-12 Program 9 cr

Observation and supervised teaching with opportunity for study and discussion of problems and issues encountered in the N-12 program. Students will be place with a person holding a valid teaching certificate in the appropriate field. Pre-requisites: Admission to candidacy, SED 340 and SED 341, appropriate methods course(s), and completion of three-fourths of teaching field(s).

SED 494 Directed Study in Secondary Education 1, 3 cr

Directed study. Pre-requisite: Permission of department. No more than two directed studies courses can be accepted for a Bachelor's Degree and Class B Certificate. Pre-requisite: Permission of department chair.

SED 499 Seniors Honors Project 3-6 cr

Under the advice and guidance of a faculty mentor, honors students will identify and carry out a research project relevant to the field of study in Secondary Education that will lead to a formal presentation at the annual Honors Student Colloquium. The senior project will be judged and graded by three faculty members chaired by the honors mentor. This course is required for Honors recognition and may be repeated for up to six credit hours. Pre-requisites: Participant in honors program and junior level status.

SED 551 The Secondary School Student 3 cr

Study of the physical, mental, and social development of students at secondary school age levels. The objectives and procedures of American secondary education are related to the development of adolescents in our culture. Included are the level of significance of specific individual differences among students in the various subject fields, the relationship of student self-concept to learning, students study through use of records, a variety of diagnostic materials, and group study projects.

SED 552 The High School Curriculum 3 cr

A study of the purpose of American secondary education and how these are reflected in the school curriculum. Curriculum organization, professional roles in curriculum development, and forces shaping the curriculum today are examined.

SED 554 Teaching Math in Secondary Schools 3 cr

Assists students in organizing materials and developing methods of teaching mathematics in secondary schools. Includes field component.

SED 555 Curriculum and Teaching in the Secondary School 3 cr

Theory and practice of planning for instruction. Conducted as a system for individually guided mastery.

SED 556 Teaching Science in Secondary Schools 3 cr

Assists students in organizing materials and developing methods of teaching science in secondary schools. Includes field component.

SED 557 Teaching Social Studies in Secondary Schools 3 cr

Assists students in organizing materials and developing methods of teaching social studies in secondary schools. Includes a field component.

SED 558 The Middle School Curriculum 3 cr

A study of the Middle School program in light of the characteristics and educational needs of youth in early adolescence.

SED 559 Advanced Teaching Techniques 3 cr

Study and practice of selected instructional strategies and classroom management for middle level education and secondary education.

SED 560 Graduate Research Seminar 3 cr

Research in problems confronting American secondary education. Selected topics are explored by students which provide the basis for seminar discussions. A seminar paper is presented by each student. This course also includes a field-based practicum. Pre-requisite: Permission of department chair.

SED 561 Trends and Practices in Teaching Language Subjects in the Secondary Schools 3 cr

Current trends and practices in curriculum, instruction, selection of materials, and derivation of procedures for guiding learning in reading, listening, writing, and speaking.

SED 562 Trends and Practices in Teaching Social Studies in the Secondary Schools 3 cr

Current trends and practices in organizing and teaching social studies in the secondary school. The selection and use of content, materials, methods, and the development and appraisal of typical units are emphasized.

SED 563 Trends and Practice in Teaching Mathematics in the Secondary Schools 3 cr

Current curriculum trends in teaching mathematics. Included are the selection of materials and a study of methods appropriate for teaching mathematics in the secondary school.

SED 564 Trends and Practices in Teaching Science in the Secondary Schools 3 cr

Current curriculum trends in teaching science in the secondary school. Included are the selection of materials and an evaluation of those methods which are appropriate for teaching the biological and physical sciences.

SED 565 Trends and Practices in Teaching Foreign Language 3 cr

Current trends and practices in curriculum, instruction, selection of materials, and derivation of procedures for guiding learning in reading, listening, writing, and speaking in foreign Languages.

SED 590 Special Topics 3 cr

Current topics of special concern to secondary educators. A different topic will be used each time the course is offered. No more than six semester hours may be applied toward a degree program.

SED 593 Internship in Secondary Education Foreign Language 3-6 cr

The internship is a supervised learning experience in a work setting similar to that in which an educator will eventually be employed. The internship provides the student with an opportunity to apply the theories and concepts learned during the graduate secondary foreign language program. No more than six hours may be taken. An acceptable Praxis II test score.

SED 594 Directed Study and Research 1, 3 cr

Students explore through directed study problems and issues of special interest or significance in Secondary Education. No more than three semester hours of any departmental 594 courses can be applied toward a degree program. Pre-requisite: Permission of the department chair.

SED 595 Internship in Secondary Education Language Arts 3-6 cr

The internship is a supervised learning experience in a work setting similar to that in which an educator will eventually be employed. The internship provides the student with an opportunity to apply the theories and concepts learned during the graduate secondary language arts program. No more than 6 hours may be taken. Prerequisite: An acceptable Praxis II test score.

SED 596 Internship in Secondary Education Social Studies 6 cr

The internship is a supervised learning experience in a work setting similar to that in which an educator will eventually be employed. The internship provides the student with an opportunity to apply the theories and concepts learned during the graduate secondary social science program. No more than six hours may be taken. Prerequisite: An acceptable Praxis II test score.

SED 597 Internship in Secondary Education Science 6 cr

The internship is a supervised learning experience in a work setting similar to that in which an educator will eventually be employed. The internship provides the student with an opportunity to apply the theories and concepts learned during the graduate secondary science program. No more than six hours may be taken. Prerequisite: An acceptable Praxis II test score.

SED 598 Internship in Secondary Education Math 6 cr

The internship is a supervised learning experience in a work setting similar to that in which an educator will eventually be employed. The internship provides the student with an opportunity to apply the theories and concepts learned during the graduate secondary math program. No more than six hours may be taken. Prerequisite: An acceptable Praxis II test score.

SED 599 Thesis 1-9 cr

A student selects a project, study, or investigation in Secondary Education related to his area of specialization. The project forms a basis for the thesis. The thesis committees will give guidance during the investigation and during the writing of the thesis.

SED 699 Research Project 3 cr

The culminating experience which the candidate must synthesize and apply the various program components in a selected instructional setting. The student completes a research project in a public school setting under the guidance of a department faculty committee. May be taken more than one semester. Prerequisite: Permission of department chair.

***Only for students admitted to teacher candidacy.**

SPEECH AND HEARING SCIENCES (SHS)

SHS 290 Speech Improvement for the Classroom 3 cr

Survey of minor speech problems in children and adults through application of speech improvement techniques. Taught Fall and Spring Semesters.

SHS 301 Introduction to Communication Disorders 3 cr

Overview of major disorders of human communication and the role of the audiologist and speech-language pathologist in assessing and treating them. Taught Fall Semester.

SHS 302 Audiology and Hearing Sciences 3 cr

This course will include an introduction to the profession of audiology and the scope of practice as well as address the anatomy and physiology of the hearing mechanisms, the physical properties of sound, quantification of sound, sound generation and sound transmission. Taught Spring Semester.

SHS 315 Fundamentals of Speech Science 3 cr

An introduction to the anatomy and physiology of speech production and the acoustic properties of speech. Pre-requisite: Cumulative GPA of 3.0. Taught Fall Semester.

SHS 331 Normal Language Acquisition (W) 4 cr

Acquisition of communicative behavior in normal children during the first decade of life: development of syntax, semantics, pragmatics, cognition; clinical laboratory experience with young children. Pre-requisite: SHS 341. Taught Spring Semester.

SHS 341 Clinical Phonetics 4 cr

Transcription techniques for the analysis of speech. Includes a study of the dynamics of normal speech sound production. May be taken concurrently with SHS 301. Pre-requisite: Cumulative GPA of 3.0. Taught Fall Semester.

SHS 414 Neurobiological Bases of Human Communication 3 cr

Introduction to neuroscience and clinical neurology as they apply to the processes of normal and disordered communication. Topics include neurophysiology, neuroanatomy, neuropathologies and neuro-rehabilitation. Pre-requisites: SHS 315, SHS 331 and SHS 341. Taught Spring Semester.

SHS 431 Introduction to Language Disorders 3 cr

A survey of language disorders in preschool and school-age children; assessment and intervention. Pre-requisite: SHS 331. Taught Spring Semester.

SHS 453 Introduction to Speech Disorders 3 cr

An introduction to disorders of articulation, voice, and fluency. Theoretical and etiological foundations will be surveyed as well as philosophical orientations to therapy. Pre-requisites: SHS 315 and 341. Taught Fall Semester.

