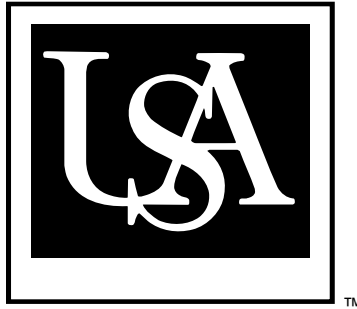


**University of South Alabama**



**2009 - 2010**

**Undergraduate  
and  
Graduate Bulletin**



UNDERGRADUATE/GRADUATE BULLETIN  
2009-2010

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/Equal Access education institution.

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## ABOUT THE UNIVERSITY

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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 University offers a wide range of high-quality undergraduate and graduate academic programs, and the USA Health System, which includes the College of Medicine, College of Allied Health, College of Nursing, USA Physicians, USA Mitchell Cancer Institute and USA Hospitals, provides state-of-the-art health care and medical education.

USA continues to earn distinction as one of the fastest-growing universities in Alabama. Enrollment at USA now tops 14,000, and the number of degrees awarded by the University recently eclipsed 62,000. Dramatic increases in enrollment illustrate USA's greatest contribution as the top provider of higher education in the upper Gulf Coast region.

Our academic programs provide a solid base to allow students to grow intellectually, economically, and socially. 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 them include new master's degree programs in environmental toxicology and civil engineering with a focus on coastal design, and doctoral programs in audiology, physical therapy, nursing practice, combined clinical and counseling psychology, communication sciences and disorders, marine sciences, instructional design and development, basic medical sciences, and pharmacy with Auburn University. 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 programs, our students enjoy a wide variety of social, cultural, entertainment and athletic activities that contribute to a well-rounded college experience. 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 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 creation of the campus Bell Tower and Alumni Plaza and the state-of-the-art, 116,000-square-foot Student Recreation Center. We are also excited about plans for a new engineering science complex and current construction of the \$45 million Health Sciences Building, which will house the colleges of Allied Health Professions and Nursing.

Student life at USA saw historic change with the recent addition of new football and marching band programs which will debut at USA's inaugural football game in fall 2009. Plans for a 40,000-square-foot football field house are already under way.

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 Mitchell Cancer Institute is putting USA at the forefront of medical research and treatment, and its physicians and scientists will soon move into a new \$75 million facility. 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, or better yet, through a personal visit to our campus. The University of South Alabama experience is best defined by the people—students, faculty, alumni and friends—who share a common enthusiasm as members of the USA family. I 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 Alonso 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 mission of the University of South Alabama is to offer high-quality programs of teaching, research, public service, and health care that create, communicate, preserve, and apply knowledge in service to the people of Alabama as citizens in a global community.

## VISION STATEMENT

Our vision is to become a preeminent comprehensive university that is recognized for its intellectual, cultural, and economic impact on the health and well-being of those we serve as leaders and citizens in a global community.

## 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.

## 6 GENERAL INFORMATION

### 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 Health Sciences, Vice President for Health Services, Vice President for Research, Vice President for University Services and Planning, Vice President for Student Affairs; and Vice President for Finance. Under the present organization, the University comprises the 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 Computer and Information Sciences, 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 Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Ga., 30333-4097; Telephone: (404) 679-4501 to award baccalaureate, masters, doctor of philosophy, doctor of audiology, doctor of physical therapy, doctor of nursing practice, and doctor of medicine degrees. In addition, the University of South Alabama has programs accredited by the following organizations: Accreditation Board for Engineering and Technology: B.S. programs in Chemical Engineering, Civil Engineering, Electrical Engineering, and Mechanical Engineering are accredited by the EAC 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 and Information Systems 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.

### POLICY OF NON-DISCRIMINATION

The University of South Alabama and its colleges and subdivisions follow a policy of nondiscrimination on the basis of sex, race, and disability 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 good information is critical for student success at the University of South Alabama. The University Libraries provide the information 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 and available through the campus computing network. It 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, and electronic reference sources. The book, journal, microform, and audiovisual collections held by the University Libraries provide students with copyrighted information not available through the Internet.

The Libraries of the University of South Alabama consist of the University Library and the Charles M. Baugh Biomedical Library, both on the main campus, as well as the Mitchell College of Business Learning Resource Center, the University Archives, the Medical Center Library and the Children's and Women's Hospital Library in downtown Mobile. The University Library is a Federal Depository Library and has a large collection of United States government documents. The Instructional Media Center (IMC) is also located in the University Library and houses educational materials such as videotapes, DVDs, CDs and audio tapes as well as audio-visual viewing and listening rooms. Two art galleries are located in the University Library and feature regional artists, traveling state-wide shows, and displays from USA Archives. Library services are also available through the Baldwin County campus. Faculty and staff of the University Libraries are available to assist patrons in locating and using all of these information resources, as well as circulation, interlibrary loan, reference, photocopying, and other services.

# DEPARTMENTS OF INSTRUCTION AND DEGREES CONFERRED

**College of Allied Health Professions**

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

**College of Arts and Sciences**

Air Force Studies  
Biological Sciences  
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  
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 Computer and Information Sciences**

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  
AHP Allied Health Professions  
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  
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 Career Experience Opportunities  
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  
EE Electrical and Computer Engineering

EEC Elementary/Early Childhood Education  
EG Engineering  
EH English  
EMT Emergency Medical Training  
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  
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  
ITE Information Technology  
LG Languages  
LGS Language Self-Instruction  
LS Leisure Studies  
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  
MUA Applied Music (Group A)  
MUB Applied Music (Group B)  
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  
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



## 8 DEGREES CONFERRED

### DEGREES CONFERRED

#### 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  
Pre-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

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

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

#### School of Computer and Information Sciences

Bachelor of Science in  
Computer and Information 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

Bachelor of Science

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  
Doctor of Philosophy  
(Combined 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.

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## ADMISSIONS/ENROLLMENT SERVICES

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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.

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### ADMISSION TO THE UNIVERSITY

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The Office of Admissions processes all applications for admission to undergraduate and graduate programs at the University. Inquiries about admission to the University 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@usouthal.edu](mailto:admiss@usouthal.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 \$35

nonrefundable processing fee by the deadlines noted. The application is available on the [Admissions](http://www.southalabama.edu/admissions/appdeadline.html) 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 June 1 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 high school 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. have earned a minimum 2.00 overall high school GPA and a minimum; and
3. have achieved a score of 19 on the composite ACT (or equivalent score on SAT).

**Core High School Course Requirements**

Curriculum Area	Units	Courses
English	4	
Mathematics	3	To include Algebra I and Geometry. Algebra II is highly recommended.
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.
<b>Total Core Units</b>	<b>16</b>	

Beginning with the freshmen class enrolling in fall semester of 2010, the Alabama High School Diploma with Advanced Academic Endorsement or equivalent will be required.

If a detailed review of a student’s sub-scores on the ACT or SAT reveal a need for additional college preparation in English, reading, or mathematics, he/she will be required to take course(s) during the first term of attendance that address(es) any identified weaknesses.

**Regular Admission with Special Requirements**

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 16 to 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 category with identified academic deficiencies will be required to take course(s) in his/her first term of attendance at the University of South Alabama to address these problems. In most cases students will complete the specified course(s) during their first term at the university. However, each of the specified course(s) must be satisfactorily completed with a grade of C or better within the first three terms of enrollment.

**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. The fee charged for Orientation covers costs of materials and meals during the programs. Details are sent to all new freshmen and transfer students prior to registration. Further information may be obtained from the Office of New Student Orientation, 2600 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 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 (minimum average score of 500- or 50 if taken prior to January 2002) on high school level General Education Development (GED) test.

**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 the completed 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 1240 SAT scores);
3. completed the junior year of high school;
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.

## 10 ADMISSIONS/ENROLLMENT SERVICES

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

### College of Medicine Early Acceptance Program:

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 COMEAP 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 1240 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.

**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.

**English:** 3 semester hours credit will be awarded for English Composition 101 for students who score 4 or higher on the Language and Composition component of the Advanced Placement Program. In other subject areas: AP Credit with a score of at least '3' will be awarded as follows:

AD Course	USA Credit
Studio Art: 2-D Design	ARS Elective 3 hrs
Studio Art: 3-D Design	ARS Elective 3 hrs
Studio Art-Drawing	ARS Elective 3 hrs
Art History	ARH 100 3 hrs

AD Course	USA Credit
Biology	BLY 121/122 8 hrs
Chemistry	CH 131/132 8 hrs
Microeconomics	ECO 215 3 hrs
Macroeconomics	ECO 216 3 hrs
Human Geography	GEO 114 3 hrs
American Gov't	PSC 130 3 hrs
Comparative Gov't	PSC 250 3 hrs
US History	HY 135/136 6 hrs
European History	HY 101/102 6 hrs
Calculus AB	MA 125/126 8 hrs
Calculus BC	MA 125/126 8 hrs
Statistics	ST 210 3 hrs
Music Theory	MUT Elective 3 hrs
Music Listening & Lit	MUL Elective 3 hrs
Physics B	PH 114/115 8 hrs
Physics C	PH 201/202 8 hrs
Computer Science A	CIS 121/122 8 hrs
Computer Science AB	CIS 121/122 8 hrs
Psychology	PSY 120 8 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 by the University of South Alabama credit 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 Computer and Information Sciences
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

IB Discipline*	IB Exam Score	USA Credit
		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 32 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.

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

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 Adult 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.

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.

A maximum of 64 semester hours may be transferred from a junior or 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

## 12 ADMISSIONS/ENROLLMENT SERVICES

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".

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## SPECIAL CATEGORY STUDENTS

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**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 Readmission" 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.

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## INTERNATIONAL STUDENT ADMISSIONS

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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.

#### 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 5.0.

**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 five (5) or more years previously, or apply on the

basis of the GED. Those attending on non-immigrant 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 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** - 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.)

Applicants who have completed two years of postsecondary education from a regionally accredited United States institution or a minimum IELTS score of 5.5 are exempt.

**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.

**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 in-state 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 nonimmigrant 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@usouthal.edu](mailto:internationalservices@usouthal.edu)

<http://www.southalabama.edu/intnatsrv>

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## READMISSION TO THE UNIVERSITY

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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.

## TUITION AND STUDENT FEES

**Office of Student Accounting web site**  
<http://www.southalabama.edu/bursar/>

### 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.

### Semester Fees required of all students:

Application Fee (non-refundable) . . . . .	\$35.00
Registration Fee (non-refundable) . . . . .	60.00
In-State Tuition (per semester hr)	
Undergraduate . . . . .	147.00
Graduate . . . . .	194.00
Physician Assistant . . . . .	194.00
Out-of-State Tuition (per semester hr)	
Undergraduate . . . . .	294.00
Graduate . . . . .	388.00
Physician Assistant . . . . .	388.00
Web Course Tuition (per semester hr)	
Course Fee (undergraduate) . . . . .	222.00
Course Fee (graduate) . . . . .	269.00
(Students taking both online and on-campus courses are subject to additional on-campus fees including non-resident fees)	
Transportation Fee	
Undergrad. full-time . . . . .	20.00
(12 hours or more)	
Graduate full-time . . . . .	20.00
(6 hours or more)	
Undergrad. part-time . . . . .	11.00
(6-11 hours)	
Graduate part-time . . . . .	11.00
(4-5 hours)	
Undergrad. part-time . . . . .	6.00
(1-5 hours)	
Graduate part-time . . . . .	6.00
(1-3 hours)	
Student Health Fee . . . . .	30.00
Student Center Fee . . . . .	8.00
Building Fee	
Undergrad. full-time . . . . .	150.00
(12 hrs or more)	
Undergrad. part-time . . . . .	84.00
(6-11 hrs)	
Undergrad. part-time . . . . .	45.00
(1-5 hrs)	
Graduate full-time . . . . .	150.00
(6 hrs or more)	
Graduate part-time . . . . .	84.00
(4-5 hrs)	
Graduate part-time . . . . .	45.00
(1-3 hrs)	
Library and Facilities Fee . . . . .	30.00
Activity/Athletic Fee	
Undergrad. full-time . . . . .	253.00
(12 hrs or more)	
Undergrad. part-time . . . . .	140.00
(6-11 hrs)	
Undergrad. part-time . . . . .	79.00
(1-5 hrs)	
Graduate full-time . . . . .	253.00
(6 hrs or more)	
Graduate part-time . . . . .	140.00
(4-5 hrs)	

Graduate part-time . . . . .	79.00
(1-3 hrs)	
(Nonresident Fees are waived for graduate assistants.)	

### Estimated costs (example only)

#### Full-time commuting students:

Course Fees of typical undergraduate student based upon 2007-2008:

	Semester	Year
Taking 15 credit hr	\$2,205.00	\$4,410.00
Other Basic Fees	<u>551.00</u>	<u>1,102.00</u>
	\$2,756.00	\$5,512.00

#### Full-time resident students:

Course fees for typical undergraduate student based upon 2008-2009:

	Semester	Year
Taking 15 credit hrs	\$2,205.00	\$4,410.00
Other Basic Fees	551.00	1,102.00
Delta Suite Residence	1,372.00	2,744.00
9-Meal Plan	<u>1,300.00</u>	<u>2,600.00</u>
	\$5,428.00	\$10,856.00

### 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.

Engineering Fee (per semester hour) . . . \$14.00

### MISCELLANEOUS FEES

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

Application Fee . . . . .	\$35.00
(one-time, non-refundable fee)	
Late Registration Fee (nonrefundable) . . . . .	50.00
Late Payment Fee (nonrefundable) . . . . .	50.00
Returned Check Fee . . . . .	15.00
Graduation Re-evaluation Fee . . . . .	25.00
Document FAX Fee (non-refundable)	
Domestic . . . . .	10.00
International . . . . .	15.00
College-Level Examination . . . . .	10.00
Recording Fee	
Credit-by-Examination Fee . . . . .	30.00
(plus usual course fee)	
Orientation Fee (one-time, non-refundable)	
Fall Semester	
New Freshmen . . . . .	100.00
Transfers . . . . .	85.00
Spring, and Summer Semesters	
New Freshmen . . . . .	85.00
Transfers . . . . .	85.00
International Student Fee . . . . .	100.00
Transcript Fee (per transcript) . . . . .	8.00
Graduation Application Fee . . . . .	50.00
Professional Liability Coverage	
(per academic year, non-refundable)	
Fall . . . . .	12.00
Spring . . . . .	12.00
Summer . . . . .	1.00
Photo ID Fee . . . . .	5.00
(non-refundable, good for five years)	
Reinstatement Fee . . . . .	100.00
Duplicate Diploma . . . . .	25.00

### ROOM AND BOARD

The University offers a variety of residence hall accommodations and meal plan options. Students living in the residence halls who have completed less than 24 semester hours of course work are required to purchase a meal plan. The charges shown below are for one semester. These rates are subject to change by the University Board of Trustees.

#### Residence Hall Fees

(Costs are Per Person Per Semester)

Beta or Gamma . . . . .	\$1,354.00/Sem
Two-bedroom Apartment for 4	
Beta or Gamma . . . . .	1,507.00/Sem
Efficiency Apartment for 2	
Gamma . . . . .	1,881.00/Sem
Private Suite with Semi-private Bath	
Delta Suite for 2 . . . . .	1,372.00/Sem
Delta Single Suite . . . . .	1,790.00/Sem
Delta . . . . .	1,500.00/Sem
Efficiency Apartment for 2	
Delta Single Efficiency . . . . .	1,987.00/Sem
Delta 4-5 Two (2) Person Suite . . . . .	1,529.00/Sem
Delta 4-5 Single Person Suite . . . . .	1,923.00/Sem
Delta 4-5 Large Single Suite . . . . .	2,073.00/Sem
Epsilon 2 . . . . .	1,451.00/Sem
Suite for 2 w/Micro-Fridge	
Suite for Disabled Student* . . . . .	2,058.00/Sem
Efficiency Apartment . . . . .	2,176.00/Sem
for Disabled Student*	

\*The student must be registered with Special Student Services Office to qualify for the space.

Rent rates are listed per student, per semester, and include local telephone service and voice mail, campus cable TV, unlimited laundry access and a high-speed Internet connection. Students may contract for long distance service through the University Telecommunications Department.

#### 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 for additional information.

### PAYMENT POLICIES

These are the University of South Alabama's payment policies effective Fall Semester 2009. 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/bursar/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 3, 2009** deadline for Fall Semester 2009 and **December 8, 2009** deadline for Spring Semester 2010.

**2009 - 2010 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 2009- August 3, 2009
- Spring 2010- December 8, 2009

Full payment is due:

- Fall 2009 - August 21, 2009 on campus payments, or online (PAWS) by August 23, 2009.
- Spring 2010 - January 15, 2010, on campus payments, or online (PAWS) by January 17, 2010.

Class cancellations will occur on the following dates:

**Fall 2009**

- 1st cancellation - August 4, 2009, if 15% of all tuition and fees, including housing and meals is not paid;
- 2nd cancellation - August 24, 2009, if account is not paid in full.

**Spring 2010**

- 1st cancellation - December 9, 2009, if 15% of all tuition and fees, including housing and meals is not paid;
- 2nd cancellation - January 19, 2010, if account is not paid in full.

**Reinstatement Period**

- Fall 2009: August 25-28, 2009
- Spring 2010: January 20-25, 2010

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/bursar/financialcalendar.html> FOR SUMMER SEMESTER PAYMENT DEADLINES.**

**FINANCIAL DATES AND DEADLINES****Fall Semester 2009**

April 13 - Registration Begins.

August 3 - 15% of all tuition and fees, including housing and meals is due for all students registering between April 7, 2008 and August 4, 2008. Please refer to the 15% payment calculator online on PAWS.

August 4 - Registration schedule cancelled if 15% payment is not received by the August 3, 2009, 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 7 - Deadline for electronic direct deposit (EDD) enrollment.

August 10 - Financial Aid Bookstore charges begin.

August 17 - Classes begin.

100% refund period on dropped courses and complete withdrawals.

August 19 - Financial Aid Bookstore charges end.

August 20 - Last day to enroll in the USA Credit Union Tuition Payment Plan for Fall Semester.

August 21 - 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 23 - Balance of tuition and fees, including housing and meals is due in full for students paying on online (PAWS)

August 24 - Financial Aid refunds begin.

August 24 - Registration schedules cancelled for students not paid in full by August 23, 2009 deadline.

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

August 25-28 - 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 30 - No refunds after this date.

**Spring Semester 2010**

October 12 - Registration begins.

December 8 - 15% of all tuition and fees, including housing and meals is due for all students registering between October 13, 2008 and December 9, 2008. Please refer to the 15% payment calculator online on PAWS.

December 9 - Registration schedule cancelled if at least 15% payment is not received by the December 8, 2009, 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.

December 11 - Deadline for electronic direct deposit (EDD) enrollment.

January 6 - Financial Aid Bookstore charges begin.

January 11 - Classes begin.

100% refund period begins on dropped courses and complete withdrawals.

January 13 - Financial Aid Bookstore charges end.

January 14 - Last day to enroll in the USA Credit Union Tuition Payment Plan for Spring Semester.

January 15 - 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 17 - Balance of tuition and fees, including housing and meals is due in full for students paying on online (PAWS).

January 18 - 50% refund period begins on dropped courses and complete withdrawals.

January 19 - Registration schedules cancelled for students not paid in full by January 17, 2010 deadline.

January 19 - Financial Aid refunds begin.

January 20-22, 25 - 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 24 - 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 20, 2009, for Fall Semester 2009 and January 14, 2010, for Spring Semester 2010.

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 10-19, 2009 for Fall Semester 2009, January 6-13, 2010 for Spring Semester 2010.**

**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.



## 16 TUITION AND STUDENT FEES

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

Meal plans may be canceled only if a student withdraws from the University. A copy of the withdrawal notice must be presented to the Dining Services Office located in the Student Center. The refund will be prorated based on the unused portion of the meal plan, and a \$25 cancellation fee will be charged.

### 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.

### NONRESIDENT FEE POLICY

A nonresident fee is charged for those students who are nonresident students. All nonresident 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 will be 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 Service Area as his/her residence (not a residence hall),
- (c) possesses more substantial connections with the state of Alabama or Service Area than with any other state, and is not in Alabama or the 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 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 within 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,
- (e) is an accredited member or spouse of an accredited member of a consular staff assigned to duties in Alabama or the 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 as 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 Area 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 Area 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*)

**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:

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

until the balance is paid in full. If it is necessary to refer an account to an outside collection agency, any costs incurred in collection will be

assessed to the account, including any attorney's fees, and the account may be reported to credit bureaus.

**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, AL 36688-0002, telephone (251) 460-6231 or e-mail: [finaid@usouthal.edu](mailto:finaid@usouthal.edu).

**APPLYING FOR FINANCIAL AID**

Complete the Free Application for Federal Student Aid at [www.fafsa.ed.gov](http://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 your financial aid information automatically. Upon receipt of your data, we will send you additional forms that you will need to submit to the Financial Aid Office.

Additionally, students whose applications are selected for verification will be asked to submit information such as tax returns (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 by mail.

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. Lenders generally notify students of the date(s) they expect to disburse their loan proceeds.

**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.

## 18 FINANCIAL AID

### Academic Competitiveness Grant

An eligible student may receive this grant of up to \$750 for the first academic year of study and up to \$1300 for the second academic year of study. The student must be a U.S. Citizen, a federal Pell Grant recipient, be enrolled full-time in a degree program, be enrolled in a first or second academic year of the program of study, and have completed a rigorous secondary school program of study (after January 1, 2006, if a first year student, and after January 1, 2005, if a second-year student. Furthermore, a second-year student must have at least a cumulative 3.0 grade-point average.

### National SMART Grant

An eligible student may receive this grant of up to \$4000 for each of the third and fourth academic years of study. To be eligible for each academic year, a student must be a US citizen, be a federal pell Grant recipient, be enrolled full-time in a degree program, be enrolled in a four-year degree-granting institution and be majoring in physical, life, or computer science, engineering, mathematics, technology, or a critical foreign language and have at least a cumulative 3.0 grade-point average in the course work required for the student's major.

The student must also be enrolled in at least one (1) class each term that is specifically required for their degree program.

### 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.finaid.usouthal.edu>. 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 Payments	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 Stafford Loans

This loan is a low interest loan made available by a lending institution such as a bank, credit union, or savings and loan association. Both degree-seeking graduates and undergraduates may apply, and you must attend at least half-time.

Students who qualify for this loan on a need basis will have their interest paid for them while they are in school, in deferment and during the six month grace period.

Students who do not qualify on a need basis for interest benefits may still borrow through the Federal Stafford Student Loan Program. These students will not have the interest paid for them. All other provisions of the Stafford Program apply to this loan.

Students may not borrow more than the cost of attendance at USA. The maximum loan limits for the Federal Subsidized Stafford Loan as established by Federal guidelines are:

- \$3,500 for first-year undergraduates
- \$4,500 for second-year undergraduates
- \$5,500 a year for students who have completed the first two years of study to a total of \$23,000 as an undergraduate
- \$8,500 a year for graduate and professional school students to a total of \$65,000 including funds borrowed as an undergraduate.

Financial aid applicants considered independent may borrow additional money under the Federal Unsubsidized Stafford Loan Program. The maximum loan limits as established by Federal guidelines are: \$4000 a year for first and second year students, \$5000 a year for students who have completed the first two years of study, and \$12,000 a year for graduates.

Remember, the amount a student may borrow is limited to financial eligibility. Also, Stafford loans may be subject to a 3% origination fee and a 1% guarantee fee.

The minimum Federal Stafford 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 Payments	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 PLUS Loan Program for Undergraduate Students

This program allows parents to borrow up to the cost of attendance, less other financial aid and veteran's benefits, at a maximum interest rate of 9%. 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 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 Stafford loans. The current fixed interest rate is 8.5% and a credit check is required.

### 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 Stafford 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.finaid.usouthal.edu>.

#### Exit Interview

Students who received a Federal Stafford 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.finaid.usouthal.edu>.

### 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, veterans benefits, 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 qualitative component, a quantitative 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.

**Qualitative Component** - The University's academic standards are the qualitative standards for this policy. These are outlined in this University **Bulletin**. In addition, Federal Law requires that students who have earned 64 or more credit semester hours (juniors and seniors) to maintain the minimum cumulative grade-point average required by the University for graduation. This minimum is defined by the **Bulletin** as 2.00. This component is evaluated each semester.

**Quantitative Component** - A student's cumulative hours passed must be at least 75% 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 18 hours. A student enrolled in 6 hours per semester for 4 semesters would be required to pass 18 hours. This component is evaluated at the time of each application and prior to disbursement.