SHS 473 Audiology I 3 cr

This course is an introduction to the following topics: disorders of hearing; etiologies of auditory and vestibular disorders found in populations of all ages and; evaluation techniques used by audiologists. Pre-requisite: SHS 302. Taught Fall Semester.

SHS 474 Audiology II 3 cr

This course is a study of the principles of the management of hearing loss in children and adults; relevant legislation; and treatment and education options. Pre-requisite: SHS 473. Taught Spring Semester.

SHS 480 Issues in Clinical Practicum (W) 4 cr

Introduction to the clinical setting; organizations and statutes that govern professional service; instrumentation, procedures and approaches to remediation. Observation of therapy and indirect participation as a clinical

aide. Pre-requisites: SHS 431 may be taken concurrently with SHS 480. Taught Spring and Summer Semesters. Special fee.

SHS 490 Special Topics 1-3 cr
Topics to be determined by student need and interest. Content will vary. A subtitle identifying the topic will be entered on the student's record. May be repeated for a total of six credits. Pre-requisite: Permission of department chair.

SHS 494 Directed Independent Study 1-3 cr
Independent study under the direction of a faculty member. Pre-requisite: Permission of department chair.

SHS 499 Senior Honors Project (H, W) 3-6 cr
Under the advice and guidance of a faculty mentor, honors students will identify and carry out a research project relevant to the field of Speech Pathology and Audiology study that will lead to a formal presentation at the annual Honors Student Colloquium. The senior project will be judged and graded by three faculty members chaired by the honors mentor. This course is required for Honors recognition and may be repeated for up to six credit hours. Pre-requisites: Permission of the department chair and completion of an approved project prospectus.

SPEECH-LANGUAGE PATHOLOGY (SLP)

SLP 510 Intro to Research Design 3 cr
A general presentation of research procedures. The student will learn to read and evaluate professional literature and develop a research prospectus.

SLP 521 Advanced Speech Science 2 cr
The study of physical and acoustic concepts involved in speech production and perception including instrumental measurement and analysis.

SLP 532 Clinical Linguistics 3 cr
This course gives students an overview of linguistic theories and approaches that are relevant to the field of speech sciences. There is a particular emphasis on those areas of linguistics that underpin the diagnostic and assessment procedures used in speech pathology.

SLP 533 Pediatric Language Disorders: Birth to Five 3 cr
Clinical assessment and management of language problems in infants, toddlers, and preschoolers, including language disorders associated with other developmental disorders and AAC.

SLP 534 School-aged Language Disorders 2 cr
This course covers assessment and intervention approaches for school-age language disorders, children beyond age 5 years. Topics include speech-language services at the discourse level; the relationship between language and literacy; service delivery models including integration; educational laws and policies.

SLP 541 Advanced Articulation Disorders 3 cr
Advanced study of disordered speech-sound production including these: development, assessment and intervention of articulation and phonological disorders in children.

SLP 551 Voice and Resonance Disorders 3 cr
Advanced study of pathology, symptomatology, etiology, and treatment of voice and resonance disorders in children and adults.

SLP 561 Fluency Disorders 3 cr
Study of theories, research, and contemporary treatment procedures in the area of fluency disorders.

SLP 565 Neuromotor Disorders of Communication 3 cr
Review of neuroanatomy and physiology, nature of neuromuscular pathologies, methods of assessment and rehabilitation of neuromotor disorders of speech production.

SLP 566 Aphasia and Neurogenic Language Disorders 3 cr
Study of the nature, characteristics, and clinical management of acquired neurogenic language disorders associated with focal lesions to the left or right hemisphere, including aphasia and right hemisphere syndrome.

SLP 567 Acquired Cognitive Communication Disorders 2 cr
Study of the nature, characteristics, and clinical management of cognitive-communication disorders associated with diffuse brain lesions, including traumatic brain injury and dementia.

SLP 568 Dysphagia 3 cr
Study of evaluation and treatment of feeding and swallowing in adults and children.

SLP 588 Audiology for Speech-Language Pathologists 2 cr
Audiometric testing; audiogram interpretation and clinical and educational management of the hearing impaired.

SLP 590 Directed Independent Research 1-3 cr
Independent research under the direction of a graduate faculty member. May be repeated. Pre-requisite: Permission of instructor and graduate advisor.

SLP 592 Seminar in Communication Disorders 1-3 cr
This course is designed to provide the opportunity for in-depth study of special interests. Pre-requisite: Permission of graduate advisor.

SLP 594 Directed Study 1-3 cr
Independent study under the direction of a graduate faculty member. May be repeated. Pre-requisite: Permission of the instructor and graduate advisor.

SLP 596 Clinical Practicum in Speech-Language Pathology 3 cr
Supervised clinical experience in speech-language pathology. May be repeated. Pre-requisite: Permission of graduate advisor. Special fee.

SLP 598 Clinical Externship 8 cr
Supervised clinical experience in a professional service facility. Pre-requisite: Requires all course work, research, and clinical practicum preparation to be completed prior to enrollment.

SLP 599 Thesis 1-3 cr
One to three credits per semester with a maximum of three hours credit. Regular standing status required. Pre-requisite: Permission of graduate advisor.

SPECIAL EDUCATION (SPE)

SPE 200 Field Experiences in Special Education Settings 1 cr
An in-field opportunity in special education. A variety of appropriate placements will be employed depending on each student's interests and needs. May be repeated for credit.

SPE 201 Field Experiences in Special Education Settings 1 cr
A series of in-field opportunities in special education. A variety of appropriate placements will be employed depending on each student's interests and needs. To be taken with SPE 312.

SPE 202 Field Experiences in Special Education Settings 1 cr
A series of in-field opportunities in special education. A variety of appropriate placements will be employed depending on each student's interests and needs. To be taken with SPE 410.

SPE 203 Field Experiences in Special Education Settings 1 cr
A series of in-field opportunities in special education. A variety of appropriate placements will be employed depending on each student's interests and needs. To be taken with SPE 410.

SPE 205 Initial Field Experience in Special Education Settings 1 cr
An infield opportunity for early field-based practicum in a variety of placements for special education majors. To be taken with SPE 400.

SPE 311 Introduction to Partnerships in Special Education 3 cr
Emphasis is on the special problems found in the home, community, and school of the exceptional child, the teacher, the family, and community resources agencies. Ways for the teacher to form teamships to work collaboratively with all human resources involved in the child's life are explored and ethical and moral standards examined.

SPE 312 Intellectual and Physical Disabilities 3 cr
A study of the intellectual and physical disabilities which usually require substantial curriculum adaptations. Historical perspectives, etiology, definition, classification, treatment, social aspects and interdisciplinary team work will be explored. Co-requisite: SPE 200.

SPE 313 Learning and Behavioral Disorders 3 cr
An examination of the definitions, characteristics, and prevalence of children with learning and/or behavioral disabilities. Emphasis is placed on the environmental and biological causes of problems in motor, perceptual, social, academic, affective, and behavioral development. Students will be introduced to current service delivery models and the programming options for individuals with learning and behavioral disabilities.

SPE 342 Developing and Teaching Ecological Curricula 3 cr

An ecological systems view which emphasizes curricular design as a multisystem interaction involving the individual, family, school, occupational setting, and society.

SPE 362* Behavioral Management of Exceptional Children (W) 3 cr

Presentation of the principles and applications of behavior modification, data collection procedures, and single-subject research designs as related to exceptional children and youth in special education environments.

SPE 363* Teaching Adaptive Curriculum to Special Needs Learners 3 cr

An examination of regular and special education K-12 curricula, materials, and procedures. Specific emphasis will be placed on the selection, modification, and adaptation of curricula, materials, and procedures to meet the needs of individuals with learning behavioral disabilities.

SPE 373* Teaching Reading to Students with Disabilities 3 cr

Introduces the student to the curriculum, teaching the methodologies and instructional activities and materials associated with effective and appropriate developmental and functional reading instruction for students with disabilities.

SPE 400 Education for Exceptional Children and Youth 3 cr

Introduction to the Field of Exceptional Children and Youth, involving the study of various areas of exceptionality.

SPE 410*Formal and Informal Assessment 3 cr

Assesses developmental levels, academic, and non-academic performance of exceptional individuals through the administration and interpretation of criterion-referenced and informal measures. Evaluation of classroom teaching and special education programs is also emphasized. Co-requisites: SPE 202, SPE 203.

SPE 432* Impact of Typical and Atypical Development on Education 3 cr

An examination of typical child development and developmental characteristics of infants, toddlers, and young children with disabilities from the prenatal period through age 8. Characteristics of disabling conditions and their impact upon development are also discussed.

SPE 433* Issues in the Education of Young Children with Disabilities 3 cr

This course prepares students to work with infants, toddlers, and young children with disabilities and their families. Topics covered include specific teaching and intervention techniques, special education laws and regulations, and service delivery models.

SPE 443* Vocational Education and Career Development of Disabled Individuals 3 cr

Issues and practices involved in the vocational preparation and training of students with disabilities, including career awareness, exploration, preparation and use of vocational resources. Vocationally related programs and services, both within and outside the special education environment are included.

SPE 454* Curriculum and Methods for the Developmentally Young 3 cr

Curriculum and methods for individuals who function in the lower levels of cognitive, motor, self care, communicative, and/or social behaviors. Emphasis is on physical management, class/ individual scheduling, adapted aids and equipment, task analysis, and functional life skills.

SPE 484* General Education Curriculum 3 cr

A curriculum course designed to emphasize general and special education K-12 curriculum. Students learn content of general education curricula through study of scope and sequence charts and strategies for adapting the curricula for students with exceptionalities, especially in inclusionary settings.

SPE 489 Pre-Practicum Experience 3 cr

Supervised early experience in the teaching field which allows the teacher's performance to be evaluated qualitatively.

SPE 490 Special Topics 3 cr

Varies in content and deals with issues, trends, and topics of current interest in the field of educating exceptional individuals. May be repeated for credit when course content varies.

SPE 494 Directed Study 3 cr

Directed Study. No more than two directed studies may be applied to programs at the undergraduate level or for certification. Prerequisite: Permission of department.

SPE 495*Internship K-6 9 cr

Observation and supervised K-6 Collaborative Teaching experience providing the opportunity to synthesize all previous instruction. This culminating activity provides opportunity for study and discussion of problems and issues encountered in the practicum situation.

SPE 496 Internship 6-12 9 cr

Observation and supervised 6-12 collaborative teaching experience providing the opportunity to synthesize all previous instruction. This culminating activity provides opportunity for study and discussion of problems and issues encountered in the practicum situation.

SPE 497 Internship ECSE 9 cr

Observation and supervised ECSE teaching experience providing the opportunity to synthesize all previous instruction. This culminating activity provides opportunity for study and discussion of problems and issues encountered in the practicum situation.

SPE 499 Seniors Honors Project 3-6 cr

Under the advice and guidance of a faculty mentor, honors students will identify and carry out a research project relevant to the field of study in Special Education that will lead to a formal presentation at the annual Honors Student Colloquium. The senior project will be judged and graded by three faculty members chaired by the honors mentor. This course is required for Honors recognition and may be repeated for up to six credit hours. Pre-requisites: Participant in honors program and junior level status.

SPE 500 Nature and Needs of Exceptional Children and Youth 3 cr

Introduction to the field of special education involving the study of all exceptionality areas. Developmental and maturational sequences of exceptional children/youth are included.

SPE 504 Seminar in Special Education 3 cr

Designed to allow students an in-depth exploration of topics of special concern to them related to children with disabilities or high potential.

SPE 505 Administration and Supervision of Special Education 3 cr

Establishing, maintaining, supervising, and evaluating special education programs in school districts and systems. Legislation and litigation, budgeting and finance, trends and issues in special education are included.

SPE 510 Introduction to Learning Characteristics and Teaching in Special Education 3 cr

An examination of the definitions, characteristics, and prevalence of children with learning disabilities, emotional and/or behavioral disabilities, mental retardation and multiple disabilities. Emphasis is placed on the environmental and biological causes of problems in motor, perceptual, social academic, affective, and behavioral development. Students will be introduced to current service delivery models and the programming for individuals with disabilities.

SPE 511 Curriculum: Regular Class and Adaptations 3 cr

Examination of all curricula as represented by various state course of study documents. Students will study and develop relevant adaptations of curricula to meet needs of various exceptional children.

SPE 512 Ecological Curriculum and Methods 3 cr

From an ecological systems view, methods of individually deriving a functional, life-centered curriculum for students with mild to severe disabilities as well as educational strategies for teaching and training within such a framework.

SPE 514 Teaming and Collaboration 3 cr

An intensive study of the nature of teaming and collaborative practices with an emphasis on developing skills to organize and participate in a variety of such situations.

SPE 515 Data-Based Behavior Management of Exceptional Children 3 cr

Behavioral assessment techniques and experimental design for the evaluation of behavior change programs. Operant and respondent methods for deceleration of inappropriate behavior. Operant methods for accelerating appropriate behaviors, teaching new behaviors and maintaining behaviors. Data-Based decision making strategies for formative program evaluation and modifications.

SPE 516 Methods for Special Needs Learners 3 cr

An examination of the methodologies employed in teaching special needs learners.

The course covers the theoretical underpinnings and practical applications of techniques with media and materials.

SPE 517 Communication: Language and Reading 3 cr

Major topics include the nature of language development and language problems in exceptional students, and remedial procedures. Informal and formal language and reading assessment. Relationship of reading to writing, phonetic, sight and combination means of reading instruction.

SPE 518 Assessment 3 cr

Advanced assessment of developmental levels, academic and nonacademic performance of exceptional individuals though the administration and interpretation of standardized tests, criterion-referenced instruments, and informal measures.

SPE 521 Children with High Potential 3 cr

Study of the intellectual, creative, emotional, and other psychological facets of gifted and talented children. Attention will be paid both to those individuals whose potential is realized and those who are considered underachievers.

SPE 522 Creative and Productive Thinking 3 cr

Geared to understanding the creative process, personality, and product of gifted and talented children as well as how to foster creativity and productive thought in the classroom.

SPE 523 Teaching Children with High Potential 3 cr

Various curricular emphases and program approaches employed for gifted, creative, and talented children are studied. Insights are offered into articulating educational efforts.

SPE 524 Atypical Children with High Potential 3 cr

This course is an in-depth study of the unique needs of atypical populations of gifted students. Attention is directed to the culturally diverse gifted, economically disadvantaged gifted, underachieving gifted, gifted in rural areas, gifted females, highly/profoundly gifted, gifted with disabilities, gifted with ADD/ADHD/SLD, and gifted preschoolers.

SPE 534 Assessment of the Developmental Young 3 cr

This course contains information on basic psychometric qualities of screening, evaluations, and assessments, tools for use with infants, toddlers, and young children with disabilities, conducting family assessments, adapting measures for children with disabilities, and using screening, assessment and evaluation in individualized programming.

SPE 535 Collaborating with Families 3 cr

This course prepares students to work with families of children with special needs. It contains information on understanding families, working with traditional and non-traditional families, and providing family-centered services.

SPE 588 Advanced Practicum Experience 3 cr

The purpose of this course is to provide a field experience focusing on evaluation and program improvement in academic and behavioral assessment, program planning, and experiences in implementation of special education programs.

SPE 589 Pre-Practicum Experience 3 cr

Supervised experience in the teaching field which allows the teacher's performance to be evaluated qualitatively.

SPE 590 Special Topics 3 cr

A course with varying content dealing with issues, trends, and topics of current interest in the field of education exceptional exceptional individuals. May be repeated for credit when course content varies. May be repeated for credit, Total credit cannot exceed 6 hours.

SPE 591 Multicategorical Practicum/ Seminar 3 cr

Combines field experiences and technology-based simulations and learning experiences with an ongoing seminar to address a wide-range of disabilities and educational implications. Course content will be individualized according to the students educational and professional background.

SPE 592 Collaborative Pract-Seminar 3 cr

The student's collaborative activities, performed in practicum at various grade levels are discussed and evaluated in seminar format.

SPE 594 Directed Study and Research 3 cr

Students explore, through directed individual study and research, problems and issues of special interest or significance in special education.

SPE 595 Internship/Practicum in Special Education Collaborative Teacher K-6 3 cr

Supervised experiences in Collaborative Teaching K-6 in the teaching field which allow the teacher's performance to be evaluated qualitatively.

SPE 596 Internship/Practicum in Special Education Collaborative Teacher 6-12 3 cr

Supervised experiences in Collaborative Teaching 6-12 in the teaching field which allow the teacher's performance to be evaluated qualitatively.