**Overall Time Frame** - Students are no longer eligible to receive Title IV Federal financial aid (this includes undergraduate loans) after attempting 16 full-time equivalent semesters. Transfer hours are included in the total hours attempted. This component is evaluated at the time of each application.

**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 Forgiveness** - Satisfactory Academic Progress for federal aid is separate from USA's Grade Forgiveness Policy. Changes in your cumulative GPA and/or deficient hours earned due to grade forgiveness 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, as well as being considered in determining the maximum number of semesters attempted for the overall time frame component. Full-time equivalent semesters are determined by dividing the total transfer hours accepted by 12. 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 qualitative standards for this policy. The

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quantitative component is defined as passing 50% 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 qualitative standards for this policy. The quantitative component is defined as passing 50% 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 the overall time-frame component, qualitative and quantitative components. Bankruptcy will not clear an academic progress problem for federal aid purposes.

**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 e-mailed appeal letter to the Office of Financial Aid if the failure to maintain Satisfactory Academic Progress was due to **extenuating circumstances and attach documentation to support your appeal.**

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.

Renewal criteria for Presidential Scholarships include maintaining a 3.0 minimum cumulative USA GPA as well as meeting all other criteria outlined in student's scholarship contract. For awards made prior to the 2002-2003 academic year, refer to scholarship contract for GPA and other renewal criteria.

Abraham Mitchell Business, Presidential and Bay Area Scholarship 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** - \$10,000 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](http://www.southalabama.edu/honors).

### Presidential, Bay Area and Community College Transfer Scholarships

**Presidential - \$10,000 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 - \$8,000 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 - \$7,000 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 - \$3,500 per year.** Qualifications: Candidates must have a minimum ACT composite score of 27 - 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 - \$2,500 per year.** Qualifications: Candidates must have an ACT composite score of 24-26 (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** - \$1,000 annual scholarship for a student within the Computer and Information Sciences program. Contact the School of Computer and Information Sciences 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) 434-3410.

**Air Force ROTC Scholarships** - Cover the costs of tuition, fees, and a reimbursable book allowance, plus a subsistence allowance of \$150 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. Three-year and two-year scholarships are available to eligible college students in all academic majors. Current enrollment in the Air Force ROTC program is not a prerequisite. Students selected to enter the advanced program (AS 300 and AS 400), will

receive \$350 - \$450 per month subsistence. 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 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 Preprofessional 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, Sally Cobb or Carol Kittrell 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) 434-3410.

**Biomedical Sciences Scholarship** - Awarded to a student majoring in Biomedical Sciences who has demonstrated academic competence and has participated in BMD extracurricular activities and/or service. Contact Biomedical Sciences for more information, (251) 380-2710.

**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 scholarship awarded annually to the outstanding undergraduate senior mathematics major. Contact the Department of Mathematics and Statistics for details, (251) 460-6264.

**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 third Friday of September. 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. 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

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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.

**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 Scholarship** - Awarded to a student 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) 380-2710.

**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 incoming engineering transfer 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.

**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.

**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.

**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.

**R. L. & Annie M. Hill Nursing Scholarship** - Awarded to a deserving student majoring in Nursing. Contact the College of Nursing for details, (251) 434-3410.

**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-Phillips-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 Scholarship** - A scholarship established by the Student Government Association in honor of the retired Dean of Students given to an entering freshman who exhibits outstanding leadership experience and potential. Contact the Student Government Association for details (251) 460-7191.

**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.

**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** - Awarded annually to a deserving minority student. Contact Minority Student Affairs (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.

**Regina Little Scholarship** - Awarded to a deserving student majoring in Nursing. Contact the College of Nursing for details, (251) 434-3410.

**Ray Lolley Memorial Scholarship** - University scholarship established by the Board of Trustees as a memorial to Senator Ray Lolley, former trustee. All aid applicants considered.

**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 Statistics. Contact the Department of Mathematics/Statistics for further details, (251) 460-6264.

**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.

**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 awarded to an outstanding and deserving student majoring in Mathematics/Statistics. Contact the Department of Mathematics/Statistics for more information, (251) 460-6264.

**Shirley Dean Panus Physical Therapy Scholarship** - Awarded to an outstanding physical therapy student. Contact the Department of Physical Therapy for further information, (251) 434-3575.

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

**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.

**Howard M. Phillips Scholarship** - Endowed scholarship award made to an academically talented and deserving student. All aid applicants are considered.

**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** - Tuition and fees (up to \$1,500 per semester for up to four semesters). Qualifications: Awarded to out-standing 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.

**QTS Engineering Scholarship** - Given annually to a deserving Engineering student. Based on academic excellence. Contact the College of Engineering for more information, (251) 460-6140.

**Radiologic Sciences Scholarship** - \$1,000 awarded annually to a second-year Radiography student. Contact the Department of Radiologic Sciences for further information, (251) 434-3456.

**Radiologic Sciences, Radiation Therapy Scholarship** - \$700 awarded annually to a senior Radiation Therapy student. Contact the Department of Radiologic Sciences for further information, (251) 434-3456.

**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.

**Bryan Robertson Engineering Scholarship** - Awarded each semester to a junior or senior

Engineering student. Based on academic excellence and financial need. Contact the College of Engineering for more information, (251) 460-6140.

**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.

**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.

**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.

**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.

**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) 434-3410.

**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.

**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



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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** - A \$1,500 per year (\$750 per semester) scholarship 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.

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# STUDENT AFFAIRS AND STUDENT SERVICES

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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, Mitchell 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*.) Students also participate as members of University-wide committees as well as on committees within the colleges of the University.

### STUDENT LIFE

The University of South Alabama, concerned with the total growth and development of its students, believes that attention should be given, not only to the intellectual aspect of this growth but also to the physical, social, emotional, and spiritual aspects. Through all of the services and programs of the University, students will hopefully acquire, along with a sound intellectual competence, a maturing sense of values.

### STUDENT CENTER

The Student Center supports the University mission of providing quality programs, facilities and services by creating a community that encourages involvement, development and personal and academic growth.

Located in the building are lounge areas, Southpaw Services, a computer lab, office space for student organizations, recreational facilities, dining services, and other service facilities. Six 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 Southpaw Services, Monday through Friday, 8:00 a.m. - 5:00 p.m. at (251) 460-6077.

### CAMPUS RECREATION

The Campus Recreation Department offers a wide variety of recreational activities to 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, 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.

The Student Recreation Center opened in 1992 with racquetball courts, basketball courts, an indoor running track, and a fitness center. The Intramural Field Complex, containing six multi-purpose playing areas, opened Fall Semester 2003. The telephone number for the Student Recreation Center is (251) 460-6065, and the telephone number for the Intramural Field Complex is (251) 461-1627.

### COUNSELING SERVICES

The University Counseling Service is staffed by professional counselors who are available to assist students with personal problems as well as with academic and vocational concerns. All types of adjustment and emotional problems are handled, including marriage and pre-marriage counseling, on a self-referral basis. Psychotherapy is provided by qualified counselors and referrals are made to various agencies as needs arise. The Counseling Service provides psychological testing and evaluation and coordinates other appropriate "campus survival" activities. No fees are charged for counseling, but, in some cases, a small fee is required for certain testing services. Counseling records are considered professional information and are protected accordingly. Personal confidences are strictly respected. Students may seek information or appointments either by telephoning (251) 460-7051 or by visiting the Counseling Services, located in Alpha Hall East, Room 326.

Operating within Counseling and Testing Service, the Substance Abuse Program provides the USA community with counseling, educational, and prevention programs related 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 illegal drug use. Services are confidentially provided for students at no charge. For further information or assistance, contact the Manager, Substance Abuse Counseling, at (251) 460-7980 or visit the web site at <http://www.southalabama.edu/counseling>. The Office is located in Alpha Hall East, Room 326.

### CRIME PREVENTION OFFICE

The USA Police Department has a Crime Prevention Program and a Crime Prevention Officer located on the main campus in Faculty Court South, Room 20. The telephone number is (251) 460-6611. Our Prevention Program includes lighting and safety programs, Rape Awareness Seminars and information, self-defense information, and campus safety tips.

### DISABILITY SERVICES

The University offers special services to students with disabilities. Students requesting services must submit documentation regarding the disability to the Special Student Services Office prior to receiving services. Reasonable accommodations are offered in accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disability Act of 1990. The Special Student Services Office is located in the Student Center, Room 270, (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. Organizations may be permitted to have alcohol at events if permission is granted through the Office of Campus Involvement. The possession, consumption, and/or distribution of illegal substances without a medical prescription are forbidden. Violation of either policy is subject to both University administrative action and criminal prosecution. See *The Lowdown* for a full description of the policy.

### JAGTRAN

The University of South Alabama's campus transportation system, 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>.

### MULTICULTURAL STUDENT AFFAIRS

The Office of Multicultural Student Affairs, located in 110 Student Center, 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. The telephone number is (251) 460-6895.

### PROGRAMS AND SPECIAL EVENTS

The Student Programming 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.

Student Programming functions through committees, such as Fine Arts, Horizons, Club South, Trips and Tours, Concerts, 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 stop by the Student Center Room 108.

### 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, 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 that publication.

### CAMPUS INVOLVEMENT

Over two hundred professional, departmental, special interest clubs, religious groups, 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 Campus Involvement, Room 129, Student Center, (251) 460-7003.

### EDUCATIONAL TALENT SEARCH

Educational Talent Search is a federally funded, early intervention program designed for Mobile County students in grades 6-12. The program provides academic and college counseling along with supportive services such as tutoring and mentoring. Tutoring for program participants is provided by USA students. For information, contact the Educational Talent Search Office, UCOM 5700, (251) 380-2620.

### TRAFFIC REGULATIONS

Faculty, and staff purchase their parking permits at the Office of Student Accounting.

Students are assessed a transportation fee which includes a parking permit. Students will register their vehicles and pick up their parking permits in the Student Center during the permit distribution dates in August and September. Parking regulations are issued with each parking hang tag.

**All students must choose a parking area hang tag and their vehicle must be parked in that area only between 7:00 a.m. and 1:45 p.m. on the main campus, Monday through Friday. Faculty/Staff (blue spaces) are off-limits for student use until 5:00 p.m.**

Anyone driving a car to campus without a current hang tag should obtain a temporary permit from the University Police; visitors should obtain a Visitor Permit.

### TESTING SERVICE

University Testing Service serves as a regional testing center for national testing organizations. Testing is provided as requested by the various departments of the University. Most national entrance examinations are administered by the center. Information regarding specific tests offered, schedules, and registration materials may be obtained by contacting the University Testing Service located in Alpha Hall East, Room 326, at (251) 460-7051.

### 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, Delta 2, Room 213, (251) 460-7322.

### 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 IAAA. 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 Clinic 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 holiday 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 are 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> or <http://www.southalabama.edu/studenthealth/shac.html>.

### STUDENT INSURANCE

All students should have medical insurance. This information is available on the USA web site under the Division of Student Affairs. Click on Student Accident and Insurance Plan. Students are encouraged to purchase this policy if they do not have other medical insurance.

### MUSICAL ORGANIZATIONS

The music department sponsors a number of musical organizations open to interested members of the entire University student body on credit and non-credit basis. These organizations include Concert Choir; University Chorale; University Marching Band; University Symphonic Band; Jazz Band; Athletic Pep Band; Woodwind, Brass, Trumpet, Guitar, String, Percussion, Wind, Flute, and Piano Ensembles; and University Opera Theatre.

### 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*

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*Vanguard*, the faculty, media services, and public relations. The editor and business manager are selected from applications submitted by interested students.

**JAG-TV** is seen throughout the campus on the University's closed-circuit cable system and is under the direction of a board comprised of representatives from the Student Government Association, *The Vanguard*, JAG-TV, faculty, media services and public relations. The general manager is selected from applications submitted by interested students.

### 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 Police Department is available twenty-four hours a day, seven days a week to assist faculty, staff and students with any type of emergency or other assistance. University police officers are sworn by the State of Alabama and are certified by the Alabama Police Officers Standards and Training Commission. The University Police Department may be contacted by calling 511 (if an emergency and from an on-campus phone) or (251) 460-6312 for non-emergency. We encourage members of our campus community to be responsible for their own safety as well as the safety of others and to report crime occurrences to the University Police Department. In accordance with the Campus Security Act of 1990, the University's "Campus Security Policies and Crime Statistics" are published and available at the Police Department's web site by clicking on "Clery Act" or by going to <http://www.southalabama.edu/police/clery.html>. Printed versions of the policies and crime statistics may be obtained from the University Police Administration office located in Faculty Court South, Room 20 during normal business hours.

The Police Department Special Services Unit is designed to anticipate, prevent, and investigate behavioral concerns to include:

- Threats directed to a member or property of the University Community
- Any person exhibiting threatening or unusual behavior
- Administrative hearings or meetings that may pose a threat to those involved during or after the meeting
- Any social or family issue that may pose an on-campus threat to anyone

If there are any questions or concerns, please contact one of the following:

Special Services Unit      461-1405  
After-Hours                460-6312  
Anonymous Crime Tip Line   460-6667

Mail:    Attn: Special Services Unit  
          USA Police Department  
          Faculty Court South (FCS) RM 20

### 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. 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.

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### HOUSING AND RESIDENCE LIFE

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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 suites, apartments, efficiencies, private suites and private efficiencies. 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/](http://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

**Two-Person Suites:** Most suites in the Epsilon Area are two-person suites which open onto an interior hallway. All Epsilon suites have a vanity area, bathroom and are equipped with a small refrigerator and microwave oven. Most suites in the Delta Area are two-person suites which open onto an exterior walkway. The Delta suites have a vanity area, bathroom and are equipped with a small refrigerator.

**Private Suites:** Private suites are available in the Delta and Epsilon Areas. Private suites in

Epsilon and Delta have the same amenities listed above for two-person suites.

**Private Suites with Semi-Private Bath:** Located in the Gamma Area, these suites are composed of two private suites with a shared-adjointing vanity area and bathroom. Each suite is equipped with a small refrigerator and microwave oven.

**Two-Person Efficiency Suites:** This type of suite 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 suites.

**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 in Gamma will accommodate two people and the apartments in Beta will accommodate four people.

**Two-Person Efficiency Apartments:** Studio-type 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 Suites and Apartments:** A limited number of private suites 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.

**Greek Housing:** Accommodations in the Greek halls are two-person suites with a vanity area and a bathroom. Each Greek house is equipped with 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. Note: Students in the Greek halls pay for local phone and internet separately.

**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. Local telephone service, with voice mail, power, water, gas, campus cable TV, unlimited use of the laundry and a high-speed internet and wireless connections are all included in the semester rent. Each residence hall area has a common building or space that includes a TV room, laundry facilities and vending machines available for student use. A deli/convenience store is also located in the Delta Commons Building. More detailed information on furnishings and amenities is available on the University web site at [www.southalabama.edu/housing/](http://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 freshmen residence hall students who have completed less than twenty-four (24) semester hours of course work are required to purchase a meal membership.

### 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@usouthal.edu](mailto:housing@usouthal.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. Residents of The Grove are subject to the same requirement for all residence hall students who have completed less than twenty-four (24) hours of course work to purchase a Dining Services meal membership. 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://flash.gogrove.com/>.

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## AUXILIARY STUDENT SERVICES

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### 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>.

### DINING SERVICES

USA 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 most students that live on campus. Please visit [www.usadiningservices.com](http://www.usadiningservices.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 *flex dollars* to use at any food service location on campus. *Flex dollars* are added to the ID card and are deducted each time there is a food service transaction.

USA Dining Services is also the official caterer on campus. A full catering guide is available at [www.usadiningservices.com](http://www.usadiningservices.com) under the catering tab. Written approval to use an outside caterer must be obtained in advance from the Assistant Vice President for Auxiliary Services.

### 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.

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/CDs
- Laptops/Printers
- Class Rings
- Office Products
- Computer Software/Supplies
- Residence Hall Room Supplies
- Custom Sewn Apparel
- Soft Drinks/Snack Foods
- Facsimile Service
- Student Supplies
- Greek Merchandise
- Test Preps/Study Aids
- Greeting Cards
- 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 Jag Cards are accepted. For additional information please call (251) 460-7012, or visit our web site at: <http://www.southalabama.edu/bookstore>.

### HEALTH SCIENCES BOOKSTORE

This bookstore, located at USA Springhill, is a specialty store for medical, nursing, and allied health students and professionals.

Approximately 2,500 reference titles are on hand and a special order system provides immediate access to over 300,000 titles available for special order.

An extensive assortment of medical diagnostic equipment and multimedia products are available. Anatomical models are also available for sale or rent.

The University Bookstore and the Health Sciences Bookstore accept Visa, MasterCard, Discover, American Express, and the USA Jag Card in addition to personal checks. For additional information please call (251) 434-3635, or visit the web site at <http://www.southalabama.edu/bookstore>.

### POST OFFICE

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

This post office is staffed by University of South Alabama employees, who are familiar with all areas of postal operations and are qualified to handle most any task. Up-to-date domestic manuals are maintained and used for reference purposes. Drop boxes and window service consist 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. Post Office.

All students who live on campus are required to have a personal mail box to receive mail; thus the Post Office box number is the student's campus address. For additional information please call (251) 414-8191, or visit our web site at <http://www.southalabama.edu/postoffice>.

### LICENSING

As a department within Auxiliary Enterprises and the Division of Student Affairs, the Licensing Department 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 commercial use of its name and marks.

All items bearing the logo/marks of the University, must be ordered through companies

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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 logo/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) 460-6481.

### TELECOMMUNICATIONS DEPARTMENT

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

If you live on campus, we will be your service provider. Digital telephones are required to use the system and are provided and maintained by the Telecommunications Department. In addition, each telephone has an associated voice mail box furnished. Please do not bring telephones from home as they will not work with our system. Your telephone and voice mail box should be working when you get to your room. The exception is the on-campus Greek Organizations. They must open separate accounts. We also offer domestic long distance for only ten cents per minute. Instructions to activate your long distance code will be provided separately.

If you are a first-time student, we are 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.

### PUBLICATION SERVICES

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 needs of students, faculty, and staff on an individual, departmental, or organizational basis. Publication Services provides the latest techniques in typesetting, desktop publishing, creative design and layout, camera work, and one-to multicolor offset printing, and mailing services.

Publication Services provides the University community with complete production of all directional and informational signs. Lamination is available for materials ranging in size from 2"x3" up to 11"x17".

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.

Publication Services creates printed material tailored to meet specific needs, including resume, newsletters, directories, handbooks, posters and flyers, stationery, and more. For further information or to schedule an appointment, call (251) 380-2828. Walk-in service is also available. Visit our web site at <http://www.usouthal.edu/publications>.

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### CAREER SERVICES

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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 service center. The **Career Exploration and Job Search component** provides activities to assist in career exploration. **The Cooperative Education and Internship Program** helps students confirm career choices through experiential education. **Career Employment and Graduate School Assistance** is offered to students and alumni seeking information about career choices and graduate or professional schools.

#### Career Exploration and Job Search

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:

- Career Library containing books and videos on career development, job search skills, resume preparation, interviewing techniques, letter writing, and employer information.
- Computer assisted career guidance programs and assessment.
- Hard copy and on-line access to national, local, state, and federal job openings.
- 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. Practical experience is available in industrial, business, governmental, or service organizations. **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 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.

**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. Some internships are not paid; experience is the reward. The option of receiving academic credit for this experience is approved through the department chair or academic advisor.

**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 working full-time for one semester and taking full-time course work the next semester. Students are paid an excellent pre-professional salary during the work semester. The student returns to campus full-time for the senior year. This program offers many advantages; interested students should consult with Career Services. Application should be made for admission to the program no later than the end of the second semester of the freshman year.

#### Prerequisites for Participation

To remain in the Cooperative Education program, students must maintain good academic standing; a cumulative grade-point average of 2.3 or above for engineering students, a grade-point average of 2.0 for all other students, and comply with the policies and procedures of the employer and the Cooperative Education and Internship Program.

#### Career Employment 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 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 ([@jaguar1.usouthal.edu](mailto:@jaguar1.usouthal.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 jaguar1 account, select that link on the University's PAWS web site at <http://paws.southalabama.edu>.

### ACADEMIC TERMS

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. Quarter credit hours divided by 1.5 yield the equivalent number of semester credit hours.

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 - 31 semester hours
Sophomore	32 - 63 semester hours
Junior	64 - 95 semester hours
Senior	96 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 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 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.

### 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: Chemistry, Computer Skills and Mathematics

#### Chemistry Placement Exam

All students planning to take General Chemistry I (CH131 and CH131L) who have not passed Fundamentals of Chemistry (CH100), as evidenced from student's transcript, are required to take the General Chemistry Placement Test. A passing score of 35 or better on the General Chemistry Placement Test is required prior to registration for CH131 and CH131L. For a detailed description of chemistry

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courses prerequisites, please see the Chemistry (CH) Course Listings Section. The General Chemistry Placement Test is administered by the Department of Chemistry and the test locations and dates are published each semester in the University of South Alabama's Registration Guide. To take the General Chemistry Placement Test, the student must bring a student number, a calculator and a number 2 pencil. No fee is charged for the test. All questions about the General Chemistry Placement Test should be directed to the Department of Chemistry office: (251) 460-6181.

### Computing Proficiency

(Refer to [Computer Access](#) above)

All undergraduate students must demonstrate basic computing skills prior to graduation from the University. This requirement may be satisfied by:

1. passing the Computer Proficiency Examination\* (CPE),  
or
2. passing CIS 150: Introduction to Computer Applications, or another CIS course specified by the major,  
or
3. for students who are pursuing a major leading to teacher certification: passing EDM 310: Microcomputing Systems in Education. This course is required for all teacher certification programs.

The following students are required to take the Computer Proficiency Examination (CPE): (1) all students who plan to major in any program in the College of Arts and Sciences and (2) all students who plan to take CIS 250. Students not passing the CPE must complete CIS 150 (Introduction to Computer Applications) prior to enrolling in CIS 250.

In addition to new student orientation, the proficiency exam is administered four times during the semester. Times, dates, and location of the exams are found at <http://www.cis.usouthal.edu/proficiencyexam>.

### Mathematics Placement Exam

All incoming students must take the on-line mathematics placement exam. The only exceptions to this policy are:

1. Students who are enrolled in one or more Developmental Studies mathematics courses are not required to take the placement exam. Such students will only be allowed to register for mathematics courses, numbered 100 or higher, after successfully completing developmental studies course work; and
2. Incoming students who transfer credit for MA 112 or higher and who plan to take subsequent mathematics courses are exempt from taking the placement exam. Nevertheless, they are encouraged to take the placement exam to help them determine if they are fully prepared for subsequent mathematics courses.

Incoming students who transfer credit for MA 110 or higher and WHO DO NOT PLAN to take subsequent mathematics courses are exempt from taking the placement exam.

3. Please note that if you have completed a college level math course, it MAY NOT

fulfill a mathematics course prerequisite, thus you may have to take the Mathematics Placement Exam. For a detailed description of mathematics courses prerequisites, please see the [Mathematics \(MA\) Course Listing Section](#).

**All other students must take the mathematics placement exam.** Once the mathematics placement exam is taken, a score will be obtained, and the students will be allowed to register for the appropriate mathematics course. If the exam is not taken, the students will be blocked from registering for all mathematics courses.

Instructions for taking the math placement exam, and further information about the placement procedure, are included in registration and orientation materials for incoming students. The math placement exam is given on-line. This exam is located at: <http://mps.southalabama.edu/mps/>.

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## REQUIREMENTS FOR A BACHELOR'S DEGREE

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To qualify for a Bachelor's degree a student must complete a minimum of 128 approved semester hours, including both general education requirements and major requirements. In some colleges/degree programs a minor is also required. Degree requirements in some programs may exceed the minimum of 128 semester hours. Students should consult the individual college and major program description for details.

**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.

### I. GENERAL EDUCATION 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 1. 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. If student completes IB degree with an IB exam score of 5 or higher in English, may satisfy the EH 101, EH 102 requirement. If student fails to complete IB degree, but has 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 2. 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.

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.\*\*

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, Business, Education, and the School of Computer and Information Sciences, and the Department of Adult Interdisciplinary Studies, students must complete CA 110 to satisfy the competency in oral communications requirement. Students majoring in the Colleges of Engineering and Nursing must meet the specific oral communication requirements of their major (see appropriate sections of this Bulletin for details.)**

**\*\*Students preparing to complete the B.S. 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.**

**Area 3. 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 4. 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)**

**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 32 credit hours of University of South Alabama 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 may be substituted to meet the residency requirement. Credits earned in approved Study Abroad programs, up to a maximum of 16 semester hours, may be used to satisfy this requirement provided the student is enrolled in IS 391, Study Abroad, and has transient course approval from the dean of the college. Study Abroad courses must be certified as equivalent to upper division (300 or 400 level) course work in order to fulfill the USA Residency Requirement.