SPE 597 Internship/Practicum in Special Education Early Childhood Special Education 3 cr

Supervised experiences in ECSE in the teaching field which allow the teacher's performance to be evaluated qualitatively.

SPE 598 Internship/Practicum in Special Education Gifted/Talented 3 cr

Supervised experiences in Gifted/Talented in the teaching field which allow the teacher's performance to be evaluated qualitatively.

SPE 599 Thesis 3 cr

A student selects a project, study, or investigation in special education related to the student's area of specialization. The project forms a basis for the thesis. A thesis committee will give guidance during the investigation and during the writing of the thesis.

SPE 601 Advanced Evaluation in Special Education 3 cr

Methods and procedures for developing criterion-referenced instruments and assessment batteries for classroom use in evaluating exceptional children and youth.

SPE 609 Advanced Study of Exceptional Children 3 cr

Comparison of normal development progress and that usually seen in the various exceptionality categories of special education especially cognitive, communication, motor, social and emotional development.

SPE 641 Seminar in Behavioral Disorders/Emotional Conflict 3 cr

Advanced study and review of the state of present knowledge in areas relevant to the psychopathological disorders of childhood including etiology, assessment, treatment, and education.

SPE 642 Clinical Teaching I 3 cr

A study of the principles of behavioral theory upon which strategies for change in cognitive and social behavior rest and the evaluative designs used to monitor behavioral change and validate strategies.

SPE 643 Clinical Teaching II 3 cr

A study and review of clinical research relevant to the curriculum requirements in the education and treatment of exceptional children and the identification of research needs in the various areas of exceptionality.

SPE 651 Seminar in Learning Disabilities 3 cr

Current trends and issues in the education of learning disabled individuals are discussed, various theoretical approaches and current empirical evidence provide the basis for discussion.

SPE 671 Seminar in Mental Retardation Education 3 cr

Current trends and issues in the education of mentally retarded individuals. Classic and recent professional literature are the basis for developing perspectives.

SPE 690 Special Topics 3 cr

A course with varying content dealing with issues, trends, and topics of current interest in the field of education exceptional individuals. May be repeated for credit when course content varies.

SPE 694 Directed Study and Research 3 cr

Students explore, through directed study, problems and issues of special interest or significance in special education.

SPE 699 Research Project 3 cr

The Research Project, as the culminating experience in the Specialist Program, provides an opportunity for the candidate to synthesize and apply the various program components in a selected instructional setting. Suitable agreements are reached with the appropriate public school system by the candidate.

***Only for students admitted to teacher candidacy.**

STATISTICS (ST)

ST 150 Contemporary Mathematics and Statistics Seminar 1 cr

This course gives an overview of modern mathematics and statistics from the point of view of the practitioners. The course is designed for majors in mathematics and statistics at all levels as well as those students who are considering mathematics and statistics as a major or minor area of study. Topics usually included are elements of geometry, algebra, analysis, methods of statistical inference, the role of the computer in the analytical sciences; these topics vary from semester to semester. This course cannot be taken for credit simultaneously with MA 150, but may be repeated in different semesters.

NOTE: May be offered for Honors Credit.

ST 210 Statistical Reasoning and Applications (C) 3 cr

An introduction to modern statistics designed to provide the student with a solid foundation in statistical concepts, reasoning and applications. Emphasis given to problem identification, methodology selection and interpretation of results. Analysis of data accomplished by extensive use of statistical computer software, thereby minimizing manual computation. Coverage includes descriptive statistics, probability models, estimation, and hypothesis testing. Pre-requisite: High School level algebra is recommended. Computer Lab fee.

NOTE: ST 210 is intended for students in all disciplines except Engineering and Computer Science. Credit for both ST 210 and ST 315 not allowed.

NOTE: May be offered for Honors Credit.

ST 305 Applied Statistics for Health Sciences (C) 3 cr

An introduction to statistical reasoning and data analysis for the health sciences. Coverage includes descriptive statistics, methods of data collection, estimation, hypothesis testing, non-parametric statistics, ANOVA, repeated measures, correlation and other measures of association. Critique of selected research articles and case studies incorporating research and evidence-based practice will be adopted to connect statistics to daily work in healthcare field. Statistical computer software (e.g. Minitab) will be extensively used for data analysis. Pre-requisite: MA 110. computer lab fee.

NOTE: This course is offered only as a fully online course and only for health sciences students.

ST 310 Statistical Research Techniques 3 cr

Continuation of ST 210 providing a more rigorous treatment of methodologies introduced in ST 210. Additional coverage will be given to experimental design, analysis of variance (ANOVA), regression, model building, non-parametric techniques, contingency table analysis, sampling and survey methods, time series analysis and statistical simulations. Statistical computer software will be extensively used for data analysis. Pre-requisite: C or better in ST 210. Computer Lab fee.

NOTE: Credit for only ONE course from ST 310, ST 315 and ST 320 is allowed.

ST 315 Applied Probability and Statistics 3 cr

Concepts of probability theory, discrete and continuous probability distributions including gamma, beta, exponential and Weibull, descriptive statistics, sampling, estimation, confidence intervals, testing of hypothesis, ANOVA and multiple comparisons, linear and multiple regression, correlation, nonparametric analysis, contingency table analysis, computer-assisted data analysis using appropriate statistical software. Pre-requisite: C or better in MA 125. Computer Lab fee.

ST 320 Applied Statistical Analysis 4 cr

Descriptive statistics, probability distributions, sampling, estimation, confidence intervals and hypothesis testing, experimental designs, ANOVA and multiple comparisons, linear and multiple regression, correlation, nonparametric analysis, goodness of fit, contingency table analysis, quality control, acceptance sampling, computer-assisted data analysis using appropriate statistical software. Pre-requisite: MA 125. Computer Lab fee.

NOTE: ST 315 and ST 320 are intended for students in Engineering, Computer Science, and Mathematics. ST 315 covers additional probability distributions while ST 320 additionally covers concepts of quality control and acceptance sampling. Students in these disciplines should consult with their academic advisor for appropriate choice between ST 315 and ST 320.

NOTE: Credit for only ONE course from ST 310, ST 315 and ST 320 is allowed.

ST 335 Applied Regression Analysis 3 cr

Simple, polynomial and multiple linear regression; residual and lack-of-fit analysis; simple, multiple, partial and multiple-partial correlation analysis; model building algorithms, dummy variables; analysis of covariance; model comparisons; analysis of experimental designs including messy data; nonlinear regression models; computer-assisted data analysis using appropriate statistical software. Pre-requisite: C or better in ST 210 or ST 315 or ST 320. Computer Lab fee.

ST 340 Design and Analysis of Experiments 3 cr

Principles, constructions, and analysis of experimental designs to include completely randomized, randomized complete block, Latin square and split plot designs, factorial experiments, designs with nested and/or crossed factors, multifactor experiments with randomization restrictions, transformations, incomplete block designs, multiple comparisons including contrasts, confounding, fractional replication, computer-assisted data analysis. Pre-requisite: C or better in ST 210 or ST 315 or ST 320. Computer Lab fee.

ST 345 Sampling and Survey Techniques 3 cr

Sampling concepts and designs for survey investigations; sampling methodologies including applications of simple random, stratified, one- and two-stage cluster, and systematic sampling; sample size determination; ratio and regression estimation; population size estimation; random response modeling; acceptance sampling including applications of single and multiple 2-class attribute sampling plans; computer-assisted data analysis using appropriate statistical software. Pre-requisite: C or better in ST 210 or ST 315 or ST320. Computer Lab fee.

ST 350 Applied Time Series Analysis 3 cr

Fundamentals concepts; classical regressio models as forecasting models, exponential smoothings, stationary and nonstationary models, additive and multiplicative decompositions, moving average, autoregressive, ARMA and ARIMA processes, estimation in MA, AR, ARMA and ARIMA processes. Box-Jenkins methodology, computer aided modeling, and applications.Pre-requisite: ST 310 or ST 315 or ST 320 or ST 335. Computer Lab fee.

ST 355 Nonparametric Statistical Methods 3 cr

Distribution-free analysis of location and scale measures, non-parametric treatment of fundamental statistical designs, nonparametric comparison procedures, association and contingency table analysis, nonparametric goodness-of-fit procedures, and tests for randomness, nonparametric regression and other measures of association, computer intensive statistical methods. Pre-requisite: ST 210 or ST 315 or ST 320. Computer Lab fee.