For courses taken at the Dauphin Island Sea Lab, that occur in the University of South Alabama Catalog of Courses, transfer evaluation will assign the equivalent USA Course number and name. For the purposes of meeting USA degree requirements and upper division USA resident course work requirements (32 hours of 300 and 400-numbered courses), 300 and 400-level Sea Lab/USA courses will count as if they were taken on the USA campus as a native USA student, even though they were taken while enrolled at the transfer institution.

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 a 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 160 total semester hours.
4. They must complete a course of study, approved by the appropriate dean, consisting of at least 32 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 32 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.



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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 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 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 (5) 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 drop courses after the last day for refunds may continue to attend class.

### 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

Under certain conditions, when a course has been repeated, a student may request that an earlier grade not be used in the calculation of the USA grade-point average.

**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 (251-460-6261 or [finaid@usouthal.edu](mailto:finaid@usouthal.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 email 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.

**32-HOUR CREDIT LIMITATION**

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), 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 32.0 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 than 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

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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 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 readmission 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 *The 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 \$6.00 per transcript. Faxed transcripts carry an additional charge of \$5.00 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 \$30.00 application fee. This evaluation will be available from the student's dean. A fee of \$15.00 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 are not included in the determination of academic honors. Academic honors are not awarded for second degrees, graduate or professional degrees.

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 the official end of the term, final grades cannot be determined in time for inclusion in the printed commencement program. 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 USA Honors Program.

**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**

If a deceased student has satisfactorily completed approximately 90 percent of the degree requirements, the Dean of the College may recommend the waiving of the remaining requirements for the appropriate academic degree. The Dean's recommendation will be submitted 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.

**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 abroad 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, undergraduate 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).

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 may be 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". 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](http://www.southalabama.edu/international) or schedule an appointment for an information session.

## HEALTH PRE-PROFESSIONAL, PRE-LAW AND HONORS

### HEALTH PRE-PROFESSIONAL PROGRAMS

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 a 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 the 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, go to page 119 of this **Bulletin** or visit the web site at <http://www.southalabama.edu/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's 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 course work 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 page 50 of this Bulletin or the web site at <http://www.southalabama.edu/alliedhealth/pa/>.

### Contact Information

Director, Health Pre-Professional Program  
Dr. Cindy Stanfield  
UCOM 5751  
(251) 380-2704  
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 11, 2009 to be considered.

## 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.

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. 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 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.

	<b>Credit Hours</b>
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 Elective	6
	<b>Total 24</b>

Introduction to Honors Senior Project  
(HON 301) (taken in the Junior Year) 1  
Honors Senior Project\*\* 6  
(may count toward major)\*\*

\* 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 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 205.

## 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 sixteen 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., Ph.D., and thirty-four 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 College of Allied Health Professions offers graduate programs leading to the degrees of Master of Science in Speech - Language Audiology, Master of Science in Occupational Therapy, Master of Health Sciences 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 Science in Biological Sciences, Marine Sciences, Mathematics, Psychology, and Doctor of Philosophy in Marine Sciences.

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 Computer and Information Sciences 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, 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.

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 place 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@usouthal.edu](mailto:admiss@usouthal.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 five-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 do not have to reapply through the Registrar's Office unless the student has attended another institution in the interim. If this is the case, a reapplication is required, including official transcripts of any additional course work completed.

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 seven (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 bachelor's degree from an accredited institution of higher education.
- 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.
- 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.
- Recommendation of the appropriate Coordinator/Chair, Director of Graduate Studies and approval by the Graduate Dean.
- 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.
- 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 bachelor's degree from an institution of higher education.
- 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 Office of Admissions. Graduate Directors or Coordinators of each graduate program may recommend consideration of other factors in the review of an application.
- Recommendation of the appropriate Coordinator/Chair, Director of Graduate Studies, the Dean of the College/School, and the Graduate Dean.
- 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.
- 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:

- 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."
- 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



## 40 THE GRADUATE SCHOOL

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. A maximum of 15 semester hours of graduate credit earned while in Non-Degree status may be applied toward a graduate degree if the student is later admitted to a graduate program of study.

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.

### 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 under-graduate 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 (7) 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.

### 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 in Basic Medical Sciences. 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 Offense 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

A maximum of nine (9) semester hours of approved transfer credit 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. Prior approval of the college director of graduate studies is required. Only courses with "A" or "B" grades are acceptable for transfer. See specific Ph.D. program for transfer credit policy. The University of South Alabama does not award graduate credit for prior portfolio-based experiential learning.

## 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 nine (9) 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 five 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 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.

## 42 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 Communication Sciences and Disorders, in Instructional Design and Development, and in Marine Sciences vary among the specialties. Each of the four 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 (8/04).
3. Ph.D. 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. A Master's thesis committee must have a minimum of three members and a dissertation committee must include at least four members of the Graduate Faculty. Both thesis and dissertation committees must have at least one member from outside the student's department or program. Two-thirds of the committee must be USA 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
- 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. Although no minimum numerical GRE score is required for admission to the program, candidates must perform at the 50th percentile level nationwide (around 500 points in both Verbal and Quantitative components of the test).

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)

- Biochemistry (6 credit hours)
- Any other prerequisites needed for specific courses within each concentration

### 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)
  - 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.
- 11 credit hours ("Research Thesis" track) or 14 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 may choose one of the following areas of concentration:

- Biology/Basic Medical Sciences (TXBY)
- Cellular Toxicology (TXCL)
- Chemistry/Chemical Engineering (TXCH)
- Civil Engineering (TXCE)

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 lack 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 Troy State University. In particular, Troy State University will soon offer two courses on-line: ("Environmental Impact and Policy" and "Risk Management") and possibly a third one ("Environmental Ethics, Policy and Law"). The latter course is currently taught on Saturdays (every other week) making it suitable for our students who would like to take it.

### DEADLINE FOR APPLICATION FOR ENVIRONMENTAL TOXICOLOGY

Applications are accepted twice a year, in the Fall and Spring semesters by the deadlines indicated in the University of South Alabama **Bulletin**.

### DESCRIPTIONS OF ALL ENVIRONMENTAL TOXICOLOGY (EXT) COURSES BEGIN ON PAGE 203.

### 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 that 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 February 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:

- Summed score of 1100 or greater on the verbal and quantitative subtests of the General Test of the Graduate Record Examination will be expected.
- Completion of an advanced degree (Master of Science/Arts) in psychology, counseling, counselor education, 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.

#### Psychological Measurement

- Psychoeducational Assessment
- Personality Assessment
- Individual Intelligence/ Cognitive Assessment

#### Psychological Interventions

- Individual and Group
- Counseling Techniques
- Cognitive Behavior Interventions

#### Biological Aspects of Behavior

- Biopsychology

#### Cognitive and Affective Aspects of Behavior

- Learning and Cognition
- Personality Theories

#### Social Aspects of Behavior

- Multicultural Psychology
- Life Span Development

#### Research Methodology and Data Analysis

- Inferential Statistics/ Research Methodology
- Applied Research Methods

#### History and Systems of Psychology

- History of Psychology

#### Vocational and Career Development

#### Group Work and Organizational Behavior

**Applicants should submit the following materials by February 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)
  - Advanced Assessment (3 credits)
  - Applied Multivariate Statistics in Psychology (3 credits)
  - Clinical Health Psychology (3 credits)
  - Psychology of Resilience to Trauma/ Crisis (3 credits)
  - Group and Systems Theory and Intervention (3 credits)
  - Consulting Psychology and Program Development (3 credits)
  - Prevention and Treatment for Public Health Problems (3 credits)

## 44 ALLIED HEALTH PROFESSIONS

- Practicum I (6 credits)
- Practicum II (6 credits)
- 9 credit hours of dissertation research on a subject identified jointly by the student and his or her Advisory Committee
- 15 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 COURSES BEGIN ON PAGE 259.

### DESCRIPTIONS OF GRADUATE INTERDISCIPLINARY STUDIES (GIS) COURSES BEGIN ON PAGE 205.

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# COLLEGE OF ALLIED HEALTH PROFESSIONS

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Dean: Richard E. Talbott (251) 380-2785

Associate Dean and Director of  
Graduate Studies: Julio F. Turrens  
(251) 380-2785

Academic Advisors: Andrea Branch and  
Selicia Judge (251) 380-2772

**College of Allied Health web site**  
<http://www.southalabama.edu/alliedhealth>

The College of Allied Health Professions offers the following programs:

#### **Certificate Program in:**

**Emergency Medical Services**  
**Radiologic Technology**

#### **Bachelor of Science Programs in:**

**Biomedical Sciences**  
**Cardiorespiratory Sciences**  
**Emergency Medical Services**  
**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 as given 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 for Allied Health students. The academic advisors are available to assist undergraduate students and other persons seeking information about Allied Health Professions programs. The academic advisors are located at 1550 University Commons, telephone number (251) 380-2772. Graduate students are advised by their respective departmental advisors.

#### **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. 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 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.

### 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 College of Allied Health Professions must take the Graduate Record Examination (GRE). A minimum GRE score of 800 (verbal and quantitative sections combined) is required to apply for admission to graduate programs in the College of Allied Health Professions. Some graduate programs in the College require GRE scores higher than the minimum. Interested students should check the specific requirements for every program.

### DOCTORAL LEVEL DEGREE PROGRAMS

The 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 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

#### ADMISSION REQUIREMENTS AND PROCEDURES

The Dean of the 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.

Doctor of Audiology  
Department of Speech Pathology  
and Audiology  
2000 University Commons  
Mobile AL 36688-0002  
Telephone: (251) 380-2600  
Web address:  
<http://www.southalabama.edu/alliedhealth/speechandhearing>

Doctor of Physical Therapy  
Department of Physical Therapy  
1504 Springhill Avenue Campus  
Mobile AL 36688-0002  
Telephone: (251) 434-3575  
Web address:  
<http://www.southalabama.edu/alliedhealth/pt>

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. 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 must submit documentary evidence showing TOEFL test scores of at least 600 (written form) or 250 (computer version), or bachelor's or graduate degrees earned at accredited United States institutions of higher education.

### DEADLINES FOR APPLICATIONS

Deadlines for application (including all supporting documentation) to the Professional Doctoral programs are specified by each department. Students admitted to a program must register for the semester for which they are accepted and to register in all the courses prescribed in the curriculum with the other members of their class. If they fail to do so, they must reapply for admission during a future application cycle.

### 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 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

Persons interested in applying for admission to the College of Allied Health Professions Professional Doctoral programs should follow the requirements listed under the appropriate program's Requirements for 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) or 250 (computer 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 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.
      - (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.

#### **EARLY ENTRY TO DOCTOR OF PHYSICAL THERAPY PROGRAM**

The Department of Physical Therapy considers applications in the "advanced undergraduate" category from individuals who meet specific requirements. See the "Early Entry" section under the Department of Physical Therapy for details.

#### **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 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. For students in the web-based DPT program for licensed physical therapists only 4 semester credits of courses with the grade of "C" may be counted toward the degree. 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.

#### **GRADES**

A - Excellent, 4 grade-points per semester hour  
 B - Good, 3 grade-points per semester hour  
 C - Marginal, 2 grade-points per semester hour  
 D - Unsatisfactory, 1 grade-point per semester hour  
 F - Failure, no grade-point  
 S - Satisfactory, (certain designated courses only)  
 U - Unsatisfactory (certain designated courses only)

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

I - Incomplete  
 X - Absent for final exam  
 WD - Withdrawal  
 P - Course in progress  
 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 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 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, or 6 semester hours for students in the web-based DPT for licensed physical therapists, 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*. Copies are available in the Dean's Office.

**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 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 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) 380-2710  
 Professors: Aliabadi, Davis, Spector, Turrens  
 Professor Emeritus: Covey  
 Associate Professor: Stanfield  
 Assistant Professors: Agah, Mockett  
 Clinical Assistant Professor: Ravine  
 Adjunct Professor: Kayes  
 Adjunct Associate Professors: Balczon, Bhatnagar  
 Adjunct Instructor: Guarino  
**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 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, veterinary or pharmacy school are advised by a College of Allied Health Professions advisor and by a Health Preprofessional advisor.

Cindy Stanfield, Ph.D.  
 Health Preprofessional Advisor  
 UCOM 5750  
 (251) 380-2704

Selicia S. Judge  
 Academic Advisor  
 College of Allied Health Professions  
 UCOM 1550  
 (251) 380-2772

**REQUIREMENTS FOR A MAJOR IN BIOMEDICAL SCIENCES (130 or 131 semester hours including the following)**

<b>Area I - Written Composition</b>	<b>(6)</b>
EH 101, 102	3,3
<b>Area II - Humanities &amp; Fine Arts (12)</b>	
CA 110	3
ARH 100, ARH 103, ARH 123,	3
ARH 240, ARH 242, ARS 101,	
DRA 110, MUL 101	
EH 215 or EH 216 or EH 225 or EH 226	3
or EH 235 or EH 236	
*Humanities Elective (recommend	3
PHL 121 if HY sequence chosen)	
<b>Area III - Natural Sciences &amp; Math</b>	<b>(12)</b>
MA 125	4
CH 131/CH 131L, CH 132/CH 132L	4,4
<b>Area IV - History, Social &amp; Behavioral Sciences</b>	<b>(12)</b>
PSY 120	3
HY 101 or HY 102 or HY 135 or HY 136	3
SY 109	3
*Social Science Elective	3
<b>Area V - Preprofessional, Major &amp; Electives</b>	<b>(34)</b>
BLY 121/BLY 121L, BLY 122/BLY 122L	4,4
CH 201, CH 202	5,5
PH 114, PH 115	5,5
ST 210	3
CIS 150 (or pass equivalency)	3
*Must complete two course sequence in Literature or History	

**MAJOR REQUIREMENTS**

Humanities/Fine Arts	3
CP 200 or HS 170	1
General Elective	6

**Forty-four or forty-five semester hours of Biomedical Sciences courses including:**

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	4
BMD 420 - Pharmacology	3
BMD 450 - Introduction to Research	2

Allied Health Professions



**48 ALLIED HEALTH PROFESSIONS**

BMD 493 - Issues in Biomedical Sciences (W)	3
<b>And either</b>	
BMD 499 (With permission of the faculty)	6
<b>OR</b>	
BMD 415 (4 credits) plus Math/Science Elective (BMD 210, BMD 350, BMD 430, BMD 494, MA 126, ST 310, BLY 205, 215, 311, 341, 363, 459, CH 265, CH 499) (3 credits)	7

**SPECIAL COURSE FEES**

BMD 323 Biochemistry Lab	\$50.00
BMD 336 Physiology Lab	37.00
BMD 402 Medical Microbiology	45.00
BMD 415 Microscopic Anatomy	37.00
BMD 499 Honors Research Thesis	37.00

**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 162.**

**DEPARTMENT OF CARDIORESPIRATORY CARE**

Chair: William Wojciechowski (251) 434-3405  
 Medical Director: Ronald Allison  
 Professors: Chang, Op't Holt  
 Associate Professor: Wojciechowski  
 Senior Clinical Instructor: Pruitt  
[Department of Cardiorespiratory Care web site](http://www.southalabama.edu/alliedhealth/crc)  
<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 fully accredited by the Committee on Accreditation of Allied Health Educational Programs (CAAHEP) and the Committee 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 67 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 Cardiorespiratory Care Admissions Committee.
5. Tour of hospital

**REQUIREMENTS FOR A MAJOR IN CARDIORESPIRATORY CARE**

Successful completion of 133 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 & 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 & Math (11)**  
 MA 112 3

CH 131/CH 131L, CH 132/CH 132L 4,4

**Area IV - History, Social & 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 & Electives\*\* (26)**

ST 210 3

BLY 121/BLY 121L 4

PH 104 4

BMD 210 3

BMD 114, BMD 115 8

CIS 150 3

AHP 101 1

\*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**

<b>Fall</b>		<b>Spring</b>	
CRC 330	4	CRC 335	5
CRC 331	3	CRC 345	5
CRC 334	2	CRC 332	4
CRC 342	3	CRC 360	2
EMT 340	3		16
	<u>15</u>		

**Summer**

<b>Either:</b>		<b>Or:</b>	
CRC 430	3	CRC 432	3
CRC 440	4	CRC 442	4
		<b>And:</b>	
		CRC 415	2
			<u>9</u>

**Senior Year**

<b>Fall</b>		<b>Spring</b>	
<b>Either:</b>		<b>Either:</b>	
CRC 430	3	CRC 430	3
CRC 440	4	CRC 440	4
		<b>Or:</b>	
CRC 431	3	CRC 431	3
CRC 441	4	CRC 441	4
		<b>Or:</b>	
CRC 432	3	CRC 432	3
CRC 442	4	CRC 442	4
		<b>And:</b>	
CRC 446	2	CRC 447	2
CRC 450	1	CRC 451	2
CRC 429	2	CRC 460	3
	<u>12</u>		<u>14</u>

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, USA Springhill, 1504 Springhill Avenue, Mobile, Alabama 36604-3273, Phone: (251)434-3405.

**Special Fees**

A special course fee is assessed in each of the following courses:

CRC 330	\$60.00
CRC 431	100.00
CRC 450	19.00
CRC 451	19.00

**DESCRIPTIONS OF ALL CARDIORESPIRATORY CARE (CRC) COURSES BEGIN ON PAGE 181.**

**DEPARTMENT OF EMERGENCY MEDICAL SERVICES EDUCATION**

Chair: David W. Burns, M.P.H. (251) 431-6418  
 Program Directors: Curry, Garmon, Varner  
 Medical Director: Frank S. Pettyjohn, M.D.  
 Instructors: Burns, Curry, Erwin, Foote, Garmon, Varner

Academic Advisors: Burns, Curry  
 Part-time Instructors: Carter, Morgan, White  
 Clinical Coordinator: McArthur  
 CME Coordinator: Faggard

**Home Page:** <http://www.southalabama.edu/ems>

**PROGRAMS OFFERED:**

- Certificate Program in Emergency Medical Technician - Basic (EMT-B)**
- Certificate Program in Paramedic (EMT-P)**
- Bachelor of Science in Emergency Medical Services**

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 two certificate programs, Basic EMT and Paramedic, as well as a Bachelor of Science in Emergency Medical Services.

**CERTIFICATE PROGRAMS**

The EMT-Basic certificate program can be completed in one academic semester and is a prerequisite to the Paramedic certificate program. Together, both programs can be completed in five or six semesters. Students may, however, elect to complete only the EMT Basic level of training. After successful completion of each level of training, 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. Those who complete both levels of training and certification are qualified to work in many areas of out-of-hospital emergency medical care, including ambulance services, fire rescue departments, and industrial health and safety settings. Students may begin certificate programs in the Fall, Spring and Summer semesters.

**BACHELOR OF SCIENCE IN EMERGENCY MEDICAL SERVICES PROGRAM**

Students graduating from USA's Paramedic certificate program, as well as licensed

Paramedics from other training 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 expand their careers in Emergency Medical Services as administrators, educators and Critical Care Paramedics.

**ADMISSIONS**

General admission to the University is requires 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:

- Evidence of successful completion of a nationally accredited or State of Alabama approved paramedic program.
- 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 by April 1 for Fall admission 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.

**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).

**PROGRESSION AND COMPLETION POLICIES**

To progress throughout the 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 both the EMT Basic and Paramedic levels of practice. Only those students who have met all academic requirements of the Program will be eligible to sit for the National Registry examination.

Students unable to satisfactorily complete the final comprehensive examinations in EMT 495 will be required to repeat this course the following semester.

**Students will be allowed to repeat a course only one time.**

In accordance with State EMS Rules, each student must be a state license EMT Basic prior to beginning his or her second semester of paramedic (third semester overall) 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 the EMT Basic or Paramedic program must maintain current Healthcare Provider (CPR) certification and must keep all immunizations current. **Students are responsible for all personal health care expenses including expenses resulting from injury or accidents, while engaged in learning experiences required by the Department of EMS Education.** All clinical students are charged once a year for professional liability insurance. Students are responsible for all travel expenses to and from clinical and field internship sties. Students are responsible for purchase of uniforms and required clinical equipment and supplies for internships. Tuition and fees are set by the University of South Alabama, upon approval of the Board of Trustees.

**CURRICULUM**

The basis for the curriculum is the current Department of Transportation National Standard curriculum for the EMT Basic (1994) and Paramedic (1999).

**EMT BASIC CERTIFICATION PROGRAM First Semester**

EMT 200: Basic Emergency Care	6
EMT 205: Basic Clinical Internship	1
EMT 206: Basic Skills Lab	<u>1</u>
	<b>8</b>

**PARAMEDIC CERTIFICATE PROGRAM First Semester**

EMT 210: Medical Terminology	3
EMT 310: Human Systems/Disease Process	3
EMT 335: Essentials of Paramedicine	3
EMT 340: EMS Cardiology	<u>3</u>
	<b>12</b>

**Second Semester**

EMT 315: Pharmacology I	3
EMT 345: Pharmacology II	3
EMT 355: Emergency Care I	<u>3</u>
	<b>9</b>

**Third Semester**

EMT 375: Women and Children	3
EMT 465: Clinical Internship I	3
EMT 350: Patient Assessment/Trauma	<u>3</u>
	<b>9</b>

**Fourth Semester**

EMT 455: Paramedic Skills Lab	1
EMT 466: Clinical Internship II	3
EMT 425: Emergency Care II	<u>3</u>
	<b>7</b>

**Fifth Semester**

EMT 475: Paramedic Field Internship	6
EMT 495: Comprehensive Review and Exams	<u>1</u>
	<b>7</b>

**SPECIAL NOTES:**

The Paramedic Certificate Program can be completed in 4 semesters exclusive of EMT Basic with permission from the Paramedic Program Director. 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 advisor prior to registration each semester.

**BACHELOR OF SCIENCE PROGRAM**

**Freshman Year**

1st Semester		2nd Semester	
EH 101	3	EH 102	3
BLY 101 & 101L	4	CH 101 & 101L	4
CIS 150	3	HY/Soc Elective	3
HY	*3	MA 110 or 112	3
Fine Arts Elective	<u>3</u>	Public Speaking/	<u>3</u>
<b>Total</b>	<b>16</b>	Speech	
		<b>Total</b>	<b>16</b>

**Sophomore Year**

1st Semester		2nd Semester	
BMD 114	4	BMD 115	4
Literature	*3	2nd HY or Lit	*3
PSY 120	3	EMT 200	6
ST 210	3	EMT 205	1
Area 2 or 4	<u>3</u>	EMT 206	<u>1</u>
Elective		<b>Total</b>	<b>15</b>
<b>Total</b>	<b>16</b>		

**Junior Year**

1st Semester		2nd Semester	
EMT 335	3	EMT 315	3
EMT 340	3	EMT 345	3
EMT 350	3	EMT 355	3
EMS 310	<u>3</u>	EMT 375	<u>3</u>
<b>Total</b>	<b>12</b>	<b>Total</b>	<b>12</b>

**3rd Semester**

EMT 455	1
EMT 465	3
EMT 466	3
EMT 425	<u>3</u>
<b>Total</b>	<b>10</b>

**Senior Year**

1st Semester		2nd Semester	
EMT 475	6	EMS 325	3
EMT 495	1	EMS 340	3
EMS 315	3	EMS 440	3
EMS 320	3	EMS 445	3
EMS 460	<u>3</u>	EMS 475	3
<b>Total</b>	<b>16</b>	EMS 495	<u>1</u>
		<b>Total</b>	<b>16</b>

**Total Credits 129**

\*Must complete a two semester series of either Literature or History.

**DESCRIPTIONS OF EMERGENCY MEDICAL SERVICES (EMS) COURSES BEGIN ON PAGE 200.**

**DESCRIPTIONS OF EMERGENCY MEDICAL TRAINING (EMT) COURSES BEGIN ON PAGE 201.**

**THE CENTER FOR EMERGENCY RESPONSE TRAINING**

The University of South Alabama's Center for Emergency Response Training (CERT) provides non-credit training and continuing education courses for emergency medical services (EMS) personnel, such as EMT's and

paramedics, as well as nurses, physicians and other allied healthcare professionals in the community.

CERT is housed in the Department of Emergency Medical Services (EMS) Education on the University's Brookley campus. The Center has been designated as an authorized community training center (CTC) of the American Heart Association. As such, over 500 students each year complete emergency cardiac care provider and refresher training in areas such as ACLS, PALS and BLS (CPR). 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.

**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.

**International Trauma Life Support (ITLS) Provider**

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.

**EMT and Paramedic Refreshers Courses**

Designed to assist those licensed EMT's and paramedics who are in need of a DOT National Standard EMT Refresher class for recertification purposes. Call department for availability and costs.

**DEPARTMENT OF OCCUPATIONAL THERAPY**

Chair: Rebecca I. Estes (251) 434-3939

Professor: Scaffa

Associate Professor: Estes

Assistant Professor: Wooster

Clinical Assistant Professors: Lemcool, O'Connor

Adjunct Faculty: Henderson, Van Slyke

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 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. To be considered for admission to the program, students must submit an application with appropriate fees to the Occupational Therapy Department by the **January 15th deadline**. Selected applicants who meet all academic admission requirements below will be invited for personal interviews.

*The following are the minimum criteria for admission:*

1. Completion of an undergraduate degree. Students may apply to the program as graduate students if they have completed a baccalaureate degree with a minimum cumulative GPA of 3.0 on a 4.0 scale from an accredited institution prior to the starting date of the program, (Baccalaureate Degree Holders; (Category I, see below). Students who have completed a minimum of 96 semester (144 quarter) hours of course work, with a minimum 3.0 GPA may apply as Advanced Undergraduates (Advanced Undergraduates: Category II, see below). Provisional admission may be offered to selected students who do not meet this criterion.
2. Completion of the prerequisite course work listed below with a minimum GPA of 3.0 on a 4.0 scale. A minimum grade of "C" must be completed in all prerequisite courses.
3. Completion of the Graduate Record Examination (GRE) within the last five years. A minimum combined score of 800 for the Verbal and Quantitative portions is required. Official scores must be submitted directly to the University before the application deadline.

Admission is offered to the top students who apply after consideration of the admission score. Selection is based on the total admission score which consists of a calculated value based on the following: GRE scores, Prerequisite GPA, and an interview score.

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), physiology (300 level or higher), chemistry, pathophysiology, physics, infectious disease or microbiology, medical terminology, introduction to occupational therapy (OT 101 or OT 201), and any additional anthropology or sociology courses (300 level or higher). A maximum of 3 points may be earned by taking these additional classes.

Applicants are strongly encouraged to observe occupational therapy practice in a variety of settings. One (1) extra point will be added to the admission score for each 25 hours observed, up to a maximum of 75 hours or three (3) points. 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 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 (144 quarter) 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.

**APPLICATIONS ARE AVAILABLE IN OCTOBER AND ARE DUE BY JANUARY 15.**

**PROGRAM PREREQUISITES ALL APPLICANTS MUST COMPLETE**

Baccalaureate Degree Holders (Category I) and Advanced Undergraduate Applicants (Category II) must complete these prerequisites:

English Composition I	3
General Biology with lab	4
Anatomy and Physiology*	6
Kinesiology*	3
Precalculus Algebra	3
(or higher level mathematics)	
Statistics or Research Methods*	3
General Psychology	3
Developmental Psychology	3
Abnormal Psychology	3
Cultural Anthropology	3
Elective	3
(one of the following: Public Speaking, Ethics, Logic, Small Group Discussion, Group Dynamics)	
Computer Competency*	3
(as demonstrated by course credit, proficiency exam, continuing education or other documentation)	
First Aid and CPR Competency*	1
(as demonstrated by course credit, or by documentation of certification by the American Red Cross or the American Heart Association)	

**TOTAL SEMESTER HOURS: 41**

\*Must be taken no more than five years prior to application.

**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)

Introduction to Logic or Ethics

(3 semester hours)

Electives (25 semester hours)

\*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 Pre-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 Pre-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 - W	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

## 52 ALLIED HEALTH PROFESSIONS

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 Fall and Spring 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 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 Musculoskeletal 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 Interventions in OT	50.00

### RETENTION POLICIES

In accordance with the Policies of the University of South Alabama Graduate School:

1. 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.
2. A student in the status of Provisional Admission who does not have a B (3.0) average upon completing 15 semester hours of graduate credit toward degree requirements will be academically 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 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 Chairperson.
7. If a student fails a Level II Fieldwork course (OT 550, OT 555), the student may be permitted to repeat the course. 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.
8. 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, P.O. Box 31220, Bethesda, MD 20824-1220. ACOTE's phone number is c/o AOTA (301)652-AOTA. Graduates of the program will be able 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 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 247.

## DEPARTMENT OF PHYSICAL THERAPY

Chair: Dennis W. Fell (251) 434-3575

Professor: Wall

Associate Professors: Fell, Gray, G.L. Irion, J.M. Irion

Assistant Professors: Gubler, Jefferson, Kennedy

**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, and in universities.

As its mission, "The Department of Physical Therapy is dedicated to the education of physical therapists who will be able to provide the community with the highest levels of professional care while maintaining a commitment to lifelong learning and the pursuit of excellence. We are further committed to advancement of knowledge in the profession through research and scholarly activity."

The degree offered by the department is the Doctor of Physical Therapy (DPT). [In addition to the regular entry-level DPT program described in this section, the department offers a "Web-based Doctor of Physical Therapy" program only for individuals who already have their license to practice physical therapy in the United States, but want to advance their knowledge and degree to the Doctorate degree. Details of this web-based program can be found on the web site: <http://www.southalabama.edu/alliedhealth/pt/onlinecpt.html>.] The remainder of this section of the bulletin describes the entry-level DPT program 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 118 semester hours (listed below) including classroom and clinical laboratory course work and 33 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 **January 15th** of the same year. Additionally, international students must apply to the University's Office of International Services (including certified translations of transcripts) by October 15th, before making application to the Department of Physical Therapy. This program is an entry-level degree. Because of the extensive list of prerequisites that must be completed prior to application, this program does not meet the needs of international students who already possess PT degrees from other countries.

### 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 prerequisites for regular graduate admission as listed below with a GPA = 3.00. These applicants may apply in January 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  $\geq 3.50$  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 January 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 January 15th with a minimum score of 900. GRE must have been taken within the last five (5) years. Verbal, Quantitative and Analytical Writing sections will be utilized.

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. A form is available for download from the web site that must be signed by the physical therapist with the license number included.

6. International applicants must have a TOEFL score  $\geq 600$  (250 on computer based or 100 on Internet based tests), TSE  $\geq 60$  and TWE  $\geq 4.5$  and must apply to the University's Office of International Services, with certified translations of transcripts, by October 15 of the previous year. This DPT program is not designed 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<sup>a</sup>

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<sup>b</sup> (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)<sup>c</sup>

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 (6) 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 Preprofessional 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 8 semesters of the professional program.
- That the academic program for students in both categories is identical in its entirety.
- That for the entire 8 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 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 33 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

## 54 ALLIED HEALTH PROFESSIONS

PT 603 Neuroscience	\$ 15.00
PT 612 Research Project	\$ 50.00
PT 621 Introductory PT Skills	\$ 20.00
PT 625 Therapeutic Intervention	\$ 20.00

A \$25.00 professional liability fee is assessed annually.

### 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

PT 600 Human Anatomy I*	3
PT 610 Principles of Research	2
PT 620 Clinical Kinesiology*	3
PT 621 Introductory PT Skills*	3
PT 622 Exercise Physiology*	4
PT 680 Professional PT Practice; W	2

#### Spring Semester - Year I

PT 601 Human Anatomy II*	4
PT 604 Pathophysiology I	2
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

PT 607 Pathophysiology II	2
PT 650 PT in Integumentary Disorders*	4
PT 671 Clinical Case Studies I	1
PT 682 PT Internship I	7

#### Fall Semester - Year II

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 (spine)*	3

#### Spring Semester - Year II

PT 612 Research Project	2
PT 628 Mobility, Orthotics, and Prosthetics*	3
PT 640 Neuromuscular PT Examination*	3
PT 641 Neuromuscular PT Evaluation*	3
PT 660 PT in Cardiovascular and Pulmonary Disorders*	4
PT 672 Clinical Case Studies III	1

#### Summer Semester - Year II

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

PT 605 Human Learning	1
PT 614 Measurement in PT	1
PT 674 Clinical Synthesis and Patient Management	2
PT 683 PT Internship II	9
PT 685 Management of PT Practice	3

#### Spring Semester - Year III

PT 613 Critical Analysis	2
PT 626 Health Promotion and Prevention in PT	1
PT 675 Comprehensive Capstone	1
PT 684 PT Internship III	10

**Curriculum Total 121**

### 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](http://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://alisd.db.legislature.state.al.us/acas/CodeOfAlabama/1975/34-24-217.htm>

### DESCRIPTIONS OF ALL PHYSICAL THERAPY (PT) COURSES BEGIN ON PAGE 261.

## DEPARTMENT OF PHYSICIAN ASSISTANT STUDIES

Chair: Zarrantaj Aliabadi (251) 434-3641

Medical Director: Michael Linder

Associate Professor: Henderson

Assistant Professors: Vetrosky, Abercrombie, Smith

Instructor: Vrettos

**Department of Physician Assistant Studies web site**

<http://www.southalabama.edu/alliedhealth/pa/>

### PHYSICIAN ASSISTANT PROGRAM

#### MASTER OF HEALTH SCIENCE DEGREE

The Physician Assistant Program serves as an entry into the profession and is designed for the student who holds a baccalaureate degree. Although the student's undergraduate major is not specified, certain prerequisites are required. These prerequisites are delineated under the section "Prerequisite Requirements and Criteria for Admission."

The program is designed to prepare the student for Physician Assistant practice in a variety of clinical practice settings following graduation. The mission of the program is to educate highly qualified physician assistants who will provide quality health care services to the citizens of Alabama and the surrounding region.

Physician assistants are highly skilled practitioners who work under the general supervision of a physician. Physicians play a major role in the teaching program in order to assure that the patient-care provided by physician assistants is equivalent in quality to that of the physician. Physician assistants provide many medical services traditionally performed only by physicians. The services provided by physician assistants are both diagnostic and therapeutic. Diagnostic procedures can include taking medical histories, performing physical

examinations, ordering and analyzing diagnostic studies such as laboratory tests, electrocardiograms and imaging studies. Therapeutic procedures such as suturing, removal of minor lesions and casting are also part of the services provided by physician assistants. Once diagnostic procedures are completed, the physician assistant reports pertinent findings to the supervising physician and develops a diagnosis. A treatment plan is implemented and appropriate referrals are made, if necessary, to other health professionals. Physician assistants are also able to prescribe medication in all 50 states.

Patient education and counseling are important aspects of a physician assistant's daily activities. Physician assistants educate and advise patients concerning disease prevention, health promotion, and help direct patients toward appropriate psychological and social resources.

The complete program consists of seven consecutive semesters (27 continuous months) of study and is divided into two components: The Preclinical Component and the Clinical Component. The **Preclinical Component** consists of four semesters (15 consecutive months) of basic and clinical medical sciences. The **Clinical Component** is three semesters (12 continuous months) in length and consists of clinical rotations in each of the major areas of medicine and surgery. During the clinical component, the student increases medical knowledge and refines clinical skills which are needed for professional practice as a physician assistant.

In addition to the academic standards of the Graduate School, any grade of "D" or lower will result in academic dismissal from the Department of Physician Assistant Studies. Withdrawal from any course in the Physician Assistant Program automatically results in dismissal from the program.

### PREREQUISITE REQUIREMENTS AND CRITERIA FOR ADMISSION

Candidates who have a minimum GRE score of 1100 and GPA of 3.5 and meet all other prerequisite minimum requirements for admission are eligible for early admission to the program. Listed below are minimum criteria including course prerequisites necessary to be considered for admission to the Physician Assistant Program. The Department of Physician Assistant Studies and the Office of Academic Advising can address questions concerning these prerequisites. All prerequisite and/or bonus courses, even if earned through advanced placement or experiential learning, must appear as an official course on a transcript from a regionally accredited institution. No transfer credit is accepted from other PA Programs. The selection of students for entry into the program is competitive. Successful applicants will generally exceed the minimum criteria listed below for admission.

#### The following are minimum criteria for admission:

1. Completion of a Baccalaureate degree with a minimum cumulative GPA of 3.0 on a 4.0 scale from an accredited institution prior to the starting date of the program. Provisional admission may be offered to selected students who do not meet this criterion.

2. Course work with a minimum grade of "C" in science and mathematics including the following: one semester each in general biology, anatomy, microbiology, organic chemistry, medical terminology, and physiology; two semesters in general chemistry; one semester in mathematics (college level algebra minimum); one semester in psychology and one semester in statistics. Extra points will be given to applicants who have completed any of the following courses with a minimum grade of "C": immunology, genetics, biochemistry, physics, pathophysiology, and pharmacology.
3. Completion of the verbal, quantitative and analytical writing components of the Graduate Record Examination (GRE) within the last five (5) years. A minimum score of 900 on the combined Verbal and Quantitative portions is required. Official scores must be submitted directly to the University (Institution Code 1880) before the application deadline. Students should plan to take the GRE no later than early-October to ensure that official scores are received by the November 1st deadline.
4. At least one reference must be from a Medical Doctor (MD), Doctor of Osteopathy (DO), or Physician Assistant (PA).
5. Interview: Following the initial review of applications, a limited number of applicants will be invited for a personal interview. Verbal and written communication skills and previous healthcare experience will be assessed during the interview. The interview score is an important component for determining admission to the program.
6. Residents of Escambia and Santa Rosa counties in Florida, and George, Green, Harrison, Jackson, Perry and Stone counties in Mississippi live within the 50-mile Service Area and qualify for in-state tuition.

**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.

**LENGTH OF STUDY**

Twenty-seven consecutive months.

**PROGRAM ENTRANCE DATE**

Mid May of each year.

**PROGRAM APPLICATION DATE**

The application is a two-step process. The first step is to complete the online application via the Central Application Service for Physician Assistants (CASPA) at <http://www.caspaonline.org>. The deadline for applying through CASPA is November 1. Transcripts and references are considered part of the CASPA application and should be sent directly to them. **The second step is to submit the supplemental application directly to the USA PA Program.** The deadline for submission of all application materials is November 1. Timely and complete submission of all required materials is the applicant's responsibility. Applicants are strongly encouraged to complete all application materials at least one month prior to the

deadline. **The supplemental application, along with other detailed information is available by visiting our web site at <http://www.southalabama.edu/alliedhealth/pa>.** Prior to matriculation, international applicants must submit an application and meet the criteria for acceptance to the University as stipulated by the Office of International Services (<http://www.southalabama.edu/intnatsrv/>).

**ACCREDITATION**

The program has been granted accreditation by the Accreditation Review Commission on Education for the Physician Assistant, Inc. (ARC-PA). Graduates are eligible to sit for the Physician Assistant National Certifying Examination (PANCE). Certification is required by most State Boards of Medical Examiners to practice as a PA.

**REQUIREMENTS FOR DEGREE**

The Physician Assistant Program leading to the Master of Health Science degree requires 121 semester credit hours with a minimum of seven semesters of study. Three of the seven semesters (12 consecutive months) are spent in full-time preceptorships in clinical settings. Registration for these courses is restricted to students enrolled in the PA program only.

Program requirements and course sequence are listed below.

**PROGRAM REQUIREMENTS AND COURSE SEQUENCE**

**Preclinical Component**

<b>Summer</b>		<b>Fall</b>	
PA 510	8	PA 520	8
PA 511	4	PA 521	4
PA 512	4	PA 522	2
	<b>16</b>	PA 523	4
			<b>18</b>
<b>Spring</b>		<b>Summer</b>	
PA 530	8	PA 540	8
PA 531	4	PA 541	4
PA 532	6	PA 542	4
	<b>18</b>		<b>16</b>

**Clinical Component**

<b>Fall, Spring and Summer</b>			
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	2
PA 594	3		26
	<b>27</b>		

**At least 16 weeks of the clinical rotations must serve rural/urban underserved populations.**

**EXPENSES**

Lab Fee for Human Gross Anatomy: \$275.00 (one time charge).

In addition to expenses associated with textbooks, food, health insurance and lodging, students will be required to purchase their own laboratory coats, stethoscope, otoscope, ophthalmoscope, soft reflex hammer, and tuning fork. Also, students should anticipate extra expenses, particularly related to housing and transportation, during the clinical year.

The University reserves the right to change tuition and fees, as deemed necessary by the Board of Trustees, without prior notice.

**DESCRIPTIONS OF ALL PHYSICIAN ASSISTANT STUDIES (PA) COURSES BEGIN ON PAGE 249.**

**DEPARTMENT OF RADIOLOGIC SCIENCES**

Chair: Charles W. Newell (251) 434-3456  
 Medical Advisor: Steven K. Teplick  
 Associate Professor: Newell  
 Clinical Assistant Professor: Durick  
 Clinical Instructors: Brewer, Cleveland, Jalkh, Cooper, Pohlmann  
 Teaching Technologists: Davis, Platt  
**Department of Radiologic Sciences web site <http://www.southalabama.edu/alliedhealth/radiologicsciences/>**

**PROGRAMS OFFERED:**

**Certificate Program in Radiologic Technology, Bachelor of Science in Radiologic Sciences**

The Department of Radiologic Sciences prepares students for careers in diagnostic imaging. Although most graduates seek employment as diagnostic radiographers, many choose to specialize in advanced imaging modalities, such as mammography, magnetic resonance imaging, vascular radiography, computed tomography, ultrasound, and radiation therapy. To meet these diverse needs, the Department of Radiologic Sciences offers a Certificate Program in Radiologic Technology and a Bachelor of Science Degree in Radiologic Sciences. The programs are described as follows:

**CERTIFICATE PROGRAM**

The certificate program requires twenty-four months for completion. Students attend two academic years and two summer sessions. The program is fully accredited by the Joint Review Committee on Education in Radiologic Technology. Upon completion of the prescribed courses, students are eligible to write the American Registry of Radiologic Technologists Examination for licensure as Radiologic Technologists.

Students graduating from the certificate program and Registered Radiographers who are graduates of other college-level accredited programs may continue their education and complete a Bachelor of Science Degree in Radiologic Sciences. The baccalaureate program is designed to provide graduates of the certificate program with an opportunity to expand their career opportunities in radiology as administrators, educators, and advanced imaging specialists. The bachelor's degree requires an additional four semesters beyond the certificate program for completion. Following the completion of the bachelor's degree and appropriate clinical experience, students may seek advanced certification through the American Registry of Radiologic Technologists or American Registry of Diagnostic Medical Sonographers.

**REQUIREMENTS FOR COMPLETION OF THE 24-MONTH CERTIFICATE PROGRAM IN RADIOLOGIC TECHNOLOGY**

Public Speaking (CA 110)	3 hours
Anat and Phys I, II (BMD 114, BMD 115)	8 hours



**56 ALLIED HEALTH PROFESSIONS**

Composition I, II (EH 101, EH 102)	6 hours
Precal Algebra (MA 112)	3 hours
Intro Computer Applic (CIS 110 or CIS 150)	3 hours
AHP 101	<u>2 hours</u>
	<b>25 hours</b>

67 semester hours of Radiologic Sciences courses including the following: RAD 101, 104, 107, 108, 109, 131, 201, 204, 215, 218, 265, 305, 306, 311, 320, 324, 335, 337, 394.

**ADMISSION REQUIREMENTS FOR CERTIFICATE PROGRAM**

1. Completion of Department of Radiologic Technology certificate application. The application, reference forms, and question and answer packet are available on the web at [www.southalabama.edu/alliedhealth/radiologicsciences](http://www.southalabama.edu/alliedhealth/radiologicsciences).
2. Application deadline is **May 1st**.
3. Submit official ACT or SAT scores regardless of previous educational background. If individual scores for Math, English and Natural Science on the ACT are below 18, it is strongly advised that the test be retaken.
4. Submit three completed reference forms.
5. Submit official transcripts (all previous college transcripts, and high school transcript if one has completed less than 30 semester hours of college level work).
6. Minimum 2.0 GPA is required. For students who are attending/or have attended USA, the USA GPA will be used. GPAs from outside courses are not averaged into the USA GPA.
7. Prospective students will be required to spend four hours in the Department of Radiology at a designated hospital prior to the personal interview.
8. Personal interview with members of the Department of Radiologic Sciences Admissions Committee.
9. A short writing assignment will be given to each candidate on the day of their interview.
10. **Following notification of acceptance to the program**, applicants will receive information regarding the completion of a **personal background check** and a **drug screening test**.
11. Applicants will be screened on the basis of past educational performance and potential for the number of clinical openings available. **Therefore, acceptance into the University does not guarantee admission to the program.**
12. Proof of medical/health insurance coverage is required of all students upon acceptance to the program and prior to beginning classes.

**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.

**Special Lab Fees:**

Special lab fees are assessed for the following courses:

RAD 131	\$15.00
RAD 201	15.00
RAD 417	15.00
RAD 418	15.00
RAD 419	15.00
RAD 430	15.00

**THE BACHELOR OF SCIENCE IN RADIOLOGIC SCIENCES PROGRAM**

Enrollment in the Advanced Imaging course work is limited; thus, students should visit the web site at [www.southalabama.edu/alliedhealth/radiologicsciences](http://www.southalabama.edu/alliedhealth/radiologicsciences) for information on the B. S. program and requirements for application.

**ADMISSION CRITERIA**

1. Successful completion of the Radiologic Technology Certificate program (90 semester hours) or another college-based program.
2. Admission to the University of South Alabama.
3. All students must receive a passing score on the ARRT examination by the end of the third week of enrollment in the B.S. program.
4. Submit official ACT or SAT scores regardless of previous educational background.
5. Completed departmental application form and submission of transcripts no later than **May 1st** of the year for which admission is requested.
6. Submit three completed reference forms available on web site.
7. Minimum of 2.0 GPA.
8. Personal interview with members of the Department of Radiologic Sciences Admissions Committee.
9. A short writing assignment will be given to each candidate on the day of their interview.
10. **Following notification of acceptance to the program**, applicants will receive information regarding the completion of a **personal background check** and a **drug screening test**.
11. Applicants will be screened on the basis of past educational performance, review of Radiologic Technology course work and the number of clinical openings available. **Therefore, acceptance into the University does not guarantee admission to the program.**
12. Radiation Therapy: Applicants must complete PH 104 or PH 114, as well as 9 hours of general study course work in the Humanities, History, Social & Behavioral Sciences, or Literature electives as a prerequisite for admission.
13. Proof of medical/health insurance coverage is required of all students upon acceptance to the program and prior to beginning classes.

**REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN RADIOLOGIC SCIENCES**

Requirements for the degree of Bachelor of Science in Radiologic Sciences include the courses as specified below:

- I. Successful completion of the Radiologic Sciences Certificate Program or equivalent (90 hours)**
- II. Imaging Specialty Electives and Management Option (20/25 hours)**  
Students may choose one of the following:
  - (a) the ultrasound option - 8 courses (28 semester hours)  
RAD 417, 421, 423 - fall semester

- |  |  |
|--|--|
| RAD 418, 424 - spring semester   |  |
| RAD 419, 425, 427 - summer semester  |  |
| (b) two other imaging areas - 4 courses (20 semester hours)  |  |
| Vascular (RAD 401, 402)  |  |
| CT (RAD 405, 406)  |  |
| Mammography (RAD 413, 414)   |  |
| MRI (RAD 409, 410)   |  |
| (c) one imaging area listed in option (b) - 2 courses (10 semester hours)  |  |
| <b>and</b> 4 management courses (12 sem. hrs.)   |  |
| MGT 300, MGT 305, MGT 310, MGT 311, MGT 340, MGT 351, MGT 451, MGT 452, MGT 454, MGT 455, MGT 460, MGT 465   |  |
| (d) The radiation therapy option - 12 courses (42 semester hours)  |  |
| RAD 441, 446, 448, 450 - fall semester   |  |
| RAD 442, 452, 455 - spring semester  |  |
| RAD 443, 453, 456 - summer semester  |  |
| RAD 444, 458 - fall semester   |  |
| For students completing a certificate program at another college:  |  |
| Students must complete at least 15 hours of upper division (300/400 - level) courses at USA in the major. In addition, two "W" (writing component) courses as well as 32 hours of upper division courses must be taken at USA. |  |

**III. General Studies**

Literature Elective (EH 215, EH 216, EH 225, EH 226, EH 235, or EH 236)	3
*Humanities Elective ST 210	3
History Elective (HY 101, HY 102, HY 135, or HY 136)	3
*Social Science Electives (2 courses)	6
MUL 101, ARH 100, ARH 103, ARH 123, ARH 240, ARH 242, ARS 101, DRA 110	3
PSY 120	3
BLY 101, BLY 102 or BLY 121, BLY 122	8
PH 104 or PH 114	<u>32</u>
	<b>32</b>
*must complete a 2 course sequence in literature or history	
** Radiation Therapy only	

**CURRICULUM FOR CERTIFICATE PROGRAM**

<b>First Year</b>			
<b>Fall</b>		<b>Spring</b>	
EH 101	3	EH 102	3
BMD114	4	BMD115	4
RAD 101	4	MA 112	3
RAD 104	3	RAD 108	1
RAD 107	1	RAD 131	<u>4</u>
AHP 101	<u>2</u>		<b>15</b>
	<b>17</b>		
<b>Summer</b>			
CA 110	3		
CIS 150 or CIS 110	3		
RAD 109	4		
RAD 215	<u>4</u>		
	<b>14</b>		
<b>Second Year</b>			
<b>Fall</b>		<b>Spring</b>	
RAD 201	6	RAD 305	4
RAD 204	4	RAD 311	4
RAD 218	4	RAD 324	6
RAD 265	<u>2</u>	RAD 335	<u>2</u>
	<b>16</b>		<b>16</b>

<b>Summer</b>	
RAD 306	5
RAD 320	2
RAD 337	5
RAD 394	<u>2</u>
	<b>14</b>

**CURRICULUM (ADDITIONAL REQUIREMENTS) FOR BACHELOR OF SCIENCE IN RADIOLOGIC SCIENCES**  
**Fall**

BLY 101/BLY 101L or BLY 121/BLY 121L	4
ST 210	3
RAD Imaging Spec and	5
RAD Imaging Spec or	5
MGT Mgt Option or	3
RAD Ultrasound Track or	11
RAD Radiation Therapy Track	<u>11</u>
	<b>15-18</b>

**Spring**

BLY 102/BLY 102L or BLY 122/BLY 122L	4
MUL 101, ARH 100, ARH 103,	3
ARH 123, ARH 240, ARH 242,	
ARS 101, DRA 110	
RAD Imaging Spec and	5
RAD Imaging Spec or	5
MGT Mgt Option or	3
RAD Ultrasound Track or	8
RAD Radiation Therapy Track	<u>10</u>
	<b>15-17</b>

**Summer**

History Elective (HY 101, HY 102,	3
HY 135, or HY 136)	
Literature Elective (EH 215, EH 216,	3
EH 225, EH 226, EH 235, or EH 236)	
PSY 120	3
MGT Mgt Option or	3
RAD Ultrasound Track or	9
RAD Radiation Therapy Track	<u>11</u>
	<b>9-20</b>

**Fall**

*Humanities Elective	3
*Social Science Electives (2 courses)	6
MGT Option	3
RAD Radiation Therapy Track	<u>10</u>
	<b>9-19</b>
*Must complete a two course sequence in Literature or History.	