ST 415 Statistical Quality Control and Reliability 3 cr

Probability distributions in quality control, inferences about process quality, control charts for attributes and variables, process capability analysis, economic design of control charts, custom charts, acceptance sampling by attributes and variables, six sigma concepts, reliability concepts, censoring, definitions and properties of survival distributions, methods of estimating and comparing reliability distributions, Kaplan-Meier estimation, burn-in models with a major emphasis on computer-assisted data analysis. Pre-requisite: Any 300 level ST course. Computer Lab fee.

ST 425 Applied Linear Models 3 cr

Some results of matrix algebra, multivariate normal distributions, distributions of quadratic forms, general linear models, design models with one factor and two factors including interaction, component-of-variance models, and computing techniques. Pre-requisite: MA 237 and ST 335 or ST 340. Computer Lab fee.

ST 450 Categorical Data Analysis 3 cr

Analysis of two-way, three-way and higher dimensional contingency tables using log-linear models, measures of association for nominal and ordinal tables, multiple-factor models, multiple response models, logistic regression, and weighted least squares. Pre-requisite: Any 300 level ST course. Computer Lab fee.

ST 460 Multivariate Statistical Analysis 3 cr

Multivariate normal distribution, sampling distribution, hypothesis testing, principal components and introduction to factor analysis, canonical correlation analysis, discriminant and classification analysis, and MANOVA. Pre-requisite: Any 300 level ST course. Computer Lab fee.

ST 470 Theory of Statistics 3 cr

A comprehensive introduction to the mathematical foundations of statistics. Sufficient statistics and information. Parameter estimation, maximum likelihood and moment estimation, optimality properties of estimators and confidence intervals. Hypothesis testing, likelihood ratio tests and power functions. Credit for both ST 470 and MA 551 is not allowed. Pre-requisite: MA 451 or MA 550.

ST 475 Statistical Computing and Graphics 3 cr

Introduction to computer-assisted data analysis with statistical computer software, including SAS, R/S-Plus. Coverage includes basics of SAS, common SAS statistical procedures, high-dimensional data visualization, some elements of statistical computing such as numerical computation, semi-numerical computation, symbolic and graphical computation, and special topics selected by instructor. (Credit for both ST 475 and ST 575 is not allowed. Pre-requisite: ST 210 or ST 315 or permission of instructor.)

ST 480 Statistical Practicum (W) 1 cr

Relates to the student's classroom studies with actual statistical problems encountered in practice. Working with the departmental statistical consultant, the student will participate in providing statistical assistance to research faculty in applied fields. Pre-requisite: C or better in EH 102 or EH 105 and approval of department chair. Computer Lab fee.

ST 490 Special Topics 1-3 cr

Selected topics in advanced undergraduate applied statistics. This course may be repeated for a maximum of six credits.

ST 494 Directed Studies 1-3 cr

Directed study. May be repeated for a maximum of six credits. Pre-requisite: Permission of the department chair.

ST 499 Honors Senior Project 3-6 cr

With the guidance and advice of a faculty mentor, Honors Students will identify, and carry out a research project in Statistics. The outcome of the research project will include a formal presentation at the annual Honors Student Colloquium. The senior project will be judged and graded by three members of the faculty, chaired by the faculty mentor.

ST 540 Statistics in Research I 3 cr

A service course for graduate students in disciplines other than mathematics and statistics. A non-calculus exposition in support of application. Coverage includes descriptive statistics, probability and probability distributions, sampling, estimation, tests of significance, analysis of variance, correlation, linear, polynomial, and multiple linear regression including residual and lack of fit analysis, nonparametric procedures, contingency table analysis, and computer-assisted data analysis using appropriate computer software. Computer lab fee.

ST 545 Statistics in Research II 3 cr

Continuation of ST 540. Coverage includes regression analysis through matrices, multiple, partial and multiple-partial correlation analysis, model building algorithms, non-linear regression, analysis of covariance, completely randomized, randomized complete block, and factorial experimentation for equal and unequal cell replication, logistic regression, resampling, basic multivariate techniques, and computer assisted data analysis. pre-requisite: C or better in ST 540. Computer lab fee.

ST 550 Environmental Statistics 3 cr

Sampling environmental populations, parametric and nonparametric estimation; applications of lognormal, Weibull, gamma and beta distributions; locating hot spots; censored data; outlier detection; trend analysis, seasonality; estimation of animal abundance. Pre-requisite: ST 540. Computer lab fee.

ST 575 Statistical Computing and Graphics 3 cr

Introduction to computer assisted data analysis with statistical computer software, including SAS, R/S-Plus. Coverage includes basics of SAS, common SAS statistical procedures, high-dimensional data visualization, some elements of statistical computing such as numerical computation, semi-numerical computation, symbolic and graphical computation, and special topics selected by instructor. (Credit for both ST 475 and ST 575 is not allowed. Pre-requisite: ST 210 or ST 315 or permission of instructor).

SOCIAL WORK (SW)

SW 200 Introduction to Social Work 3 cr

Introduction to the profession of social work. Topics include historical development, nature of profession, professional associations, practice theory, values and ethics.

SW 201 Human Behavior and Social Environment I 3 cr

The Person-In-Environment model of human behavior. Course examines individual, family and group behavior in the social context. Pre-requisites: BLY 101 or BLY 101L.

SW 212 Introduction to Social Welfare 3 cr

Introduction to Social Welfare system, Institution and Philosophical base. Course will address historical development, social and economic justice, and diversity.

SW 214 Social Work Skills and Field Experience 3 cr

Service learning experience in social work. Forty hours of agency-based experience is required. Students must attend two hour weekly skills development lecture. Pre-requisite: SY 109 or SY 112. Fee.

SW 301 Social Welfare Policy 3 cr

The Generalist Model of social work applied to individuals, families and groups. Emphasis is placed on diversity, social work values and ethics, and the use of empirical information. Special Fee. Pre-requisite: SW 212.

SW 302 Human Behavior/ Social Environment II 3 cr

The Person-in-Environment Model of human behavior. Course examines task groups, organizations, and community systems in the social context. Pre-requisites: SY 109. Co-requisite: SW 401.

SW 310 Community Context 3 cr

The rural and urban contexts of social work practice. Emphasis of the course is placed on how these contexts affect human behavior and the practice of social work.

SW 340 Family Violence 3 cr

Study of the social problems of family violence including domestic violence, intimate partner violence, child abuse and elder abuse. The role of the social worker, social services and social policy will be examined. Pre-requisite: SY 109.

SW 350 Child Welfare Services 3 cr

General survey of the social work field of child welfare services with a focus on child protective services.

SW 360 Social Work Practice in Mental Health 3 cr

This course is designed to provide the student with an overview of the mental health system and focuses specifically on issues related to the role of a social worker in a mental health setting. Pre-requisite: SW 200.

SW 401 Generalist Practice I 3 cr

The Generalist Model of social work applied to individuals, families, and groups. Emphasis is placed on diversity, social work values and ethics and evidence based practice. Co-requisite: SW 302.

SW 402 Generalist Practice II 3 cr

The Generalist Model of social work applied to organizations, communities and tasks groups. Emphasis is placed on diversity, social work values and ethics, and social justice.

SW 412 Field Instruction 12 cr

Field Instruction in social work. Four hundred thirty-six hours of supervised experience in social work setting are required. Pre-requisites: SW 401 and SW 402 and SY 382. SW 414 must be taken concurrently. Fee.

SW 414 Senior Seminar - W 3 cr

This is the capstone senior level course in social work. Class discussion and assignments are designed to facilitate integration between field instruction experience and curriculum content. Pre-requisites: SW 401 and SW 402 and SY 382. SW 412 must be taken concurrently.

SW 420 Social Work in Health Care 3 cr

Study of the practice of social work in the health care field. Major social policy issues, service delivery systems, relationships with other health care professionals, and practice issues related to social work will be covered.

SW 490 Special Topics 3 cr

Advanced topics in social work. May be repeated twice for elective content when topic varies.

SOCIOLOGY (SY)

NOTE: SY 109 is a Pre-requisite for all other sociology courses described below. Pre-requisites for anthropology courses are listed separately.

SY 109 Introductory Sociology 3 cr

Sociology is the scientific study of social behavior and social phenomena. This course is

a survey intended to introduce students to the major concepts, issues, theory, methods and substantive findings of the discipline. Topics may include the impact of social structures on behavior and opportunity, inequalities, socialization, culture, religion, crime and deviance, the family, modernity, and globalization. **Core Course**.

SY 112 Social Problems 3 cr
A study of persistent and recurring social conditions and individual and group behaviors that are contrary to the expressed norms of community members and that community members strive to control through collective action.

SY 200 Social Factors in Sexual Behavior 3 cr
An analysis of social patterns in sexual behavior including theories of sexuality and gender, gender similarities and differences in sexual behavior, sexual orientation, sexual violence, teen pregnancy and sexually transmitted diseases. Pre-requisite: SY 109.

SY 212 Field of Social Welfare 3 cr
A survey of the field of social welfare and of social-work functions. Rise, development, and present organization of social welfare agencies and the social services. Brief introduction to the techniques of the social-work profession. Pre-requisite: SY 109.

SY 220 Marriage and the Family 3 cr
The organization, function, and present status of the family, primarily in the United States. Problems of mate selection, marital adjustment, and parent-child relations treated on the basis of recent and current social change. Pre-requisite: SY 109.

SY 241 Criminology 3 cr
The nature and causation of criminal behavior. Evaluation of theories and research. Pre-requisite: SY 109.

SY 242 Corrections 3 cr
Administration of criminal justice in American society. Federal, state and local prison systems; management and treatment of criminals; history of punishment; jail detention, probation and parole; prison activities; rehabilitation. Pre-requisite: SY 109.

SY 290 Special Topics 3 cr
Selected topics in sociology. May be taken for a maximum of nine hours credit when the subject matter varies. Pre-requisite: SY 109.

SY 305 Sociology of Sport 3 cr
Addresses the issues of rise and development of Sport in North America and relates these developments to other societal structures and processes. Pre-requisite: SY 109.

SY 312 Social Work Applications 3 cr
Focus is on the application of social-behavioral science orientations to the amelioration of social problems and public policy issues. Pre-requisites: SY 109 and SY 212.

SY 315 African-American Families 3 cr
The study of family structure, mate selection, marital and other romantic interaction, parenting and kinship among African Americans. Pre-requisite: SY 109.

SY 319 Sociology of Drugs 3 cr
This course examines social, historical, cultural and political factors that shape ideas about drugs and views on drug use, drug treatment, and drug policy. Pre-requisite: SY 109.

SY 340 Juvenile Delinquency 3 cr
A study of the nature, extent, treatment, and prevention of delinquent behavior among youth in the United States and other urban industrial societies. Pre-requisite: SY 109.

SY 350 Evolutionary Sociology 3 cr
This course considers social behavior and social phenomena as manifestations of the observable properties of the organisms that make up societies (i.e. 'human nature'). The core of the course will involve constructing a brief but sound model of human behavior and then seeing how well that model can help explain a spectrum of behavior and phenomena. In addition, we will consider different religious, cultural, and scientific views on human nature, as well as some of the classic philosophical debates (e.g. nature/nurture) that revolve around questions of human nature. Pre-requisite: SY 109.

SY 352 World Religions 3 cr
This course is an introduction to the religions of the world. It is divided into three basic units: Indigenous Religions (of Africa, North America, and Oceania); Eastern Religions (Hinduism, Buddhism, Daoism, Confucianism, Jainism) and Western Religions (Judaism, Christianity, Islam). The emphasis is on grasping the core principles of each tradition, seeing the ways in which religion meets basic human needs, and religion as a cultural artifact that borrows, adapts, and changes over time. Course is identical with PHL 352 and REL 352. Credit cannot be received for both SY 352 and PHY 352 or REL 352.

SY 360 Sociology of Work and Occupations 3 cr
Examines work, occupations and careers in modern societies. Course topics include: the evolution of work, the meaning of work, the demography of work, unions, jobs, occupations, professions, industries, classes, unions, technology and alienation, labor market segmentation, non-standard and contingent work, work and the family, work and economic inequality, job satisfaction and organizational commitment. Pre-requisite: SY 109.

SY 372 Social Gerontology (W) 3 cr
Sociological aspects of aging in contemporary American society. Within its parameters are related problems of economics, health, and social contacts. Pre-requisite: SY 109.

SY 376 Modern Sociological Theory 3 cr
The major schools of sociological theory after 1920s is as well as recent challenges to these schools. Pre-requisite: SY 109.

SY 381 Sociological Research Methods I (C) 4 cr
This is the first course in a two-semester sequence, with weekly laboratory instruction in data analysis and statistical computer use. This course is designed for sociology and social work majors. It covers observational and experimental research designs, measurement, sampling and program evaluation. This course is usually taught in the Fall semester. Pre-requisites: SY 109 and ST 175 or ST 210.

SY 382 Sociological Research Methods II (C) 4 cr
This is the second course in a two-semester sequence, with weekly laboratory instruction in data analysis and statistical computer use. This course is designed for sociology and social work majors. It covers basic and inferential statistics up to linear regression. This course is usually taught in the Spring semester. Pre-requisites: SY 109, SY 381, ST 175 or ST 210.

SY 394 Directed Studies 1-3 cr
Field or library pursuits through which special interests or needs of the student may be pursued on an individual, supervised, or tutorial basis. No more than six hours may be used in the major. Arrangements must be made with the instructor prior to registration. Requires permission of Department Chair.

SY 401 Disasters and Society 3 cr
The sociological examination of natural, technological, and human-initated disasters. The social impacts of disasters will be reviewed through case-studies of major twenty-first century catastrophes and issues of community vulnerability, resiliency and recovery will be addressed. Pre-requisite: SY 109.

SY 408 Industrial Sociology 3 cr
Examines the historical development and contemporary structure of American industry as social choices shaped by contending forces; also explores alternative industrial futures. Pre-requisite: SY 109.

SY 410 Population (W) 3 cr
An introduction to the study of human populations; population growth and decline; fertility, mortality, and migration; characteristics of populations; population, food, and economic development; demographic analysis; population policies. Fee. Pre-requisite: SY 109.

SY 412 Applied Sociology (W) 3 cr
A survey of the specialties and techniques of professional sociologists, including the kinds of social problems and how these problems are addressed. Pre-requisites are SY 109, SY 381, SY 382 and SY 376.

SY 415 Sociology of Mental Health and Illness 3 cr
A sociological analysis of mental health and illness including social epidemiology, effects of social integration and support, labeling mechanisms, social evolution of treatment systems, and cultural factors in the recognition and diagnosis of disorders. Pre-requisite: SY 109.

SY 418 Advanced Family Studies 3 cr
This course examines interaction patterns in different types of family structure, with emphasis on marital adjustment, parent-child interaction, and sibling interactions. Pre-requisites: SY 109, SY 220.

SY 420 Sociology of Religion 3 cr
The study of religion is at or near the core of sociology. This course is an exploration of

the sociological dimensions of religion within the classical theoretical traditions of Durkheim, Weber and Marx, augmented with more recent theory and research. We consider the definition, functions and origins of religion, the role of beliefs and rituals in it, the interaction of religion with other aspects of society, and secularization of the future of religion, among other topics. Pre-requisite: SY 109.

SY 421 Social Stratification (W) 3 cr
This course introduces students to the patterns and processes of inequality in its major forms. It includes discussions of social class, sex, race, ethnicity, and policy. Additionally, this course satisfies the University's writing requirement. As such, students will acquire knowledge through writing assignments and will demonstrate mastery of new information in written form. Pre-requisite: SY 109.

SY 425 Urban Sociology (W) 3 cr
The study of urbanization and urban ways of life. Emphasis is given to relationships between urbanization and changes in the social organization of urban areas. Urban problems and planning are analyzed in terms of social change at the structural level. Pre-requisite: SY 109.

SY 426 Social and Cultural Change 3 cr
This course is designed to familiarize students with major theories and processes of social and cultural change, the factors influencing social and cultural change, diffusion of innovations, and adoption of new ideas and practices. Cross-listed as AN 426. Pre-requisite: SY 109.

SY 428 Gender and Society 3 cr
Description and analysis of gender roles and inequality in contemporary Western societies in cross-cultural and historical context. Pre-requisite: SY 109.

SY 430 Sociology of Culture 3 cr
Examines the major perspectives in the sociology of culture, with emphasis on the problems of culture in modern and post-modern societies. Pre-requisite: SY 109.

SY 435 Health Inequalities Across the Life Span 3 cr
This course examines differences in health status across the life span. The course will focus heavily on racial/ethnic and socioeconomic disparities in health applying a social determinants' of health framework. Issues that will be considered include how income, education, neighborhood conditions, access to health care, and other community factors shape opportunities to be healthy. The course is cross-listed as SY 435 and GRN 435 and has been approved as an elective for the Undergraduate Certificate in Gerontology and the interdisciplinary minor in Gerontology.