**DESCRIPTIONS OF ALL RADIOLOGIC SCIENCES (RAD) COURSES BEGIN ON PAGE 263.**

**DEPARTMENT OF SPEECH PATHOLOGY AND AUDIOLOGY**

Chair: Robert E. Moore (251) 380-2600  
 Professor Emeritus: B. Evans, Sellers  
 Professors: Dagenais, Talbott  
 Associate Professors: Beverly, Moore  
 Assistant Professors: Adams, Estis, D. Evans, K. Evans, Gordon-Hickey, Ramkissoon  
 Clinical Specialists: Beverly, Byrd, Hardaway, Holston, Hudson, Love

**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 area 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 bachelor's and master's programs 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. 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**

<b>Area I - Written Composition</b>	<b>(6)</b>
EH 101, EH 102	3, 3
<b>Area II - Humanities &amp; Fine Arts</b>	<b>(12)</b>
CA 110	3
ARH 100, ARH 103, ARH 123,	3
ARH 240, ARH 242; ARS 101;	
MUL 101; DRA 110	
EH 215 or EH 216 or EH 225 or	3
EH 226 or EH 235 or EH 236	
*Humanities Elective	3
(suggest LG if HY sequence chosen)	
<b>Area III - Natural Sciences &amp; Math</b>	<b>(11)</b>
MA 112	3
BLY 121	4
Lab Science Elective	4
<b>Area IV - History, Social &amp; Behavioral Sciences</b>	<b>(12)</b>
History Elective (HY 101, HY 102,	3
HY 135, or HY 136)	
*Social Sciences Electives (3 courses)	9
(recommend AN 100 & SY 109)	
<b>Area V - Preprofessional, Major &amp; Electives</b>	<b>(24)</b>
CIS 150 or CIS 110 or CIS 250	3
PSY 120	3
BMD 114, BMD 115	4, 4
ST 210 or BUS 245	3
AHP 101	2

PH 104	4
General Elective	3
*must complete a two course sequence in Literature or History	

**MAJOR REQUIREMENTS**

Human Development (PSY 250, PSY 340, 3, 3	
PSY 350; EPY 251, EPY 315, EPY 451)	
Aging (PSY 250, PSY 356; BLY 207;	3, 3
HSC 450, HSC 457; SY 372, SY 472;	
LS 479, GRN 290; AIS 201, AIS 401)	
Multicultural (EDF 315; EPY 315;	3, 3
AN 200, AN 458; SY 315, SY 428,	
SY 445, SY 455; PSY 270, PSY 485;	
AIS 320; IS 100, IS 200)	
Psychology (PSY of your choice)	3, 3
SHS 290 or approved elective	3

**Prior to enrolling in SHS courses at the 300- and 400-level, students must complete BMD 114, BMD 115, CIS 150 or CIS 110 or CIS 250, MA 112, SHS 291, and at least one course each from the Aging, Multicultural, and Human Development areas. Students must have achieved an overall GPA of 3.0 in order to enroll in SHS 300- and 400-level courses.**

**REQUIRED SPEECH AND HEARING SCIENCES COURSES**

**(36 credits as given below)**

SHS 291	3	SHS 314	3
SHS 331	4	SHS 341	4
SHS 414	3	SHS 431	3
SHS 441	3	SHS 452	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 268.**

**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 15**. 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 in the field must complete the Three-Year Master's Degree Program. (See below.)
2. A minimum 3.0 ("A"=4.0) overall undergraduate GPA 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. A minimum combined score of 800 for the Verbal and Quantitative portions is required.
4. Three references from faculty at the undergraduate institution are required. Two of these references must 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 15** 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.

#### THREE-YEAR MASTER'S DEGREE PROGRAM FOR STUDENTS HOLDING A BACHELOR'S DEGREE IN ANOTHER DISCIPLINE

The Three-Year Master's Degree Program 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 program of study (Master's in Speech-Language Pathology).

Admission is limited and on a competitive basis. Those who meet admission requirements are admitted to the graduate program and, if they maintain appropriate grades, continue studies at the graduate level after completing the undergraduate curriculum. Students may need to successfully complete additional course work outside of the department. This course work may be completed prior to admission to the program or concurrently with the undergraduate SHS course work. All out-of-department course work 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 2 psychology courses.

Given the structured curriculum in this special track, students are admitted Fall Semester only. Students interested in this program should contact the department for advising prior to applying. Application procedures are outlined under the program of study.

#### 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.
6. A passing score on the PRAXIS exam.

#### TYPICAL COURSE SEQUENCE

##### Master of Science in Speech-Language Pathology

##### Year 1

Fall	Spring	Summer			
SLP 532	3	SLP 510	3	SLP 568	2
SLP 541	3	SLP 533	3	SLP 534	2
SLP 565	3	SLP 566	3	SLP 596	3
SLP 596	3	SLP 596	3		

##### Year 2

Fall	Spring		
SLP 521	3	SLP 567	2
SLP 551	3	SLP 588	2
SLP 561	3	SLP 598	8
SLP 596	3		

A special course fee is assessed for the following course:

SLP 596	\$50.00
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#### 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 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. Any combination of six (6) semester hours of "C" in MSSLP 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, readmission will require approval of the department chairperson and the Dean of the 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 SPEECH-LANGUAGE PATHOLOGY (SLP) COURSES BEGIN ON PAGE 269.

#### DOCTOR OF AUDIOLOGY

The Doctor of Audiology (Au.D.) is a professional doctoral degree and is administered through the 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 accepted after November 1 with enrollment beginning in the Fall Semester only. The deadline for receipt of all application materials is **February 15**. 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) 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 Au.D. program. 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 to be considered for regular admission, a minimum of 2.5 overall undergraduate GPA for provisional admission.
3. Completed of the Graduate Record Examination (GRE) within the last five years. A minimum combined score of 800 on the Verbal and Quantitative portions is required.
4. Three references from faculty at the undergraduate institution are required. Two of these references must 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 15** 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. 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 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 formative assessments administered during the third semester of years one and two of the program.
4. A passing grade on the summative assessment administered during the second semester of year three of the program.
5. Demonstration of academic and clinical competencies as reflected in the student's Knowledge and Skills Assessment (KASA) document.
6. 1820 clinical clock hours (52 weeks X 35 hours per week) in the required areas as stipulated by ASHA.
7. A passing score on the PRAXIS exam.

The Au.D. degree requires a **minimum** of 11 semesters of full-time academic study. The final three semesters are spent off campus completing externships. Students must successfully complete formative and summative assessments. All students must pass the PRAXIS examination before leaving campus for externships.

**TYPICAL COURSE SEQUENCE**

**Doctor of Audiology**

**Year 1**

<b>Fall</b>	<b>Spring</b>	<b>Summer</b>
AUD 612 3	AUD 622 3	AUD 632 2
AUD 614 2	AUD 613 3	AUD 642 3
AUD 640 3	AUD 616 3	AUD 643 3
AUD 641 3	AUD 670 2	AUD 630 3
AUD 670 1	AUD 670 2	

**Year 2**

<b>Fall</b>	<b>Spring</b>	<b>Summer</b>
AUD 615 3	AUD 646 3	AUD 648 3
AUD 631 3	AUD 647 3	AUD 651 3
AUD 645 3	AUD 650 3	AUD 652 2
AUD 671 3	AUD 671 3	AUD 671 3

**Year 3**

<b>Fall</b>	<b>Spring</b>	<b>Summer</b>
AUD 621 1	AUD 654 2	AUD 675 1
AUD 623 3	AUD 655 3	AUD 676 6
AUD 633 3	AUD 661 3	
AUD 653 3	AUD 671 3	
AUD 671 3		

**Year 4**

<b>Fall</b>	<b>Spring</b>
AUD 675 1	AUD 675 1
AUD 676 6	AUD 676 6

A special course fee is assessed for the following courses:

AUD 631	\$25.00
AUD 670	\$50.00
AUD 671	\$50.00
AUD 672	\$50.00

**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 have a 3.0 GPA upon completing 15 semester hours of graduate credit toward degree requirements will be academically 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. Any combination of six (6) semester hours of "C" in MSSLP 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, readmission will require approval of the department chair and the Dean of the 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 157.**

**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.

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

## 60 ARTS AND SCIENCES

then a graduate degree in speech-language pathology or audiology is needed.

- 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.
- Combined score of at least 1000 on the Verbal and Quantitative portions of the Graduate Record Examination (GRE).
- Three letters of reference from faculty at the undergraduate institution are required. Two of these references must be provided by the Ph.D. faculty.
- A Letter of Intent stating the applicant's reasons for pursuing the degree.

### Track Two:

- 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.)
- 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).
- Combined score of at least 1000 on the Verbal and Quantitative portions of the Graduate Record Examination (GRE).
- Three letters of reference from current faculty, two of these references being provided by the Ph.D. faculty.
- 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 four (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. The deadline for receipt of all application materials is **February 15**.

### 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 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 (2) 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 184.

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# COLLEGE OF ARTS AND SCIENCES

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Dean: G. David Johnson (251) 460-6280  
Associate Deans: S. L. Varghese, Lois A. Wims  
Assistant Dean: Victoria L. Rivizzigno  
Assistant to the Dean: Donald DeVore, Crystal Thomas  
Advisors: Muriel Edwards, Nancy Howell, Lynne Winterton

**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](#)  
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[International Studies](#)  
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[Mathematics and Statistics](#)  
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[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 Dean's Office or Registrar's Office 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 32 hours of course work must be at the upper division level in order to fulfill the University's residency requirement. At least 15 of the 32 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.

**All first-time freshmen must successfully complete CAS 100: New Student Seminar 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 128 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 50 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 128 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

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.

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### 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

LG 190 or LG 290

LGS 101 and LGS 102

LGS 106 and LGS 107

LGS 121 and LGS 122

LGS 141 and LGS 142

LGS 190 or LGS 290

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, ARH 240, ARH 242, 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, ARH 100, ARH 103, ARH 123, ARH 240, ARH 242, ARS 101, ARS 121, ARS 123, ARS 124, ARS 241, ARS 281, CLA 110, DRA 100, DRA 101, DRA 102, DRA 110, DRA 115, DRA 120, DRA 121, DRA 130, DRA 131, DRA 132, DRA 150, DRA 220, DRA 221, DRA 250, EH 215, EH 216, EH 225, EH 226, EH 235, EH 236, LG 205, LG 211, LG 212, LG 213, 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, LGS 290, MUA 101-MUA 300, MUB 101-MUB 300, MUE 102, MUE 103, MUE 202, MUE 203, MUL 101, MUO 111-MUO 125, 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

#### 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 141, CH 132 or CH 142, 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

#### C. Computer Technology Requirement

All undergraduate students must demonstrate basic computer skills prior to graduation. This requirement may be satisfied by:

1. Passing the Computer Proficiency Examination\* (CPE),  
or
2. Passing CIS 150: Introduction to Computer Applications, or another CIS course specified by the major,  
or
3. For students who are pursuing a major leading to teacher certification: Pass EDM 310: Microcomputing Systems in Education. The course is required for all teacher certification programs.

\*Freshman and transfer students will take the CPE during New Student Orientation. Students who fail the CPE may repeat the exam one time. Those who fail the CPE two times must comply with either #2 or #3 above. Students are advised to complete the computer competence requirement in their freshman years since computing skills are used in most courses.

#### Mathematics Placement Exam

All incoming students must take the on-line mathematics placement exam. The only exceptions to this policy are: 1) students who are enrolled in one or more Developmental Studies mathematics courses. Such students will only be allowed to register for mathematics courses, numbered 100 or higher, after successfully completing developmental studies course work; 2) incoming students who transfer credit for MA 112 or higher and who plan to take subsequent mathematics courses are exempt from taking the placement exam. Nevertheless, they are encouraged to take the placement exam to help them determine if they are fully prepared for subsequent mathematics courses. Incoming students who transfer credit for MA 110 or higher and WHO DO NOT PLAN to take subsequent mathematics courses are exempt from taking the placement exam; and 3)

please note that if you have completed a college level math course, it MAY NOT fulfill a mathematics course prerequisite, thus you may have to take the Mathematics Placement Exam. For a detailed description of mathematics courses prerequisites, please see the [Mathematics \(MA\) course listing section](#). **All other students must take the mathematics placement exam.**

Once the mathematics placement exam is taken, a score will be determined, and the students will be allowed to register for the appropriate mathematics course. If the exam is not taken, the students will be blocked from registering for all mathematics courses.

Instructions for taking the math placement exam, and further information about the placement procedure, are included in registration and orientation materials for incoming students. The math placement exam is given on-line. This exam is located at: <http://mps.southalabama.edu/mps/>.

#### Chemistry Placement Exam

All students planning to take General Chemistry I (CH 131 and CH 131L) who have not passed Fundamentals of Chemistry (CH 100), as evidenced from student's transcript, are required to take the General Chemistry Placement Test. A passing score of 35 or better on the General Chemistry Placement Test is required prior to registration for CH 131 and CH 131L. For detailed description of chemistry courses prerequisites, please see the [Chemistry \(CH\) course listing section](#). The General Chemistry Placement Test is administered by the Department of Chemistry; the test locations and dates are published each semester in the University of South Alabama Schedule of Classes. To take the General Chemistry Placement Test, the student must have a USA student I.D., and bring a calculator and a number 2 pencil. No fee is charged for the test. All questions about the General Chemistry Placement Test should be directed to the Department of Chemistry office: (251) 460-6181.

#### 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 & Behavioral Sciences Component (9 HRS)

AN 100, AN 101, ECO 215, ECO 216, GEO 114, GEO 115, HY 101, HY 102, HY 135, HY 136, IS 100, PSC 130, PSY 120, 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 David LaValley (251) 460-7211

Professor: LaValley

Assistant Professors: Parent, Restad, Walton

E-mail: [afrotc@usouthal.edu](mailto:afrotc@usouthal.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 the results of the Air Force Officer Qualifying Test. Application is normally made while a member of the GMC or (for students not enrolled in the GMC) early in the academic year prior to the year of desired entry. 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. Two types of courses are available, depending upon which program the student anticipates entering (two- or four-year). The two-year program requires a five-week field training course prior to entering the POC. The four-year program requires a four-week course to be completed, normally, between the sophomore and junior years.

When attending either field training course, 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. Students attending a five-week field training course receive academic credit for the full two years of courses in the GMC.

### 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 157.

## DEPARTMENT OF BIOLOGY

Chair: John A. Freeman (251) 460-6331

Graduate Coordinator: Brian Axsmith.

Professor: Freeman

Associate Professors: Axsmith, Boettcher, K. Major, McCreddie, Sherman

Assistant Professors: Mata, Morris, Nichadhain, O'Brien

Instructors: Cinkovich, Delaney, C. Major

Emeriti: Boyles, Hamil, Lelong, Miller

**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: New Student Seminar 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 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: 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.)

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)

### AREAS OF CONCENTRATION

Students who wish to concentrate in a specific area may want to follow one of these optional tracks:

#### 1. Marine Biology

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 370, BLY 430, BLY 451, 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 132, CH 201 and any two courses from the following:

CH 202, CH 265, CH 414, CH 440, CH 441  
GY 111, GY 112, GY 413, GY 461  
MAS 575

### 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 Biological 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 *University 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-four hours of biology are required, including:

1. BLY 121, BLY 121L, BLY 122, BLY 122L (General Biology).
2. Sixteen hours of biology electives, at least eight of which must be in laboratory courses 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 concentrations in Basic Medical Sciences (through cooperative agreement with the College of Medicine - see next page) and 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 one of 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. Two years of 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 1100 on the Verbal and Quantitative portions, with at least a score of 500 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 Biological Sciences 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 BASIC MEDICAL SCIENCES (BMS)

The purpose of this track is to provide qualified beginning graduate students with an opportunity to become research scientists in biology with an emphasis in basic medical science. Course work and research opportunities are offered in the Departments of Biochemistry, Microbiology/Immunology, Pharmacology, Physiology, and Structural and Cellular Biology in the College of Medicine, as well as in the Department of Biological Sciences. Students fulfill the normal criteria for the MS degree in Biology. Students must complete thesis research in basic medical sciences. This track prepares the student for additional graduate study in the basic medical sciences leading to the Ph.D. degree. A non-thesis option is not available.

Students are expected to choose a major professor and to define a thesis topic by the end of the first year in residence. The student and the major professor select an advisory committee consisting of the major professor, who may be from either Basic Medical Sciences (with a co-major professor from Biological Sciences) or the Department of Biological Sciences, and at least one other member from Biological Sciences.

#### 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

Students will find detailed explanation of special departmental requirements in a document, "Special Policies and Procedures Regarding the

Master's Degree Program in the Department of Biological Sciences." This document is available from the departmental office or the Biology web site, and describes initial orientation for new students, administration of the comprehensive examination, departmental seminars, and the like.

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

- Complete, with a minimum grade of "B", thirty hours, of which at least twenty-four hours must be course work at the 400 or 500 level. All Biology graduate students, including those with a BMS or Marine Biology concentration, must complete at least six hours of formal course work in BLY (excluding directed studies and thesis) listed courses. No course at the 300 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 beyond the twenty-four hour minimum.
- Complete a thesis representing original research. A maximum of six 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.
- Enroll in Biology Seminar during at least two semesters of residency.
- Complete successfully a comprehensive written examination in the student's general area(s) of expertise as indicated by their research project and course work. The student's graduate committee determines what defines the 'area(s) of expertise'. This examination may be taken only after the student has completed 18 hours of graduate work excluding thesis credits. The student, with the endorsement of the major professor, should submit to the department a letter of intent to take the examination one week prior to its administration. The comprehensive examination is a requirement for graduation, not for admission to regular graduate standing. Candidates failing the comprehensive examination may be examined over the parts of the test which they failed after a minimum three-month delay. No portion of the comprehensive examination may be taken more than twice.
- Make an oral defense of the thesis.

#### DESCRIPTIONS OF ALL BIOLOGY (BLY) COURSES BEGIN ON PAGE 159.

### DEPARTMENT OF CHEMISTRY

Chair: Andrzej Wierzbicki (251) 460-6181

Professors: J. Davis, Forbes, Jackson, Wierzbicki

Associate Professors: Cioffi, Hoffman

Assistant Professors: Barletta, Coym, Miller,

Perine, Stenson, Sykora

Senior Instructor: P. Davis

Instructors: Merritt, 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:

- 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
- 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: New Student Seminar 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 CHEMISTRY (ACS CERTIFIED)

A minimum of 43 semester hours in Chemistry beyond the CH 132 and CH 132L or CH 141 and CH 141L course level as listed below:

CH 131, 131L	3, 1 hrs
CH 132, 132L	3, 1 hrs
Or CH 141, 141L	4, 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, 1 hrs
CH 465, 465L	3, 2 hrs
CH 440	3 hrs
CH 492, 493	1, 1 hrs
CH 494	4 hrs

**Electives:** In addition to these courses above, a student must choose one other 400 level chemistry course 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 planning to attend graduate school interested in either physical chemistry or analytical chemistry are encouraged to take the third semester of physics (PH 303).

#### REQUIREMENTS FOR A MAJOR IN CHEMISTRY (BIOCHEMISTRY TRACK)

A minimum of 41 semester hours in Chemistry beyond the CH 132 and CH 132L or CH 141 and CH 141L course level, as listed below:

CH 131, 131L	3, 1 hrs
CH 132, 132L	3, 1 hrs
Or CH 141, 141L	4, 1 hrs
CH 150	2 hrs
CH 201, 201L, 202, 202L	3, 1, 3, 1 hrs
CH 265, 265L	3, 1 hrs
CH 300, 300L	3, 1 hrs
CH 403	3 hrs
CH 440, 441	3, 3 hrs
CH 443	3 hrs
CH 465, 465L	3, 2 hrs
CH 394/494	4 hrs
CH 492, 493	1, 1 hrs

**Mathematics:** Two Semesters of Calculus (MA 125, MA 126)

**Physics:** Two Semesters of calculus-based Physics (PH 201, PH 202)

#### 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.

#### REQUIREMENTS FOR A MINOR IN CHEMISTRY

A minimum of 12 semester hours in Chemistry beyond the CH 132 and CH 132L or CH 141 and CH 141L 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 172.

### DEPARTMENT OF COMMUNICATION

Chair: Gerald L. Wilson (251) 380-2800

Professors: Aucoin, Wilson

Associate Professors: Murphree, Rockwell, Ward

Assistant Professors: Glover, Kimball,

Lunceford, Mark, Moody, Toelken

Instructors: Bush, Dardeau, Dupree Taylor,

Huling, Rigsby, 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, organizational communication, and the mass media of radio, TV and film.

Given these goals, the Department attempts to meet individual performance and career needs with a flexible curriculum. Students select one of the seven tracks 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 seven tracks, or concentrated areas of study, offered in Communication are: Advertising, Communication Technology, Interpersonal Communication and Rhetoric, Journalism (Print Journalism and Broadcast Journalism), Organizational Communication, Public Relations, and Radio-Television-Film. In brief, the Department's commitment to a broad-based study of communication activities permits a more intelligent choice of career fields. In addition, it provides a more meaningful classroom experience during the junior and senior years. Students pursuing a degree in Communication also must have a minor in another discipline.

**All first-time freshmen must successfully complete CAS 100: New Student Seminar 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 Public Speaking requirement (CA 110) and 39 semester hours in one of the department's seven tracks listed below.

At least five communication classes must be numbered 300 or higher and must be taken at USA. Only three hours of credit from CA 394 or CA 494 can be used to satisfy this requirement.

#### SPECIAL REQUIREMENTS FOR MASS COMMUNICATION CONCENTRATIONS: ADVERTISING, COMMUNICATION TECHNOLOGY, JOURNALISM, PUBLIC RELATIONS, AND RADIO/TV/FILM

At least 80 hours in courses outside the Department of Communication are required, with at least 65 semester hours being completed in 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.

#### REQUIREMENTS FOR A MINOR IN COMMUNICATION

Minors in Communication must complete a total of 24 hours to include CA 110 (Public Speaking), CA 200 (Communication Theory), CA 210 (Argumentation), CA 220 (Writing for Communication Media), CA 300 (Foundation

of Communication Research), plus nine additional hours in Communication including at least three hours of upper level credit. At least nine hours must be taken at USA.

#### TRACKS IN COMMUNICATION

##### ADVERTISING TRACK:

This track is for students interested in studying advertising.

**Required:** CA 101, CA 200, CA 221, CA 300, CA 310, CA 321, CA 322, CA 381, CA 445, CA 476, CA 478

**Choose Two:** CA 440, CA 360, CA 366, CA 455, CA 496

##### COMMUNICATION TECHNOLOGY TRACK

This track is for students interested in studying communication technology, including Internet-based technology.

**Required:** CA 200, CA 220, CA 260, CA 300, CA 360, CA 366, CA 445, CA 457

**Choose Two:** CA 211, CA 230, CA 241, CA 286

**Choose Three:** CA 340, CA 352, CA 382, CA 435, CA 453, CA 455, CA 496

##### INTERPERSONAL COMMUNICATION AND RHETORIC TRACK

This track is for students interested in studying interpersonal communication and rhetoric.

**Required:** CA 100, CA 200, CA 210, CA 211, CA 310, CA 315, CA 410, CA 411, CA 422, CA 424

**Choose Three:** CA 230, CA 360, CA 366, CA 400, CA 430, CA 453

##### JOURNALISM TRACK

This track is for students interested in studying print or broadcast journalism.

**Required:** CA 101, CA 200, CA 220, CA 445, CA 455

##### Print Journalism:

**Required:** CA 281, CA 370, CA 472

**Choose One:** CA 385, CA 387

**Choose Two:** CA 300, CA 381, CA 382, CA 388, CA 453, CA 481, CA 496

**Choose Two from Group One or Group Two:**  
Group One: CA 241, CA 244, CA 250, CA 340, CA 350  
Group Two: CA 260, CA 360, CA 366, CA 457

##### Broadcast Journalism:

**Required:** CA 250, CA 350, CA 450, CA 451, CA 452

**Choose One:** CA 244, CA 300, CA 382, CA 388, CA 453, CA 496

**Choose Two from Group One or Group Two:**  
Group One: CA 281, CA 370, CA 387  
Group Two: CA 260, CA 360, CA 366, CA 457

##### ORGANIZATIONAL COMMUNICATION TRACK

This track is for students interested in studying organizational communication.

**Required:** CA 100, CA 200, CA 230, CA 275, CA 300, CA 330, CA 430, CA 435, CA 436

**Choose One:** CA 210, CA 211, CA 221

**Choose Three:** CA 260, CA 360, CA 381, CA 400, CA 411, CA 457, CA 496

##### PUBLIC RELATIONS TRACK

This track is for students interested in studying public relations.

**Required:** CA 101, CA 200, CA 220, CA 286, CA 300, CA 386, CA 445, CA 484, CA 486

**Choose Two:** CA 221, CA 230, CA 381

**Choose Two:** CA 210, CA 221 (if not selected above), CA 230 (if not selected above), CA 241, CA 244, CA 260, CA 320, CA 321, CA 350, CA 360, CA 370, CA 381 (if not selected above), CA 435, CA 496

##### RADIO/TV/FILM TRACK

This track is for students interested in studying radio, television, or film.

**Required:** CA 101, CA 200, CA 220, CA 241, CA 340, CA 356, CA 445

**Choose One:** CA 343, CA 344

**Choose Five:** CA 244, CA 260, CA 300, CA 343 (if not selected above), CA 344 (if not selected above), CA 350, CA 352, CA 360, CA 382, CA 388, CA 440, CA 441, CA 453, CA 455, CA 457, 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 person 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 33 credit hours, including a twelve-hour core, elected courses from the communication and other university departments, 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 - 1000 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:

## 68 ARTS AND SCIENCES

- A minimum grade-point average of 3.0.
- A major in communication or 21 semester hours in communication. 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 director.

### International Students

- International students must submit documentation of TOEFL test scores of at least 525.
- 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 33-hour degree program.

### PROVISIONAL ADMISSION

Students who do not meet the requirement for regular admission may apply for provisional admission if they meet the following standards.

### GRE/GMAT Scores

- GRE - 800 or better 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.
- An undergraduate minor in communication or 21 semester hours in communication.

Provisional students will be eligible for regular standing after accruing at least nine 500-level semester hours (usually three 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 15 credit hours. Provisional students who do not have a 3.0 GPA after completing 15 hours of course work will be subject to dismissal from the program.

### NON-DEGREE ADMISSION

Students may register for and complete up to five courses without formal entrance into the program.

### DEGREE REQUIREMENTS AND COURSES

Students must complete a minimum of 33 semester hours of credit in approved 400 and 500-level courses. This includes three hours for thesis or project work. A minimum of 24 semester hours must be completed at the University of South Alabama. At least 24 semester hours must be taken in communication. At least 24 hours must be at the 500 level.

### Core Courses

For students with an undergraduate degree in communication, the normal requirements consist of the following four courses.

- CA 500, Introduction to Graduate Studies in Communication (generally offered in the fall semester)
- CA 501, Communication Research Methods (generally offered in the spring semester)
- CA 502, Communication Theory (generally offered in the fall semester)
- CA 503, Communication Research Methods II (generally offered in the spring semester)

Students beginning in the fall must take CA 500 before or concurrently with the first 500-level class. Students beginning in the spring semester must take CA 500 the following fall.

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 nine of the 33 required graduate hours outside of the communication department.
- With advisor approval, a maximum of nine hours of advanced undergraduate-level course work may be applied toward the graduate degree if the following requirements are met:
  - A member of the graduate faculty serves as the course instructor.
  - Graduate students in 400-level courses perform additional work to satisfy graduate standing.
  - The course (or its equivalent) was not taken at and counted toward the undergraduate degree.
  - The graduate director approves the course as part of the student's graduate program.

### 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.

- Students must submit topic proposals to a graduate faculty member. Once the topic is approved, both the faculty member and the students must sign a contract describing student expectations and outcomes and grading criteria.
- Students can register for between one and three credit hours in CA 594 courses with course requirements determined accordingly.
- Students make take a maximum of 6 hours in directed study course work.

### Grade Requirements

- A minimum of a 3.0 GPA on all work attempted is required for graduation.
- Courses in which the students received 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.

### 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. The exam 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.

### DESCRIPTIONS OF ALL COMMUNICATION (CA) COURSES BEGIN ON PAGE 164.

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## DEPARTMENT OF DRAMATIC ARTS

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Chair: Leon Van Dyke (251) 460-6305

Professors: Miller, Van Dyke

Associate Professor: Britton

Instructor: 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: New Student Seminar 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 THE BACHELOR OF ARTS DEGREE IN DRAMA

A minimum of forty-eight 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 seven

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 twenty-four semester hours in Dramatic Arts, including DRA 100, DRA 101, DRA 110, DRA 120, DRA 210, DRA 350, DRA 351; three additional hours selected from DRA 130, 131, 132; and six 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

##### III. Natural Sciences and Mathematics (11 HRS)

1. Select 3 hours: MA 110, MA 112, MA 113, MA 115, MA 120, MA 125, or MA 126
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 & Behav. Sciences (12 HRS)

Anthropology, Geography, History, International Studies, Political Science, Psychology, Sociology

##### V. BFA in Theatre Arts

###### A. Dramatic Arts Core Requirements (31 HRS)

DRA 100	1 hrs	DRA 101	1 hrs
*DRA 103	4 hrs	**DRA 104	3 hrs
DRA 120	3 hrs	DRA 150	3 hrs
***DRA 330	3 hrs	***DRA 130	3 hrs
DRA 332	3 hrs	DRA 210	1 hrs
DRA 350	3 hrs	DRA 340	3 hrs

\*DRA 103 is required every semester.

\*\*Option for Theatre Design and Technology Concentration: Any 3 hrs. in PE activity courses.

\*\*\*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 (62 HRS)

DRA 100	1 hrs	DRA 300	2 hrs
DRA 101/301 or DRA 102/302	1 hrs		
DRA 121	3 hrs	DRA 132	3 hrs
DRA 220	3 hrs	DRA 221	3 hrs
DRA 321	3 hrs	DRA 320	3 hrs
DRA 351	3 hrs	DRA 400	6 hrs
Art and/or Music electives	6 hrs		
Additional courses in	6 hrs		

Dramatic Literature  
Additional elective hours in DRA 16 hrs  
\*An additional 3 hrs in Dance may be substituted for DRA 220

##### Group 2: Theatre Design and Technology Concentration (62 HRS)

DRA 101	1 hrs	DRA 301	2 hrs
DRA 102/302	1 hrs	DRA 131	3 hrs
DRA 132	3 hrs	DRA 400	6 hrs
DRA 351	3 hrs	DRA 432	3 hrs
DRA 431	3 hrs	ARH 100	3 hrs
DRA 490	3 hrs	ARH 121	3 hrs
DRA 494	3 hrs		

Additional courses in 6 hrs  
Dramatic Literature  
Additional elective courses in DRA 16 hrs

##### Group 3: Music Theatre Concentration (62 HRS)

DRA 116/416	3 hrs	DRA 121	3 hrs
*DRA 220	3 hrs	DRA 320	3 hrs
DRA 321	3 hrs	**MUA 100	0 hrs
MUE 102	1 hrs	MUE 103	1 hrs
MUO 111/411	8 hrs	MUT 112	3 hrs
MUT 113	3 hrs	MUA 124	4 hrs
MUL 235	2 hrs	MUL 236	2 hrs
MUL 315	3 hrs	MUA 322	8 hrs
Additional elective courses in DRA	12 hrs		

\*\* 4 Semesters

#### DESCRIPTIONS OF ALL DRAMATIC ARTS (DRA) COURSES BEGIN ON PAGE 184.

#### DEPARTMENT OF EARTH SCIENCES

Chair: Miriam L. Fearn (251) 460-6381

Professors: Dilsaver, Ryder

Associate Professors: Allison, Blackwell, Clark, Fearn, Haywick, Kimball, Rivizzigno, Williams

Assistant Professors: J. Connors, Sawyer, Terwey, Thakur

Instructors: M.A. Connors, Jordan, Stutsman, G. Wade, R. Wade

Emeriti: Ispording, Lamb, Sebastian, Wilson

**Department of Earth Sciences web site**  
<http://www.southalabama.edu/geography>

The Department of Earth Sciences includes the disciplines of Geography, Geology, and Meteorology, and it offers a B.S. degree in each of these three majors.

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.

A student may receive a major or minor in either Geography, Geology, or Meteorology.

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. All honors courses are listed under the prefix ES.

**All first-time freshmen must successfully complete CAS 100: New Student Seminar 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 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	4 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		

## 70 ARTS AND SCIENCES

### 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:

GEO 420	4 hrs	GEO 442	4 hrs
GEO 460	4 hrs	GEO 461	4 hrs
GEO 462	4 hrs		

- 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 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
		<b>Total</b>	<b>44-46</b>

#### Additional requirements from other disciplines

MA 125, MA 126, CH 131, CH 132, and a minimum of eight (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 on pursuing graduate study are encouraged to complete a full year of calculus and physics at the University of South Alabama.

A program in composite sciences has been approved as an acceptable minor for Geology majors, by adding BLY 101/102 or BLY 121/122 and associated labs. A Geology major may also seek a traditional minor. A Certificate in Geographic Information Systems (GIS) can be obtained simultaneously with a BS in Geology

if the student elects to minor in Geography. Contact the Department of Earth Sciences for information concerning the GIS certification program, the composite sciences minor, Geology elective courses, and Departmental 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.

#### Recommended Geology Class Sequence for Freshmen Students

Year	Fall Semester	Spring Semester	Summer Semester
1	CAS 100	2 GY 112 & 112L	4
	GY 111 & 111L	4 MA 125	4
	CH 131	4 CH 132	4
	SS 1	4 EH 102	3
	EH 101	3 <b>Total</b>	15
	<b>Total</b>	16	
2	GY 301	3 GY 303	4
	GY 302	4 GY 304	3
	MA 126 or	4 PH 114/	4/5
	GY 420	201	
	HUM 1	3 SS 2	3/4
	<b>Total</b>	14	<b>Total 14/16</b>
3	GY 305, 4/5	GY 402	3 GY 480
	PH 115		<b>Total 6</b>
	or PH 201	GY 403	4
	GY 401	3 HUM 3	3
	HUM 2	3 FL 2	3
	FL 1	3 CA 110	3
	Minor 1	3/4 <b>Total</b>	16
	<b>Total</b>	16/18	
4	GY Elect 13/4	GY Elect 2 3/4	
	Minor 2 3/4	SS 3 (3)	3
	Minor 3 3/4	SS 4 (3)	3
	Minor 4 3/4	Minor 5 3/4	
	Art 3	Minor 6 3/4	
	<b>Total</b>	15/19	<b>Total 15/18</b>

**Major Hours 44-46**  
**Minor Hours 8-24**

HUM = Humanities  
SS = Social Sciences

FL= Foreign Language

Art = Fine and Performing Arts

Total hours 128 to 138 (Assumes student will pass placement tests for CH 131, MA 125 and CIS 150.

### REQUIREMENTS FOR A MAJOR IN METEOROLOGY

A student with a major in Meteorology must take a group of required courses totaling at least 49 semester hours. Meteorology students must take a core of 35 semester hours of meteorology courses, plus one of the specialty tracks listed below and two to four hours of electives. Students may meet the meteorology elective requirement by taking one or more course(s) from another track(s) or from additional meteorology offerings.

The meteorology degree also requires MA 125, 126, 227, 238, PH 201, 202; ST 315 and CIS 227 or MET 420.

#### Meteorology Major Requirements (49 HRS)

##### A. Meteorology Core Courses:

MET 140	4 hrs	MET 341	3 hrs
MET 353	4 hrs	MET 354	3 hrs
MET 355	3 hrs	MET 356	3 hrs
MET 357	2 hrs	MET 454	6 hrs
MET 455	6 hrs	MET 496	1 hr
<b>Total</b>		<b>35 hrs</b>	

- B. Select 3 - 4 hours of electives in Meteorology or courses listed in the tracks, and/or from MET 420, MET 442, MET 456 (W).

- C. Select one group:

**Group 1 - Professional Meteorology Track:**

GEO 332 or	4 hrs	GY 425	4 hrs
MET 492**	3 hrs	MET 358	3 hrs
<b>Total</b>		<b>10-11 hrs</b>	

**Group 2 - Industrial Meteorology Track:**

MGT 300	3 hrs	MET 492***	2 hrs
ECO 215	3 hrs	GY 425	4 hrs
<b>Total</b>		<b>12 hrs</b>	

**Group 3 - Broadcast Meteorology Track:**

MET 359	2 hrs	MET 498	3 hrs
MET 497	3 hrs	MET 358	3 hrs
<b>Total</b>		<b>11 hrs</b>	

**Group 4 - Environ. Meteorology Track:**

GY 425	4 hrs	GEO 460	4 hrs
MET 492****	3 hrs		
<b>Total</b>		<b>11 hrs</b>	

\*\* Satellite Meteorology seminar

\*\*\* Industrial Meteorology seminar

\*\*\*\* Air Pollution Meteorology seminar

- 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 342, MET 354, MET 355, MET 356,

MET 357, MET 358, MET 401, MET 402, MET 420, MET 442, and MET 456 (W).

## 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 others who need such course work. Contact the Department.

### DESCRIPTIONS OF ALL EARTH SCIENCES (ES) COURSES BEGIN ON PAGE 202.

### DESCRIPTIONS OF ALL GEOGRAPHY (GEO) COURSES BEGIN ON PAGE 204.

### DESCRIPTIONS OF ALL GEOLOGY (GY) COURSES BEGIN ON PAGE 206.

### DESCRIPTIONS OF ALL METEOROLOGY (MET) COURSES BEGIN ON PAGE 233.

## DEPARTMENT OF ENGLISH

Interim Chair: Robert Coleman (251) 460-6146  
Stokes Distinguished Professor of

Creative Writing: Walker

Associate Professors: Beason, Coleman, Guzy, Harrington, Hollingsworth, McLaughlin, Payne

Assistant Professors: Alford, Amare, Cesarini, Haines, Halbrooks, Hillyer, Jackson, Nowlin, Raczkowski, St. Clair

Instructors: Daley, Kracke, Peterson, Roy, Trumbo

Senior Instructor: Spain

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, New Student Seminar, 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 ENGLISH

A minimum of 36 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. 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 1660-1900 (EH 331, EH 332, EH334, EH340, EH342, 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, 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.

### 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 are specified in the College of Arts and Sciences section. Note that Area II Requirements are partially satisfied and Sequence Requirement fully satisfied by the major requirements specified above.

### REQUIREMENTS FOR A MAJOR IN ENGLISH WITH A CONCENTRATION IN CREATIVE WRITING

A minimum of 36 semester hours in English, 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. Remaining hours must include:

1. Five creative writing courses selected from (EH 391, EH 392, EH 393, EH 394, EH 395, EH 396, EH 483, EH 488, EH 497, EH 498).
2. Five literature courses at the 300 level or above, including an American novel course (EH 331 or EH 361) and a Shakespeare course (EH 322, EH 323, or EH 472). The remaining three literature courses may be chosen from EH 300 and/or 400 level except the creative writing courses listed above. Appropriate seminar and "Studies in" courses can serve to fulfill these requirements.
3. A writing portfolio, to be submitted in the student's senior year, that includes one critical essay and two samples of creative writing written for course work in the Department, as well as one reflective synthesis letter (details and deadlines are available in the English Department office).

### 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 Sequence Requirement 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.

### 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.



## 72 ARTS AND SCIENCES

### Requirements (21 hours)

#### Core Courses (9 hours):

- 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)
- 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  
EH 496: Professional Studies Internship
- 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

- 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.\*
- A minimum GPA of 3.0 in junior and senior level courses presented in fulfillment of requirement 1.
- A score of at least 500 on the Verbal subtest of the GRE General Test.
- For all applicants, a personal statement of no more than 500 words.
- For applicants for whom English is a second language, a TOEFL score of at least 535.

#### PROVISIONAL ADMISSION

- 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.

- A minimum GPA of 2.50 in junior and senior level courses presented in fulfillment of requirement 1.
- Applicants presenting a score of less than 500 on the Verbal subtest of the GRE General Test must enter in the Provisional category. Applicants may also be admitted provisionally without submitting a score, but one must be submitted before the student can advance to Regular Status.
- Same as requirements 4 and 5 for Regular Admission.

Students admitted provisionally may be required to make up deficiencies in their undergraduate course work in addition to the normal degree requirements listed below.

\*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 Coordinator for information and application. (See also **Bulletin** section on Graduate School, "Assistantships and Fellowships.")

#### REQUIREMENTS FOR DEGREE

During the second semester in the program, each student must submit an individual plan of study with regard to adequate coverage of British and American literature, literary theory, language, development of writing skills, and the student's individual needs and objectives. The plan must be approved by the Coordinator of Graduate Studies in English.

#### 1. Concentration in British and American Literature

- 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 twelve semester hours selected from the 400-level English courses may be used to meet the requirement of a minimum of thirty-six hours.
- Comprehensive examination options now include a written exam and a thesis with oral exam. Please contact the coordinator of Graduate Studies for information.
- Demonstrated proficiency in a foreign language is required (see 4 below).

#### 2. Concentration in Creative Writing

- Thesis with oral exam option:** 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 twelve semester hours selected from 400-level English courses may be used to meet the requirement of thirty-six hours minimum. 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 examination.

**Written and Thesis option:** 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, along with six hours of thesis credits to be granted on the successful completion and defense of the thesis, are 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 twelve semester hours selected from 400-level English courses may be used to meet the requirement of thirty hours minimum. At least one semester before graduation, students pursuing this option must pass one-half of the written comprehensive examination as described under the literature concentration.

- Students may concentrate on fiction, nonfiction, or poetry writing.
- This concentration is offered only as a thesis degree. For the thesis, a book-length work of fiction, nonfiction, or poetry is required.
- An oral defense of the thesis will be required at least four weeks prior to the anticipated graduation date. (For final submission of the thesis to the Graduate School, see the **Bulletin** section on General Information.)

- e. Demonstrated proficiency in a foreign language is required (see 4 listed below).
3. **M.A. in English with Alabama Class-A Professional Teaching Certification.** Students holding Class-B Professional Teaching Certification may, in many cases, complete the regular graduate program in English with the literature emphasis in order to qualify for Class-A certification. Most students with an undergraduate degree in education will already have taken those education courses required for certification. Upon admission, however, all students planning to pursue this certification must have their transcripts reviewed by the records specialist in education in order to ascertain whether the education requirements have been met or will require further course work in education. Up to nine semester hours in education at the graduate level may be incorporated into the literature emphasis as electives.
4. **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. 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 196.**

**DEPARTMENT OF FOREIGN LANGUAGES AND LITERATURES**

Interim Chair: Isabel Z. Brown (251) 460-6291  
 Professors: McCready, Mozur  
 Associate Professors: Brown, Perez-Pineda  
 Assistant Professors: Fantoni, Faught, Khan, Roddy  
 Instructors: Britt, Wilbanks  
 Emeriti: Jones, Lomangino, Quinn  
[Department of Foreign Languages and Literatures web site](http://www.southalabama.edu/languages)  
<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, and Latin, 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: New Student Seminar 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 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 core requirement takes the place of a traditional minor. 36 hours of electives remain toward completion of a Bachelor of Arts degree. The required core courses include Global Issues (IS 100), World Languages (LG 110), World Literature I & II (EH 235 and EH 236), Directed Study: Pre-Study Abroad (LG 394), Study Abroad (IS 391), and Senior Seminar (LG 480). Students are also required to submit a portfolio of work done in upper-level language, culture, and literature courses.

**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.

For students majoring or minoring in Foreign Languages and Literature or International Studies, credits earned in approved Study Abroad programs, up to a maximum of 16 semester hours, may be used to satisfy the university residency requirement provided the student is enrolled in IS 391, Study Abroad and has transient course approval from the dean of the college. Study Abroad courses must be certified as equivalent to upper division (300 or 400 level) course work in order to fulfill the USA Residency Requirement.

**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, 433, 434, or 435. Remaining credits needed to complete the concentration will be selected from additional upper-division courses offered in the respective languages.

**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 (Foreign Language Proficiency, Intermediate Language courses, EH 235 and EH 236) are fulfilled by the major requirements specified above. For the Sequence Requirement, Foreign Languages and Literatures majors are restricted to EH 235 and EH 236.

**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.

**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 tutors. Final student performance evaluations are administered by nationally certified external examiners. Like 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."

**DESCRIPTIONS OF ALL LANGUAGES (LG) COURSES BEGIN ON PAGE 218.****DESCRIPTIONS OF LESSER TAUGHT LANGUAGES (LGS) COURSES BEGIN ON PAGE 221.****DEPARTMENT OF HISTORY**

Chair: Clarence L. Mohr (251) 460-6210  
 Graduate Coordinator: Donald DeVore  
 Professors: Mohr, Rogers  
 Professors Emeriti: Brandon, Holmes, Mahan, Thomason  
 Associate Professors: Brazy, Brown, DeVore, Macaluso, McKiven, Monheit, Nigota  
 Associate Professor Emeritus: Houston  
 Assistant Professors: Hamilton, Kozelsky, Lewis, Miller, Strong, Turner, Williams  
 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, 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 21 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: New Student Seminar 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.**

**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:

- complete the standard requirements for a major in History
- have a 3.5 overall GPA (University requirement)
- have a 3.5 History GPA (Department requirement)
- receive agreement of a member of the History Department to serve as mentor
- receive permission of the Department Chair to undertake this program
- 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**.

**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 letters of recommendation directly to the Office of Admissions. The following criteria supplement Graduate School criteria (see Categories of Admission).

**REGULAR ADMISSION**

- At least twenty-one semester hours of college work in History approved by the Graduate Committee of the Department of History.
- 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 12 credit hours of 400-level courses, 400-level work taken for graduate credit will require extra work beyond what is expected of undergraduates.
- Take at least 21 credit hours at the 500 level, not all of which must be History courses.
- Complete HY 530 American Historiography.
- Complete HY 540 Modern European Historiography.
- Complete one of the following research seminars: HY 581 or HY 586 (HY 546, HY 553 or HY 580 may be substituted, if a research paper is completed).
- Choose two of the following fields and complete 12 credit hours in each:  
American History  
European 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 repeat the course.**

**The remaining requirements are dictated by the track in which students choose to study:**

#### Non-Thesis

- Complete comprehensive examinations in two fields, one in American and one in European History (see list of fields above).
- Complete HY 597 Professional Studies: Directed Field Research or HY 592 The Teaching of History.

#### Thesis

- Complete a comprehensive examination in one field (see list of fields on previous page) 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.

### M.A. in History with Class A Teaching Certification

This is also known as the "Strength in Subject Matter Program." Only students who hold a valid Class B Teaching Certificate are eligible. Normally this applies to students with a B.A. in Education at a university or college in Alabama. Questions regarding eligibility should be directed to the Dean's Office of the College of Education.