SY 440 Deviance and Social Control 3 cr
The study of societal norms and their violation. Focus on social construction, control, condemnation and accommodation of deviant behavior. Pre-requisite: SY 109.

SY 445 Majority-Minority Relations (W) 3 cr
The study of relationships between majorities and minorities in society. This course will explore the macro-social forces that bring these relationships about and the institutional settings where different group members come into contact with each other. A variety of key concepts and theories surrounding majority and minority relations will be defined and analyzed. Historical and current case studies will be examined to illustrate the development of these relations. Pre-requisite: SY 109.

SY 447 Sociology of Law 3 cr
Overview of predominant theoretical approaches, classical and contemporary, in legal sociology, and their application. Undergraduates require permission of instructor. Pre-requisite: SY 109.

SY 455 Sociological Social Psychology 3 cr
This course uses the classic texts of sociological social psychology (Simmel, Mead, Berger and Luckman, Goffman) along with select other sources to explore such topics as the relation between the individual and society, the social bases of thinking and knowing, the self and self presentation, identity and roles, and social interaction. Pre-requisite: SY 109.

SY 458 Crowds, Riots and Social Movements (W) 3 cr
A survey of the theoretical and historical foundations of collective behavior, riots, and social movements. A variety of situations and behaviors will be analyzed including social movement participation; growth and organization; strategies, tactics, and consequences for participants and society. Pre-requisite: SY 109.

SY 459 Medicine and Society 3 cr
The sociological study of medical care, with topics ranging from the micropolitics of doctor-patient communication through macro-level investigation of comparative health care systems. Pre-requisite: SY 109.

SY 460 Social Organization (W) 3 cr
This course provides the student with a comprehensive behavioral science approach to understanding modern social organizational trends. Pre-requisite: SY 109.

SY 467 Environmental Sociology 3 cr
This course will cover topics such as public awareness and the social construction of environmental issues, especially acid rain, biodiversity, biotechnology and technological disasters. Pre-requisite: SY 109.

SY 472 Sociology of Aging and the Family 3 cr
The class focuses on sociological theories of family and aging and the linkages of families and their aging members with organizations that deliver services, including: government agencies, healthcare organizations, legal services, corporations/businesses, and religious organizations. Pre-requisite: SY 109.

SY 475 Development of Sociological Theory 3 cr
The development of theories in sociology, as related to social thought, institutions, and theories of social progress. Pre-requisite: SY 109.

SY 490 Special Topics 1-3 cr
A sociological examination of advanced topics. This course may be taken for a maximum of 9 hours credit when the subject matter varies. Pre-requisites: Upper division status and SY 109.

SY 492 Seminar (W) 3 cr
Selected topics in sociology for students with junior or senior standing. Note: SY 492 is not intended for graduate students.

SY 494 Directed Studies 1-3 cr
Designing a study, carrying out the research, and writing the result of a thesis. No more than six hours of credit may be applied to major. Pre-requisites: Upper division status and permission of Department Chair.

SY 496 Sociology Internship 3-6 cr
Provides an opportunity to combine academic principles with practical experience in an agency dealing with human relationships. Specifics of the assignment result from a mutual agreement among student, course director and agency. Course may be repeated for a maximum of six hours of credit. Pre-requisites: Upper division status; Department Chair's permission; and proof of insurance. The 3 hour internship requires 100 contact hours; the 6 hour internship requires 200 contact hours.

SY 500 Orientation 2 cr
Introduces student to graduate study in sociology by providing information on degrees, career opportunities, and professional activities in the discipline.

SY 501 Disasters and Society 3 cr
The sociological examination of natural, technological, and human-initiated disasters. The social impacts of disasters will be reviewed through the case-studies of major twenty-first century catastrophes and issues of community vulnerability, resiliency, and recovery will be addressed.

SY 505 Advanced Principles of Sociology 3 cr
Systematic review and integration of major propositions, concepts, and research data from various fields of sociology. Development of a comprehensive orientation for the description and explanation of social phenomena.

SY 506 Contemporary Sociological Theory 3 cr
Critical examination of major theoretical schools after 1920 and their classical predecessors: also examination of recent challenges to and syntheses of these schools.

SY 508 Research Design 3 cr
Advanced treatment of topics in sociological methodology, including: logic of scientific explanation; experimental, quasi-experimental, survey, and qualitative research designs; and research ethics.

SY 509 Research Analysis 4 cr
This is an applied course in the application of data analysis and statistical methods in social research. This course covers basic regression models with limited and categorical independent variables. It assumes knowledge of basic and inferential statistics. The course includes weekly instruction in data analysis and statistical computer use. This course is usually taught in the Spring semester. Fee.

SY 512 Applied Sociology 3 cr
A survey of the specialties and techniques of professional sociologists and the conditions under which sociological knowledge is applied to social problems, the kinds of problems addressed, and the degree of effectiveness of applications. A variety of methods will be discussed including social impact analysis, program evaluation, needs assessment, and social indicators. Requires SY 508 and SY 509 or instructor's permission.

SY 515 Sociology of Mental Health and Illness 3 cr
A sociological analysis of mental health and illness including social epidemiology, effects of social integration and support, labeling mechanisms, social evolution of treatment systems, and cultural factors in the recognition and diagnosis of disorders.

SY 518 Advanced Family Studies 3 cr
This course examines interaction patterns in different types of family structure, with emphasis on marital adjustment, parent-child interaction, and sibling interactions.

SY 520 Sociology of Religion 3 cr
An analysis of religion as a social institution with emphasis on modern western societies. Topics include the function of religion for societies and individuals, changing patterns of religious belief and practice, and the relationship between religion and other social institutions.

SY 521 Social Stratification 3 cr
A sociological approach to the study of class, status and power with a particular emphasis on American society. Students will present material in the classroom and conduct an advanced research project in the area of inequality.

SY 523 Aging in American Society 3 cr
The role of the elderly in today's society, problems, adaptability, crises, functions. Comparisons with youth and working adults. Survey of social programs and resources in formal and informal support networks.

SY 528 Gender and Society 3 cr
Description and analysis of gender roles and inequality in contemporary Western societies in cross-cultural and historical context.

SY 530 Sociology of Culture 3 cr
This course will introduce students to the major perspectives in the field of the sociology of culture. Particular attention will be given to each perspective's diagnosis of the problems of culture in modern and postmodern capitalist societies.

SY 535 Health Inequalities Life Course 3 cr
The main purpose of this seminar is to provide students with an understanding of how social factors contribute to racial/ethnic, socioeconomic and gender disparities in health and health care. We will examine how dyadic relationships such as interpersonal forms of discrimination, marriage, and social ties may contribute to health disparities. We will also examine the ways in which neighborhood and community context, as well as inequalities in socioeconomic status materially shape health and access to health care services. The course is cross-listed as SY 535 and GRN 435/535 and has been approved as an elective for the Undergraduate/Graduate Certificate in Gerontology and the interdisciplinary minor in Gerontology.

SY 540 Deviance and Social Control 3 cr
Deviance includes acts that violate norms. Social control is the groups' efforts to induce people to conform to these norms. This course includes discussions of what actually is deviance, how things become deviant, and how sociologists explain deviance. Several weeks are devoted to talking about specific forms of deviance, ranging from alcohol and drugs to mental illness. The last part of the course is spent discussing elite deviance. Pre-requisite: SY 109.

SY 547 Sociology of Law 3 cr
Overview of predominant theoretical approaches, classical and contemporary in legal sociology, and their application in empirical studies engaging legal phenomena.

SY 550 The Community 3 cr
An advanced consideration of the concept of community.

SY 555 Advanced Sociological Social Psychology 3 cr
This course explores the complicated relationship between individuals and the society around them. We will do so via intensive study of the canonical works of sociological social psychology - including Mead, Goffman, Berger & Luckmann, and Simmel, among many others. Our topics will include the origins and meaning of selfhood, the social bases of knowledge, and forms of interaction.

SY 559 Medicine and Society 3 cr
The sociological study of medical care, with topics ranging from the micropolitics of doctor-patient communication through macro-level investigation of comparative health care systems. Explores extant research methods and theories of medical sociology to prepare graduate students to do sociological research in health care settings.