Students in this track may pursue the thesis or non-thesis option. In either case they must meet all requirements outlined above, with the following exception:

- A Survey of Special Education course (either SPE 400 or SPE 500), if not previously completed.

### DESCRIPTIONS OF ALL HISTORY (HY) COURSES BEGIN ON PAGE 209.

### 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. a minor in Gender Studies,
3. an undergraduate and graduate certificate in Gerontology,
4. a major in International Studies,
5. a double major in International Studies and International Business,
6. a double major in International Studies and Foreign Languages and Literatures,
7. a minor in International Studies.

The requirements for each of these programs are listed as follows.

#### African-American Studies

#### Gender Studies

#### Gerontology

#### International Studies

### DESCRIPTIONS OF ALL INTERDISCIPLINARY PROGRAMS (IDS) COURSES BEGIN ON PAGE 213.

### AFRICAN-AMERICAN STUDIES

Director: Dr. Kern M. Jackson (251) 460-6146  
Faculty Affiliates:

Mr. Bruce Alford, English  
Dr. Martha Jane Brazzy, History  
Dr. Donald Devore, History  
Mr. W. Frye Gaillard, History  
Dr. Brenda G. Juarez, Education  
Ms. Alice Kracke, English  
Dr. Denise McAdory, Sociology,  
Anthropology and Social Work  
Dr. Henry M. McKiven, Jr., History  
Dr. Clarence L. Mohr, History  
Dr. Gloria J. Palileo, Sociology,  
Anthropology and Social Work  
Dr. Sue Walker, English  
Dr. Susan Youngblood, Philosophy

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
HY 377	HY 477	HY 478
HY 485	PSY 270	SY 220
SY 315	SY 435	SY 445

#### Other

ARH 250 ARH 343

A description of these courses may be found under the appropriate departments.

### DESCRIPTIONS OF ALL AFRICAN-AMERICAN STUDIES (AFR) COURSES BEGIN ON PAGE 149.

### GENDER STUDIES

Director: Linda Payne (251) 460-6502

#### 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 nine 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; GLBT studies; male and female physiology; gender and health, business and politics; and others. 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.

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- Minor courses must also represent four different disciplines.
- 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.
- GS 101 Introduction to Gender Studies.
- One 400 level course with a focus on gender studies. This can be a GS course (i.e. GS 492) or an approved course in another discipline.

### CORE COURSES

#### Gender Studies Courses

- GS 101 Introduction to Gender Studies  
GS 490 Gender Studies Special Topics  
GS 494 Directed Studies  
GS 496 Internship

#### 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  
Frequent offerings in approved special topics.

#### Social Science Courses

- AN 355 Gender and Anthropology  
CA 315 Gender and Communication  
HY 343 Witchcraft and Magic in Medieval and Early Modern Europe  
HY 377 African American Experiences  
HY 485 History of American Feminist Movements  
PSY 470 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. Linda Payne, Director, Gender Studies Program, HUMB 254, University of South Alabama, Mobile, AL 36688-0002. Phone (251) 460-6502; FAX: (251) 460-1517; E-mail address: [lpayne@jaguar1.usouthal.edu](mailto:lpayne@jaguar1.usouthal.edu)

### DESCRIPTION OF ALL GENDER STUDIES (GS) COURSES BEGIN ON PAGE 206.

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## GERONTOLOGY

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Program Director and  
Graduate Academic Advisor:  
Roma Stovall Hanks (251) 460-6347 or  
(251) 460-6020

Undergraduate Academic Advisor:

Denise McAdory (251) 460-6347

**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:

- the human life cycle,
- issues related to aging, and
- 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.

In order to receive the Gerontology Certificate, the student must submit a completed Data Sheet and Application available at [www.southalabama.edu/gerontology](http://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 elderly 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 356, 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 be accepted. The 3 hour internship requires 100 contact hours; the 6 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, LS 397, LS 479, PSC 481, SY 435, SY 472, and SY 490. When the course topic is appropriate for gerontology, EH 492, EDF 490, SY 290, SY 490 and PSC 440 may be taken as electives. 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.

### REQUIREMENTS FOR THE INTERDISCIPLINARY MINOR IN GERONTOLOGY

The Interdisciplinary Minor in Gerontology requires 24 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.

#### CORE COURSES (UNDERGRADUATE) (Required)

SY 372  
BLY 207 Or SY 435  
PSY 356 Or PSY 250  
PSC 481 Or HSC 450

#### 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 6 weeks prior to registration. The 3 hour internship requires 100 contact hours; the 6 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, EDF 490, GRN 494, PSC 440, SY 490, and EH 492 may be taken as electives when the course topic is appropriate for gerontology. 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. Public Policy in Aging (PSC 581) and Ethical Considerations in the Care of the Aging (HSC 550) are strongly recommended.

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.

A maximum of two 400-level undergraduate courses (up to 6 semester hours credit) may be included in the Graduate Certificate Program, provided they were not previously applied to the student's undergraduate certificate or minor in Gerontology. Following are the courses approved for the Graduate Certificate:

#### **(Required)**

SY 523  
GRN 596 or equivalent

#### **(Elective Courses)**

AIS 401, AIS 425, CED 564, GRN 490, GRN 494, HSC 457, HSC 524,  
HSC 550, PSC 581, SY 435, SY 572

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.

Up to six semester hours of 400-level courses may be applied to the Graduate Certificate Program in Gerontology, provided they were not previously applied to the student's Undergraduate Certificate Program or the Interdisciplinary Minor in Gerontology.

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, HUMB 34, University of South Alabama, Mobile, Alabama 36688-0002; phone: (251) 460-6020; FAX (251) 460-7925, e-mail: [rhanks@usouthal.edu](mailto:rhanks@usouthal.edu). web site: [www.southalabama.edu/gerontology/](http://www.southalabama.edu/gerontology/)

### **DESCRIPTION OF ALL GERONTOLOGY (GRN) COURSES BEGIN ON PAGE 205.**

### **INTERNATIONAL STUDIES**

Director: Stephen D. Morris (251) 460-7200

Faculty Affiliates:

Ms. Kristy Britt, Foreign Languages (Latin America); Dr. Isabel Z. Brown, Foreign

Languages (Latin America); Dr. Nader Entessar, Political Science (International Relations, Middle East); Dr. Larry Dilsaver, Geography (Europe); Dr. Christian Fantoni, Foreign Languages (French); Dr. David Faught, Foreign Languages (Latin America); Dr. Elwood Hannum, History (Europe); Dr. Mara Kozelsky, History (Asia, Europe); Dr. Harry Miller, History (Asia); Dr. Robert Houston, History (International Relations); Dr. Zohair Husain, Political Science (Asia, International Relations, Middle East); Dr. Zoya Khan, Foreign Languages (Spanish, Latin America); Dr. Konrad Kressley, Political Science (Europe); Dr. Mollie Lewis, History (Latin America); Dr. Eric Loomis, Philosophy (Asia); Dr. Mihaela Marin, Foreign Languages (French); Dr. Susan McCready, Foreign Languages (Europe); Dr. Mark Moberg, Anthropology (Latin America); Dr. Joseph Mozur, Foreign Languages, (Europe); Dr. Geneva Murray, Anthropology (Asia and IR); Dr. Harry Roddy, Foreign Languages (Europe); Dr. Christine Rinne, Foreign Languages (German); 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); Dr. Rajiv Thakur, Geography (Asia); Ms. Terri Wilbanks, Foreign Languages (Latin America) Dr. Rebecca Williams, History (Asia, Middle East)

#### **International Studies web site**

**[http://www.southalabama.edu/international studies/](http://www.southalabama.edu/international_studies/)**

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: New Student Seminar 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.**

#### **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.

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IS majors must also take AN 100, GEO 114 and HY 102 as part of their general education requirements since these courses are pre-requisites for upper division courses in the major.

### CORE COURSES

#### (Required of all majors) (15 hrs)

- IS 100 Global Issues
- IPSC 250 Comparative Politics
- IPSC 270 International Relations
- IGEO 312 World Economic Geography (W)
- IIS 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)

- 3 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)
- 9 hours of electives from among the following: HY 367, HY 368, HY 461 (not taken above); LG 202, LG 207, LG 222; 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 preprofessional program in Language should take an additional 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.

- ACC 211 Accounting principles
- ECO 215 Microeconomics
- ECO 330 Current Global Economic Issues or
- ECO 363 International Economics
- MKT 320 Principles of Marketing (prerequisite ACC 211 and ECO 215)
- 9 hrs electives from the following: FIN 332; MGT 334; MGT 465; MKT 336; MKT 383; MKT 477; MKT 492; IS 496

#### 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 possibly 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 truly 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 their language skills well beyond the pre-professional component of the program. Moreover, Foreign Language majors enjoy additional and special opportunities to participate in studies 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 221 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)
- MGT 310 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 (corequisite MGT 485)

**International Studies Core**

IS 100, PSC 250, PSC 270, GEO 312, IS 495

**Area Concentration:****International Political Economy**

- 6 hours 200 level LG
- ECO 330 Current Global Economic Issues
- 1 of the following: ECO 321 Econ Systems or ECO 371 Development Econ
- (if transfer student, both courses required)
- FIN 332 Multinational Finance
- IS 475 International Political Economy

**International Business -****Marketing Concentration**

- 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**

For a minor in International Studies, students must complete the following course of study: (21 hours, including 9 hours at the 300-400 level) 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 213.****DEPARTMENT OF MARINE SCIENCES**

Chair: Robert L. Shipp

Professors: Heck, Kiene, Shipp, Valentine  
Associate Professors: Cebrian, Graham, Park, Powers

Assistant Professors: Carmichael, MacIntyre

**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 March 1 is encouraged; beginning April 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 April. 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 1100 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.

Conditional 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") eight (8) 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 \$15,600 per year plus a tuition fellowship and waiver of out-of-state fees. Prospective students must submit applications by February 15 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 strongly 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.

The comprehensive examination must be passed within three (3) years of the beginning of the MS program of study.

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 nine (9) credit hours.

#### Core Courses

The four (4) core courses consist of three (3) semester hours each for a total of 12 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 strongly 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	3	MAS 602	3
MAS 603	3	MAS 604	3
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)
<b>Total Hours 35</b>	<b>(32 minimum)</b>

#### 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 strongly 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 March 1 is encouraged; beginning April 1 the admissions committee will make initial recommendations about applicants for the following Fall class, with formal letters sent to applicants by the end of April. 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 1100 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 \$18,000 per year plus a tuition fellowship and waiver of out-of-state fees. Prospective students must submit applications by February 15 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 fourteen (14) credit hours.

The four (4) core courses consist of three (3) semester hours each for a total of 12 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. Up to 16 semester hours of dual-listed and 400-level courses may be counted, with no more than 12 hours of either type. The remaining courses must be solely graduate level.

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	3	MAS 602	3
MAS 603	3	MAS 604	3
<b>Seminar (two enrollments)</b>			<b>2</b>
<b>Total 14 Hours</b>			

Marine Science Electives	at least 23
Directed Studies	8 (maximum)
Dissertation (1-5 per semester)	<u>15 (maximum)</u>
	<b>at least 60</b>

#### 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 226.

#### DEPARTMENT OF MATHEMATICS AND STATISTICS

Chair: Scott Carter

Graduate Coordinator: Silver

##### Mathematics

Professors: Carter, Pillen, Prokhorov, Silver, Williams, Zhang

Associate Professors: Brick, Feldvoss, Kalinin, Sadovskaya

Assistant Professors: Benko, Byrne,

Galaktionova, Moffatt, Pickett,

Professorial Lecturer: Jellett

Senior Instructor: Crumb

Instructors: Farmer, Murdick, Summerlin

Associate Professor Emeritus: Dodd

Professors Emeriti: Kovacs, Mattics

##### Statistics

Professors: S. Mishra, Mulekar, Rainosek

Assistant Professors: N. Mishra, Wang

Instructors: Farmer, Summerlin

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: New Student Seminar 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.**

## 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 at the 400 level or above.

The program also requires an approved minor. Students in the major are encouraged to take MA 320 as soon as possible after taking MA 125. Recommended concentrations are available at <http://www.southalabama.edu/mathstat>.

## 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 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 450, 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 on-line placement exam available at <http://mps.southalabama.edu/mps/> at least 48 hours prior to registering for a mathematics course.

### Note: 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.**
5. **MA 110 is not a prerequisite course for any other course.**

## 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. Additionally, there is a program available for students who are seeking Class A Professional Teacher Certification. Undergraduate preparation in mathematics is required for the program.

### 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. For the purpose of describing degree requirements, graduate courses in mathematics are divided into two groups:

Group 1: MA 511, MA 512, MA 515, MA 516, MA 518, MA 519, MA 521, MA 525, MA 535, MA 536, MA 537, MA 538, MA 539, MA 540, MA 542 and MA 543.

Group 2: MA 507, MA 508, MA 521, MA 525, MA 550, MA 551, MA 555, MA 560, MA 565, MA 567, MA 568, MA 571, MA 572, ST 540, and ST 545.

### THESIS OPTION

1. A minimum of 32 semester hours of course work including MA 535, MA 536 and MA 599.
2. At least two courses selected from Group 1 other than MA 535 and MA 536.

3. At least two courses selected from Group 2.
4. In addition to MA 535 and MA 536, at least one two-course sequence must be completed.
5. 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.
6. Complete a comprehensive examination covering a collection of course work specified by the Graduate Coordinator.
7. Complete MA 592 (Seminar) during at least two semesters.
5. Complete a comprehensive examination covering a collection of course work specified by the Graduate Coordinator.
6. No more than four courses from MA 501, MA 502, MA 503, MA 504, MA 505, MA 506 and SED 563 may be counted toward the degree.
7. EDM 510.
8. Students with no previous work in Special Education are required to take SPE 500. This course may not be counted toward the required 33 semester hours of course work for the degree.

#### **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 223.**

#### **DESCRIPTIONS OF ALL STATISTICS (ST) COURSES BEGIN ON PAGE 271.**

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### **DEPARTMENT OF MILITARY SCIENCE**

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Chair: LTC William Geiger (251) 460-6341

Professor: Geiger

Assistant Professors: Rey, Trisler

Instructors: Belle, Green

[Department of Military Science web site](http://www.southalabama.edu/armyrotc)  
<http://www.southalabama.edu/armyrotc>

#### **MILITARY SCIENCE**

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, Reserve, and 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 receive advanced placement by requesting it through the department chair.

#### **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. MS I (MS 101-102). Meets for one hour per week. All contracted students are required to attend a two hour leadership lab every other week and 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 each semester.

MS II (MS 201-202). Meets for two hours per week. All students are required to attend a two hour leadership lab every other 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, 2-year scholarships are granted 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 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.

#### **NON-THESIS OPTION**

1. A minimum of 32 hours of course work including MA 535 and MA 536.
2. At least three courses selected from Group 1 other than MA 535 and MA 536.
3. At least three courses selected from Group 2.
4. In addition to MA 535 and MA 536, at least one two-course sequence must be completed.
5. Completion of a comprehensive examination covering a collection of course work specified by the Graduate Coordinator.
6. 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 two courses selected from Group 1 in addition to MA 535, MA 536 and the course satisfying Group 2.
4. At least one course selected from Group 2.
5. At least three courses in Computer Science approved by the Mathematics Graduate Committee.
6. Complete a comprehensive examination covering a collection of courses specified by the Graduate Coordinator.
7. Complete MA 592 (Seminar) during at least two semesters.

#### **M.S. IN MATHEMATICS WITH ALABAMA CLASS A PROFESSIONAL TEACHING CERTIFICATION (NON-THESIS)**

This option is available for students holding a Class B Professional Certification in Education. The curriculum consists of 33 semester hours of course work. Upon completion of the program, the MS degree in Mathematics is awarded by the University and the Class A Professional Certification is awarded by the State Department of Education.

1. A minimum of 30 semester hours of Mathematics course work with at least 21 hours in Mathematics courses numbered 507 or higher.
2. At least two courses selected from Group 1 and other than MA 535 and MA 536.
3. At least two courses selected from Group 2.
4. In addition to MA 535 and MA 536, at least one two-course sequence must be completed.

## 84 ARTS AND SCIENCES

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, contracted 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, contracted 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.

### 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 awarded 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 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 cadets. Runs from 3k to 26.2 mile marathons and triathlons.

### 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 21 hours of course work to include:

- 18 hours of Military Science, including
  - MS 101 and 102;
  - MS 201 and 202;
  - 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;
  - MS 301 and 302;
  - MS 401 and 402.
- A 3 hour Military History Course.
- 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 18 semester hours of MS course work and one military history elective 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 238.

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## DEPARTMENT OF MUSIC

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Chair: Greg Gruner (251) 460-6136

Professors: A. Bohnet, Bush, Gruner, Heavner, Holm

Assistant Professors: Durant, Fresne, Miller, Moore, Rowell, M. Sammons, P. Wood, Zoghby

Lecturers: K. Bohnet, Covington, Davis, Gilmore, Imsand, Middleton, C. Sammons, Seebacher, Sylvester, Taylor, Trimm, 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: New Student Seminar 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 26 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 (four hrs.), six hours of electives in music at 300 level or above.

### REQUIREMENTS FOR A BACHELOR OF MUSIC DEGREE (B.M.)

A total of 128 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, Music Business, Performance or Outside Fields. 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](http://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

MUT 112 MUT 213

MUT 113 MUT 312

MUT 212 MUT 313

#### Conducting - 3 hours

MUT 361

#### Music Literature - 10 hours

MUL 235

MUL 236

MUL 335

MUL 336

#### Major Ensemble - 7 hours

Concert Choir or Symphony Band

#### Applied Music (MUA or MUB) - 14 hours

200 level - 8 hours

300 or 400 level - 6 hours

#### Piano - 4 hours

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 (35 hrs.)**

MUE 120, MUE 141, MUE 241, MUE 342, MUE 345, MUE 346, MUE 444, MUE 455, MUS 201, EDM 310 or MUS 490, MUT 362, EDF 211, EDF 315, EPY 251, SPE 400, SED 470 Electives (4 hrs.)

**Music Education - Vocal (35 hrs)**

MUA 181 (repeat for two semesters), MUE 444, MUE 448, MUE 455, MUS 201, EDM 310 or MUS 490, MUS 202, MUS 203, MUT 364, EDF 211, EDF 315, EPY 251, SPE 400, SED 470 Electives (4 hrs.)

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, MUL4\*\* Literature, MUO 411/MUO 417, 4 semesters of small ensemble, 9 hours of electives in music at 300 level or above  
Electives (16 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 (14 hrs.)

**Music Business (35 hrs.)**

MUS 204, MUS 304, MUS 305, MUS 404, MUS 470, ACC 211, ACC 212, ECO 215, ECO 216, MKT 320  
Electives (4 hrs.)

**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 (18-30 hrs.)

Electives - variable to complete 128 hr. degree total.

**ADDITIONAL INFORMATION FOR 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 in the Music Office before registration begins. Once a student is registered and knows their schedule, they must request the form back to complete schedule information and return to the Department Secretary.

**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 (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; Jazz Band; Woodwind, Brass, Guitar, Percussion, and Piano Ensembles; and South Alabama Opera Theatre.

**Note: No more than twelve credits in this area are applicable toward a degree.**

**DESCRIPTIONS OF ALL MUSIC, APPLIED (MUA, MUB) BEGIN ON PAGE 238.**

**DESCRIPTIONS OF ALL MUSICAL ORGANIZATIONS (MUO) BEGIN ON PAGE 241.**

**DESCRIPTIONS OF ALL MUSIC EDUCATION, METHODS, AND MATERIALS (MUE) COURSES BEGIN ON PAGE 240.**

**DESCRIPTIONS OF ALL MUSIC HISTORY AND LITERATURE (MUL) COURSES BEGIN ON PAGE 241.**

**DESCRIPTIONS OF ALL MUSIC STUDIO (MUS) COURSES BEGIN ON PAGE 242.**

**DESCRIPTIONS OF ALL MUSIC THEORY (MUT) COURSES BEGIN ON PAGE 243.**

**DESCRIPTIONS OF ALL CONDUCTING (MUT) COURSES BEGIN ON PAGE 243.**

## DEPARTMENT OF PHILOSOPHY

Chair: John Coker (251) 460-6248

Associate Professors: Coker, Loomis, Meeker

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: New Student Seminar 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 PHILOSOPHY

All majors in Philosophy, whether concentrating in Philosophy or in Religion,

must complete 30 semester credit hours of course work, of which 15 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 300 and/or 400 level. Students pursuing a degree in Philosophy also must have a minor in another discipline.

#### The Common Core:

- **PHL 321** (Symbolic Logic)
- **PHL 240** (Western Philosophy: Classical and Medieval) and **PHL 245** (Western Philosophy: Renaissance/Enlightenment)
- **One of PHL/REL/CLA/EH 310** (Classical Mythology), or **PHL/REL 351** (Philosophy of Religion), or **PHL/REL 354** (Philosophies of India)
- **PHL 461** (Metaphysics)

The following further courses are required for the **Religion Concentration**:

- **PHL/REL 352** (World Religions) or **PHL/REL 355** (Chinese Philosophy)
- 2 Additional Religion (REL) courses at 300 or 400 level
- 1 more (REL) courses

The following further courses are required for the **Philosophy Concentration**:

- **PHL 431** (Advanced Ethical Theory) or **PHL 441** (Epistemology)
- 2 Additional Philosophy (PHL) courses at 300 or 400 level
- 2 more (PHL) courses

The following further courses are required for the **Classics Concentration**:

- **CLA/HY 454**: Ancient Greek Culture or **CLA/HY 455**: Ancient Roman Culture
- 2 Additional Classics (CLA) courses at 300 or 400 level
- 1 more (CLA) course
- Fulfill Foreign Language Requirement by taking 1 year of Latin or 1 year of Ancient Greek

No more than six 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.