SY 565 Maritime Sociology 3 cr
Provides a sociological assessment of the relationship between human communities, technology, and marine resources.

SY 566 Social Impact Assessment in the in the Coastal Environment 3 cr
This course will provide a general introduction to the various frameworks used in social impact analysis.

SY 567 Environmental Sociology 3 cr
This course will cover topics such as public awareness and the social construction of environmental issues, especially acid rain, biodiversity, biotechnology and technological disasters.

SY 572 Sociology of Aging and the Family 3 cr
The class focuses on sociological theories of family and aging and the linkages of families and their aging members with organizations that deliver medical and social services, with government bureaucracies, the legal system, corporations and businesses, and religious organizations.

SY 590 Special Topics 3 cr
Selected topics in graduate sociology. Course may be repeated for different topics.

SY 594 Directed Studies 1-3 cr
Field or library projects through which special interests of the student may be pursued on a tutorial basis with a graduate faculty member. Arrangements must be made with the professor prior to registration. Permission of the Department Chair is required.

SY 595 Research Project in Sociology 1-3 cr
A research paper is prepared under the supervision of a graduate faculty member. Student is guided through the formulation and execution of a research design with appropriate use of theory and research methodology. Pre-requisites/Co-requisites: SY 596, completion of portfolio review, and appointment of project committee.

SY 596 Internship: Sociology 3-6 cr
Relates the student's classroom studies to occupational and professional experiences in an approved community agency. Written reports required. May be taken for a maximum of six credit hours. Requires permission of the Graduate Coordinator and Department Chair and proof of insurance. The 3 hour internship requires 100 contact hours; the 6 hour internship requires 200 contact hours.

SY 597 Sociology Teaching Apprenticeship 1-3 cr
The student will work directly with a member of the Sociology faculty to learn pedagogy, innovation in teaching and course content that will equip the student for future teaching assignments.

SY 599 Thesis 1-6 cr
May be taken for a total of six hours of credit. Pre-requisites: SY 594; completion of portfolio review and appointment of thesis committee.

FACULTY

(The date in parentheses is the year of initial appointment. Graduate specifies Graduate Faculty.)

ABERCROMBIE, DIANE D., Associate Professor of Physician Assistant Studies-Chair. B.S., M.A., University of Alabama-Birmingham; MMSc., Emory University; Ph.D., University of South Alabama (1997) (Graduate)

ADAMS, ELIZABETH M., Associate Professor of Speech Pathology and Audiology. B.S., Spring Hill College; Ph.D., University of South Alabama (2006) (Graduate)

AFFUSO, ERMANNO., Assistant Professor of Economics. B.S., M.S., Bari University of Technology; Ph.D., Auburn University (2013) (Graduate)

ALAM, MOHAMMAD S., Professor of Electrical and Computer Engineering-Chair. B.S.,M.S., Bangladesh University of Engineering and Technology; M.S., Wayne State University; Ph.D. University of Dayton (2001) (Graduate)

AL-ASSADI, WALEED, Assistant Professor of Electrical and Computer Engineering. B.S., M.S., University of Baghdad; Ph.D., Colorado State University (2010) (Graduate)

ALVAREZ, DIEGO, Assistant Professor of Internal Medicine and Physiology. M.D., Universidad Libre de Columbia; Ph.D., University of South Alabama (2007) (Graduate)

ALEXEYEV, MIKHAIL, Associate Professor of Cell Biology and Neuroscience. B.S., Kiev State University; Ph.D., Institute of Molecular Biology (1997) (Graduate)

AL-MEDHI, ABU BAKR., Associate Professor of Pharmacology. M.D., Ph.D., Crimea Medical Institute, Simferopol, Crimea, Ukraine (2002) (Graduate)

ALLISON, DAVID T., Associate Professor of Geology; Adjunct Assistant Professor of Marine Sciences. B.S., University of Alabama; Ph.D., Florida State University (1990) (Graduate)

AMARE, NICOLE E., Associate Professor of English, B.A., University of Wisconsin, M.A., Kansas State University; M.A., Ph.D., University of Alabama (2001) (Graduate)

ANASTASIO, RANDALL J., Instructor in Health, Physical Education, and Leisure Studies. B.S., M.S., University of Southern Mississippi (2007)

ANDEL, TODD R., Associate Professor of Computing. B.S.C.E., University of Central Florida; M.S.C.E., Air Force Institute of Technology; Ph.D., Florida State University (2012) (Graduate)

ANDERSON, JENNIFER A., Instructor of Adult Health Nursing. B.S.N., University of South Alabama; M.S.N., Spring Hill College (2009)

ANDERSON, MIA LONG, Assistant Professor of Communication. ABJ, University of Georgia; M.S. University of Tennessee; Ph.D. University of Alabama (2013)

ANDERSON, SUSAN A., Associate Professor Emeritus (1975-2009)

ARONSON, NATHAN N., JR., Professor Emeritus of Biochemistry and Molecular Biology-Chair (1992-2007)

ARONSON, RICHARD B., Professor of Marine Sciences. Ph.D., Harvard University (1994)

AUCOIN, JAMES L., Professor of Communication-Chair. B.A., University of Missouri-Kansas City; M.A., University of Colorado; Ph.D., University of Missouri-Columbia (1994) (Graduate)

AUDIA, JONATHON P., Assistant Professor of Microbiology and Immunology. B.S., McMaster University, Ontario, Canada; Ph.D., University of South Alabama (2003) (Graduate)

AXSMITH, BRIAN J., Professor of Biological Sciences. B.S., Millersville University; Ph.D., University of Kansas (1999) (Graduate)

AYLING, JUNE E., Professor of Pharmacology. B.S., Ph.D., University of California-Berkeley (1981) (Graduate)

AZOK, JUDITH A., Assistant Professor of Adult Health Nursing. B.S.N., M.S.N., Ohio State University (1990)

BAILEY, M. GAHAN, Associate Professor of Leadership and Teacher Education. B.A., Nicholls State University; M.Ed., University of Southwestern Louisiana; Ph.D., University of Southern Mississippi (1998) (Graduate)

BALCZON, RONALD D., Associate Professor of Cell Biology and Neuroscience. B.S., Ph.D., Florida State University (1988) (Graduate)

BALLARD, STEPHEN T., Professor of Physiology. B.S., North Carolina State University; M.S., University of Kentucky; Ph.D., University of North Carolina (1989) (Graduate)

BARLETTA, ROBERT E., Associate Professor of Chemistry; Joint appointment-Associate Professor of Marine Sciences. B.S., M.A., University of Rhode Island; Ph.D., Brown University (2006) (Graduate)

BARRINGTON, ROBERT, Assistant Professor of Microbiology/Immunology. B.S., Oregon State University; Ph.D., Loyola University Chicago (2008) (Graduate)

BARROW, ROBERT V., Professor Emeritus of Political Science and Criminal Justice (1966-1998)

BARTER, ALEXANDRA S., Senior Instructor in Health, Physical Education, and Leisure Studies. B.S., M.Ed., University of South Alabama (2004)

BASQUE, ANTHONY MARK, Senior Instructor in English As A Second Language. B.A., M.A., University of South Alabama (1992)

BATTISTE, DAVID R., Assistant Professor of Chemistry. B.S., University of Florida; Ph.D., Louisiana State University (2011) (Graduate)

BAUER, NATALIE, Assistant Professor of Pharmacology. B.S., Delta State University; Ph.D., University of South Alabama (2007) (Graduate)

BAUGHN, CHRISTINA L., Instructor of Adult Health Nursing. B.S.N., M.S.N., University of South Alabama (2014)

BAXTER, ABIGAIL, Professor of Leadership and Teacher Education. AB, Guilford College; M.A., University of Maryland; Ph.D., Vanderbilt University (1998) (Graduate)

BEASON, LARRY W., Associate Professor of English. B.S., M.A., Stephen F. Austin State University; Ph.D., Texas A&M University (1998) (Graduate)

BEEBE, DONALD A., Instructor in Earth Sciences. B.S., University of South Alabama; Ph.D., Clemson University (2013) (Graduate)

BELLE, MSG. MICHAEL H., Assistant Professor of Military Science (2008)

BENKO, DAVID, Associate Professor of Mathematics and Statistics. B.S., M.S., Ph.D., University of Szeged; Ph.D., University of South Florida (2008) (Graduate)

BERTOLLA, STACEE B., Senior Instructor of Maternal-Child Health Nursing. B.S.N., M.S.N., University of South Alabama (2005)

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