### 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.

## 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 178.**

**DESCRIPTIONS OF ALL PHILOSOPHY (PHL) COURSES BEGIN ON PAGE 255.**

**DESCRIPTIONS OF ALL RELIGION (REL) COURSES BEGIN ON PAGE 266.**

## DEPARTMENT OF PHYSICS

Chair: Sankoorikal L. Varghese (251) 460-6224

Professors: Clark, Helminger, Jenkins, Varghese

Associate Professor: Sanders

Assistant Professors: Gapud, Godang

Senior Instructor: Boleman

Instructors: Ficici, Novovic

**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: New Student Seminar, 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.**

### 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	<u>3</u>
CAS 100	2	<b>Total</b>	<b>15</b>
Electives	<u>3</u>		
<b>Total</b>	<b>17</b>		

**Second Year**

Physics 202	4	Physics 303	4
Math 227	4	Math 238	3
Art/Humanities	3	Art/Humanities	3
Social Sciences	3	Social Sciences	3
CIS 210 or 227	<u>3</u>	Comm: CA 110	<u>3</u>
<b>Total</b>	<b>17</b>	<b>Total</b>	<b>16</b>

**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	<u>3</u>	Electives	<u>6</u>
<b>Total</b>	<b>15</b>	<b>Total</b>	<b>18</b>

**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	<u>3</u>	Electives	<u>3</u>
<b>Total</b>	<b>15</b>	<b>Total</b>	<b>15</b>

<b>Totals:</b>	<b>Hours</b>	<b>Physics Electives:</b>
		<b>Option A</b>

Physics	46
Mathematics	15
Chemistry	8
CAS	2
Art/Humanities	12
Social Sciences	12
Communication	9
Language	6
CIS 3	
Electives	<u>15</u>
<b>Total</b>	<b>128</b>

**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	<u>3</u>
CAS 100	2	<b>Total</b>	<b>15</b>
Electives	<u>3</u>		
<b>Total</b>	<b>17</b>		

**Second Year**

Physics 202	4	Physics 303	4
Math 227	4	Math 238	3
Art/Humanities	3	Art/Humanities	3
Social Sciences	3	Social Sciences	3
CIS 210 or 227	<u>3</u>	Comm: CA 110	<u>3</u>
<b>Total</b>	<b>17</b>	<b>Total</b>	<b>16</b>

**Third Year**

Physics 366	3	Physics 411	3
Physics 385 (W)	3	Physics Electives	3
Physics 354	3	Art/Humanities	3
Physics Elective	3	Social Sciences	3
Art/Humanities	3	Electives	<u>3</u>
Social Sciences	<u>3</u>	<b>Total</b>	<b>15</b>
<b>Total</b>	<b>18</b>		

**Fourth Year**

Physics 348	3	Physics 463	3
Physics 448	3	Language	3
Physics Elective	3	Electives	<u>9</u>
Language	3	<b>Total</b>	<b>15</b>
Electives	<u>3</u>		
<b>Total</b>	<b>15</b>		

<b>Totals:</b>	<b>Hours</b>	<b>Physics Electives:</b>
		<b>Option B</b>

Physics	43
Mathematics	15
Chemistry	8
CAS 100	2
Art/Humanities	12
Social Sciences	12
Communication	9
Language	6
CIS 3	
Electives	<u>18</u>
<b>Total</b>	<b>128</b>

**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 EH101	<u>3</u>	Comm EH 102	<u>3</u>
<b>Total</b>	<b>16</b>	<b>Total</b>	<b>17</b>

**Second Year**

Physics 202	4	Physics 303	4
Math 227	4	Math 238	3
Biology 122	4	Chemistry 201	5
Art/Humanities	<u>3</u>	Art/Humanities	<u>3</u>
<b>Total</b>	<b>15</b>	<b>Total</b>	<b>15</b>

**Third Year**

Physics 366	3	Physics 463	3
Physics 385 (W)	3	Physics elective	3
Chemistry 202	5	Biology 311	4
Art/Humanities	3	Art/Humanities	3
Social Sciences	<u>3</u>	Social Sciences	<u>3</u>
<b>Total</b>	<b>17</b>	<b>Total</b>	<b>16</b>

**Fourth Year**

Physics 348	3	Language	3
Physics 448	3	Social Sciences	3
Physics Elective	3	CA 110	3
Language	3	Electives	<u>8</u>
Social Sciences	<u>3</u>	<b>Total</b>	<b>17</b>
<b>Total</b>	<b>15</b>		

<b>Totals:</b>	<b>Hours</b>	<b>Physics Electives:</b>
		<b>Premedical Option</b>

Physics	34
Math	15
Chemistry	18
Biology	12
Art/Humanities	12
Social Sciences	12
CAS	2
Communication	9
Language	6
Electives	<u>8</u>
<b>Total</b>	<b>128</b>

**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 311. 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.



## 88 ARTS AND SCIENCES

### 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	<b>Total</b>	<b>14</b>
Arts/Humanities	3		
<b>Total</b>	<b>16</b>		

#### 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
<b>Total</b>	<b>18</b>	<b>Total</b>	<b>16</b>

#### 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
<b>Total</b>	<b>15</b>	<b>Total</b>	<b>14</b>

#### Fourth Year

Chemistry 131	4	Chemistry 132	4
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Social Sciences	3	Social Sciences	3
Physics 348	3	Physics 463	3
MET 454	6	MET 455	6
<b>Total</b>	<b>16</b>	<b>Total</b>	<b>16</b>

#### Fifth Year

Physics 448	3
Physics 385	3
<b>Total</b>	<b>6</b>

#### Summer before 4th or 5th year

MET 456	3	MET 356	3
<b>Total</b>	<b>3</b>	<b>Total</b>	<b>3</b>

#### 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
<b>Total</b>	<b>137</b>

### 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 252.

## DEPARTMENT OF POLITICAL SCIENCE AND CRIMINAL JUSTICE

Chair: Nader Entessar (251) 460-7161  
 Graduate Coordinator: Sam Fisher  
 Professors: Entessar, Fishman, Morris  
 Associate Professors: Bowers, Fisher, Husain, Nicholls, O'Shea, Wims  
 Assistant Professors: Blakely, Blankenship, Nelson, Schulze, Shaw  
 Emeriti: Barrow, Harkins, Kaempfer, 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: New Student Seminar 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 POLITICAL SCIENCE

The major in political science requires 39 semester hours, of which 15 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, PSC 311 or PSC 312 or PSC 313, and PSC 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 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
PSC 311 or PSC 312 or PSC 313	3
400 level PSC electives	6
300/400 level PSC elective	15
<b>Total Required Hours</b>	<b>39</b>

#### 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 21 semester hours in political science, of which 9 hours are required (PSC 130, PSC 250 or PSC 270, PSC 311 or PSC 312 or PSC 313), and 9 hours of 300/400 level PSC electives and 3 hours of 400 level PSC electives. Students must complete 9 hrs. of the 21 hrs. at the University of South Alabama.

#### POLITICAL SCIENCE MINOR:

PSC 130	3
PSC 250 or PSC 270	3
PSC 311 or PSC 312 or PSC 313	3
400 level PSC elective	3
300/400 level PSC electives	9
<b>Total Required Hours</b>	<b>21</b>

#### 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: New Student Seminar.

#### 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.**

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
<b>Total Required Hours</b>	<b>42</b>

#### 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
<b>Total Required Hours</b>	<b>18</b>

#### 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.

#### REQUIREMENTS FOR ADMISSION

Students are admitted each semester. The following criteria supplement the Graduate School criteria (see Categories of Admission).

#### REGULAR ADMISSION

1. Minimum cumulative undergraduate grade-point average of 3.00 (on a 4-point scale).
2. Satisfactory GRE scores (at least 1000 combined score on the Verbal and the Quantitative Subtests).
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 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 US 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. Twelve hours of electives approved by the Coordinator of the MPA Program in the Department of Political Science and Criminal Justice. These twelve hours are to be selected from among the following: PSC 596, Internship (maximum of nine hours); PSC 594, Directed Research (one to six hours); PSC 599, Thesis (six hours); and/or other graduate or 400, 500 or 600-level courses offered by the University of South Alabama as approved by the advisor.

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 257.****DESCRIPTIONS OF ALL CRIMINAL JUSTICE (CJ) COURSES BEGIN ON PAGE 177.****DEPARTMENT OF PSYCHOLOGY**

Chair: Dr. Larry Christensen (251) 460-6371

Graduate Coordinator: Turner

Professors: Brown, Christensen, Labbe',

Langhinrichsen-Rohling, Rohling, Turner

Associate Professors: Anderson, Sinnott

Assistant Professors: Foster, Gordon, Reidy,

Shelley-Tremblay, Yates

**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: New Student Seminar 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 36 semester hours in psychology including 30 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 310, PSY 320, PSY 412	All five
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 356	Any One

**Ten courses (30 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 and 15 semester hours of electives (twelve of those must be in courses numbered 300 or above).

**ASSOCIATE BEHAVIOR ANALYST**

The Behavior Analyst Certification Board, Inc.® has approved the following course sequence as meeting the course work requirements for eligibility to take the Board Certified Associate Behavior Analyst Examination. The sequence includes PSY 395, PSY 417, PSY 418, and PSY 419.

**MASTER OF SCIENCE IN PSYCHOLOGY**

The Master of Science degree program in Psychology is designed to provide individuals with knowledge of current theories, principles, and methods of experimental and applied psychology in preparation for future work toward a doctoral degree, employment under supervision in an applied setting, employment in a research setting or employment in a junior college teaching position.

The student is given an opportunity to apply for a concentration in either of the following areas of study:

1. General/Experimental Psychology
2. Applied Psychology

An individualized course of study will be developed by the student and an advisor so as to fulfill the student's career objectives and, at the same time, meet all requirements for the M.S. degree in Psychology.

**REQUIREMENTS FOR ADMISSION**

Students are admitted Fall Semester only. Applications to the Psychology Graduate Program should be completed by March 1 for admission the following Fall. Applications completed after March 1 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 and three letters of recommendation. Applicants will be asked to indicate whether they are applying for the general/experimental or the applied concentration. Applicants should contact the Department of Psychology for guidelines on submission of these materials.

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 1000 or better on the verbal and quantitative subtests of the General Test of the Graduate Record Examination.
3. Submission of a score on the GRE Subject Test in Psychology is recommended, especially for applicants for graduate assistantships.

**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 1000 or better on the verbal plus quantitative subtests 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 pre-requisites 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 by writing the Psychology Department, University of South Alabama, Mobile, AL 36688-0002 or by calling the secretary of the Psychology Department at (251) 460-6371. The deadline for receipt of completed assistantship applications is March 1.

**GRADUATE CORE CURRICULUM**

The core courses are required of all students in the Master's Program in Psychology regardless of concentration. In addition to these core courses, all students in the applied concentration are required to complete either a major project in psychology (PSY 598, minimum of three hours required) or a thesis (PSY 599, minimum of six hours required). Students in the experimental concentration are required to complete a thesis (PSY 599, minimum of six hours required). Further guidelines for completion of theses and major projects are available in the Department of Psychology.

**Core Courses (Research Methodology)**

PSY 500	2 hrs	PSY 501	3 hrs
PSY 502	3 hrs	PSY 510	3 hrs

**Research Experience**

PSY 598	min of 3 hrs
PSY 599	min of 6 hrs

**Applied Concentration**

In addition to the graduate core curriculum, students admitted to the applied concentration are required to complete all courses below. In addition, students in the applied concentration 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 enroll in any practicum course.

**Group A - Required Applied Courses**

PSY 530	3 hrs	PSY 532	3 hrs
PSY 540	3 hrs	PSY 542	3 hrs
PSY 544	3 hrs	PSY 550	3 hrs
PSY 556	3 hrs		

**General/Experimental Concentration**

Students admitted to the general/experimental concentration will develop an individualized program of study in consultation with their graduate advisor emphasizing experimental psychology and research. The program of study must be approved by the Psychology Graduate Committee and must include the graduate core curriculum and other courses (typically 12 to 15

hours) culminating in completion and oral defense of a thesis based on original research. A minimum of 36 hours of graduate courses are required.

**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 259.****DEPARTMENT OF SOCIOLOGY, ANTHROPOLOGY AND SOCIAL WORK**

Chair: Roma Stovall Hanks (251) 460-6347  
 Graduate Coordinator: Nicole T. Carr  
 Professors: Daley, Gartman, Hanks, Johnson, Moberg, Picou, Waselkov  
 Associate Professors: N. Carr, P. Carr  
 Assistant Professors: Bryan, Freed, Hudson, Marshall, McAdory, Murray  
 Instructor: Haas  
**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 solving 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: New Student Seminar 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 SOCIOLOGY

A minimum of 35 semester hours in Sociology, including SY 109, SY 376, SY 381 and SY 382. All sociology majors are also required to take AN 100 or 101, and ST 210. 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 345, 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 solving 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 has been granted candidacy 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 and objectives 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 2.50 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 Biology requirement with a grade of "C" or better.
- 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. 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 be 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 2.50 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.

#### Four Year Curriculum for the Social Work Program

##### Freshman Year

###### Fall Semester

EH 101 or exemption  
CA 110 Oral Communication  
Foreign Language \*  
CAS 100 (2)  
Biology (BLY 101)  
**Semester Cred. Hrs.: 15**

###### Spring Semester

EH 102  
Fine Arts \*  
Foreign Language \*  
SY 109 Introductory SY  
Biology (BLY 102)  
**Semester Cred. Hrs.: 16**

##### Sophomore Year

###### Fall Semester

Math (3 or 4 cr) \*  
Literature \*  
HY 135 Amer. Hist.  
AN 100 Intro to Cultural  
SW 200 Intro to Social Work  
SY 112 Social Problems  
**Semester Cred. Hrs.: 18**

###### Spring Semester

PHL 131 Intro Ethics \*  
HY 136 Amer. Hist.  
Statistics 210 (C)  
SW 212 Intro to Social Welfare  
PSC 130 US Government  
SW 214 Field Experience (2 cr.)  
**Semester Cred. Hrs.: 17**

##### Junior Year

###### Fall Semester

SW 201 Human B. & Soc Envir I  
SY 381 Socio Research Methods I  
SW 301 Social Welfare Policy  
AFR 101 \* or Humanities  
PSY 120 General Psychology  
**Semester Cred. Hrs.: 15**

###### Spring Semester

SW 302 H.B. & Social Envir II  
SY 382 Socio Research Methods II  
SW 401 Generalist Practice I  
SW 310 Community Context  
SY 220 Marriage & the Family  
**Semester Cred. Hrs.: 15**

##### Senior Year

###### Fall Semester

SW 402 Generalist Practice II  
Electives (6-8 cr)  
SY 445 Maj/Min Relations  
SW Field of Practice Elective  
**Semester Cred. Hrs.: 15-17**

###### Spring Semester

SW 412 Field Instruction (12 cr)  
SW 414 Senior Seminar (3 cr)  
Elective (2-3)  
**Semester Cred. Hrs.: 15-17**

**Total Semester Cred Hrs.: 128**

#### GENERAL EDUCATION REQUIREMENTS FOR SOCIAL WORK MAJORS

General Education requirements for social work majors are specified in the [College of Arts and Sciences section](#).

\*\* Students must complete four additional hours of elective credits taken anytime throughout course of study to reach a total of 128 credit hours. Students must also complete two Writing Intensive (W) courses, one of which must be in Social Work or minor field. Students must meet the general education proficiency requirement. Students completing BSW requirements automatically complete the requirements for a minor in Sociology.

#### 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
  - Diversity
  - Statistics
  - Ethics
- Complete the following courses in the major:
 

• SW 200	• SW 212
• SW 214	• SW 201
• 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.

#### GRADUATE PROGRAM

The Master of Arts degree 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 or the applied research program. The basic research program is designed to prepare students for admission to doctoral programs in sociology. The applied research program is designed for students whose current situations or immediate goals involve careers in teaching, government, industry or social services. The program offers specialized training in a number of areas of sociology, including Applied, Maritime, Environmental, Family Studies, Criminology and Gerontology. Students may be enrolled in the University's Gerontology Certification program while pursuing the M.A. 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. Score of 1000 or better on the verbal and quantitative subtests 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 program. Admission decisions are based on the applicant's entire application package. Applicants with lower GPA's or GRE scores below 1000 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 condition 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 Sociology master's program. 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 Sociology 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 Sociology master's program 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 PROGRAM**

1. A minimum of thirty-six 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 500, SY 505, SY 506, SY 508 and SY 509. SY 505 may be waived for students based on extent of background in sociology. If waived, student will be required to complete one

- additional elective course (three hours) in sociology.
3. Successful completion of a comprehensive written examination in theory and methods in the semester immediately following completion of core courses. For full time students, comprehensive exams will normally be taken in their third full semester. Comprehensive exams typically will be scheduled during the first month of classes in Fall and Spring semesters. If the student fails the examination, it may be retaken during the next scheduled exam period. The comprehensive examination may be taken no more than two times.
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 comprehensive written exam.
5. Completion of a thesis representing original research. Six semester hours will be granted for the thesis. A thesis proposal and the subsequent thesis must be approved by a committee that includes at least three members of the graduate faculty, including at least one member from outside the student's department or program.
6. An oral defense of the thesis.

**BASIC RESEARCH PROGRAM SUMMARY**

Core Courses (SY 500, SY 505,.....	15
SY 506, SY 508 and SY 509)	
Directed Study (SY 594) .....	3
Thesis (SY 599) .....	6
Elective Courses (400 level or higher .....	12
as approved by the graduate advisor).	
As many as twelve semester hours may	
be at the senior (400), undergraduate level.	
<b>Total Credit Hours .....</b>	<b>36</b>

**DEGREE REQUIREMENTS, APPLIED RESEARCH PROGRAM**

1. A minimum of thirty-six 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 500, SY 505, SY 506, SY 508 and SY 509. SY 505 may be waived for students based on extent of background in sociology. If waived, student will be required to complete one additional elective course (three hours) in sociology.
3. Completion of SY 512 (Applied Sociology) and SY 596 (Internship).
4. Successful completion of a comprehensive written examination in theory and methods in the semester immediately following completion of core courses. For full time students, comprehensive exams will normally be taken in their third full semester. Comprehensive exams typically will be scheduled during the first month of classes in Fall and Spring semesters. If the student fails the examination, it may be retaken during the next scheduled exam period. The comprehensive examination may be taken no more than two times.
5. Completion of Sociology Internship (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 (SY 595). Prerequisites: Pass in comprehensive exam and approved research proposal. The project proposal and the subsequent research project must be approved by at least two members of the Sociology graduate faculty: the student's advisor and a second reader.
7. An oral presentation of the Applied Research Project in a professional forum (such as a professional meeting, a university lecture, or community or agency presentation).

**APPLIED RESEARCH PROGRAM SUMMARY**

Core Courses (SY 500, SY 505,.....	15
SY 506, SY 508 and SY 509)	
Applied Sociology (SY 512) .....	3
Internship (SY 596) .....	3
Research Paper (SY 595) .....	3
Elective Courses (400 level or higher .....	12
as approved by the graduate advisor).	
As many as twelve semester hours may	
be at the senior (400), undergraduate level.	
<b>Total Credit Hours .....</b>	<b>36</b>

**DESCRIPTIONS OF ALL SOCIOLOGY (SY) COURSES BEGIN ON PAGE 273.**

**DESCRIPTIONS OF ALL ANTHROPOLOGY (AN) COURSES BEGIN ON PAGE 153.**

**DESCRIPTIONS OF ALL SOCIAL WORK (SW) COURSES BEGIN ON PAGE 273.**

**DEPARTMENT OF VISUAL ARTS**

Chair: Jason Guynes (251) 461-1438  
 Professors: Simpson, Guynes  
 Associate Professors: Oszuscik, Shamback  
 Assistant Professors: Gibbs, Johnson, Richards, Skiadas, Wright  
 Instructors: Burns, Schneider  
**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 one degree program, the Bachelor of Fine Arts degree with concentrations in Art History, Ceramics, Graphic Design, Painting, Photography, and Sculpture.

This degree program is 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: New Student Seminar 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.

### 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.

##### 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 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 345, ARH 346

*Seminar and Special Topics courses may be used to satisfy area requirements.*

### Language Requirements in Arts 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, and one "Computer Competency" (C) course.

#### 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.....6 hrs  
in 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)

#### Studio Art Core Requirements

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. Professional Practices: ARS 396 .....3 hrs

#### Studio Concentration Requirements

Two options are available. See below for specific requirements for each Studio Concentration.

##### Option One:

A Primary Studio Concentration in Ceramics, Graphic Design, Painting, Photography, 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, Graphic Design, Painting, Photography, 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.
- 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.

### Secondary Studio Concentrations

Fifteen hours in studio areas. Secondary concentrations are available in Ceramics, Graphic Design, Painting, Photography, 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 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 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 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.**

### 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 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 and ARH 360 will not count toward the minor in Art History.

### GRADUATE STUDIES

Although the Art and Art History Department has no graduate degree programs, courses in Art History and Studio Art are offered at the graduate level for those students who need such course work.

### DESCRIPTIONS OF ALL ART HISTORY (ARH) COURSES BEGIN ON PAGE 154.

### DESCRIPTIONS OF ALL STUDIO ART (ARS) COURSES BEGIN ON PAGE 155.



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# MITCHELL COLLEGE OF BUSINESS

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Dean: Carl C. Moore (251) 460-6419

Associate Dean and Director of

Graduate Studies: John E. Gamble  
(251) 460-6418

Associate Dean: Deborah F. Spake  
(251) 460-7907

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 and Master 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, marketing, and transportation 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 field 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 program, and through the efforts of individual faculty and staff.

## CENTER FOR BUSINESS AND ECONOMIC RESEARCH

The Center for Business and Economic Research (CBER) publishes a monthly newsletter showing trends in local business and visitor activities; maintains a community database; publishes faculty working papers; and undertakes applied business and economic research in cooperation with the state and local agencies.

## THE CENTER FOR REAL ESTATE STUDIES

The Center for Real Estate Studies offers students the opportunity to increase their knowledge of real estate research and the local real estate market. The Center also offers educational services to the business community and is committed to academic excellence, strong partnerships with the real estate industry, rigorous research policy related topics, and research support for community based real estate initiatives.

## 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, Transportation, and Data Processing. (Refer to 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 write the Director, Career Services Center, 307 University Blvd., 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 64 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.

## STUDENTS RESPONSIBILITY AND ADVISING

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.

Each student enrolled in the Mitchell College of Business must complete or be in the process of completing the following Basic Business Techniques Core before enrolling in any course of the 300 or 400 series.

ACC 211, ACC 212	CIS 250	CA 110
BUS 245, BUS 255	MA 120	
ECO 215, ECO 216		
EH 101, EH 102		

All students enrolled in the College will list their major area as Business Administration until they have completed the Basic Business Techniques Core listed above with a 2.0 average in the area. Upon entering the 300 series each student must declare a major concentration area selected from the fields of Accounting, Economics, Finance, Management, Marketing, or General Business. After declaring a major concentration area, 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 five (5) out of eight (8) major courses at the University of South Alabama.

## 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 business core requirements and the first major cannot be counted toward the second major requirements. A minimum of 15 semester hours in the second major must be taken in addition to degree 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 declaring a minor in Marketing must make a grade no lower than C in all Marketing courses. Students must complete at least 50% of the courses counted towards the minor at the University of South Alabama.

## ECONOMICS MINOR

A minimum of 21 semester hours in Economics including:

ECO 215	ECO 216
ECO 315	ECO 316

Plus nine semester hours of other upper-level courses numbered 301 or above.

## ENTREPRENEURSHIP MINOR

ACC 211	ACC 212
ACC 321	BUS 265
MGT 300	ECO 215
MGT 345	MGT 465
MKT 320	

## GENERAL BUSINESS MINOR

ACC 211	ACC 212
BUS 245 or ST 210	BUS 265
FIN 315 or FIN 305	ECO 215
MGT 300	MKT 320

## GENERAL MANAGEMENT MINOR

ACC 211	BUS 265
ECO 215	MGT 325
BUS 245 or ST 210	MGT 340
MGT 300	MGT 351
MGT 305	

## MARKETING MINOR

ACC 211	ECO 215
MGT 300	MKT 320
MKT 374	MKT 380
MKT 350	MKT 382
MKT 385	

## 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, Finance, Management or Marketing. Students who attend evening classes only may select a major in General Business or Accounting. The General Business major is also available in the evening at the University of South Alabama Baldwin County Campus. Phone: (251) 928-8133. Other majors are not available in the evening.

To graduate, you must have a minimum of 128 semester hours with an overall institution grade-point average of 2.0. In addition, a 2.0 grade-point average is required in the 200-level business courses, a 2.0 grade-point average is required in the 300-level business 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
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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) 2nd Literature course of sequence	3
Fine and performing Arts (ARS 101, DRA 110, MUL 101, or ARH 103)	3
Humanities & Fine Arts (Select 1 from: CA 110, 211, ARS 101, DRA, 110, LG 111, 112, 131, 132, 151, 152, 171, 172, MUL 101, PHL 110, 131, ARH 103, or 123)	3
History (HY 101, 102, 135, or 136)	3
Behavioral Sciences (PSY 120, SY 109, or AN 100)	3

## Science Requirements

Natural Science <b>with lab</b> (Select 2 from BLY 101 or 121, BLY 102 or 122, CH 101, 103, 131, 132, 141, GEO 101, GEO 102, GY 111, 112, MET 140, PH 101, 104, PH 114 or 201, Ph 115 or 202)	4
	4

## Freshman Core/Non-Business 9

BUS 150 - Introduction to Business and Management **	9
2 electives	

\*\*BUS 150 is required of all incoming freshman. All transfer students will be exempted from BUS 150 and must select three non-business electives.

## Non-Business Electives (9 Hours Required)

### 200 Level Core (A minimum grade of "C" is required in each course 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 Core (A minimum grade of "C" is required in each course in this area)

BUS 305 - Information Systems & Technology 3	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) 24**

<b>Business Electives (300 - 400 level)</b>	12
<b>Business Policy Requirement</b>	
MGT 485 - Business Policy in a Global Economy (W)	3
MGT 486 - Undergraduate Comp Exam (MGT 485 Co-Req.) 0	0

### TOTAL BUSINESS CURRICULUM 128 SEMESTER HOURS

#### GENERAL BUSINESS

The major in general business is designed for students planning careers in small business management, institutional management, human resource management, or sales. Areas of concentration are pursued in the junior and senior years.

#### Required General Business Major Courses

MGT 311 - Legal Environment of Business II  
MGT 340 - Organizational Behavior (W)  
MGT 351 - Human Resource Management  
MKT 374 - Buyer Behavior  
MKT 379 - Retailing  
MKT 336 - International Marketing

Choose **three** courses from the following:

FIN 300           MGT 345  
MKT 345           MKT 348

#### REPEAT COURSE POLICY

If a course in the Mitchell College of Business is completed with a grade of "C" or better, the course cannot be repeated for credit. Any grade received will not be counted in the calculation of the Grade-Point Average (GPA).

#### 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 has a fall only admission policy, while students may apply for fall, spring, or summer admission into the MAcc program.

1. a bachelor's degree,
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:

$$200 \times \text{GPA} + \text{GMAT} = 1050 \text{ or}$$

$$200 \times \text{UDGPA (last 64 hours)} + \text{GMAT} = 1100$$

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.

#### 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).

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.

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 nine (9) semester hours of graduate credit earned in 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 more than one course, he or she will be dismissed. In no case will a student be permitted to repeat a course more than one time.

#### 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 tuition. Out-of-state fees, if applicable, are also waived. Fees are paid by the student.

Application forms can be secured 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. In addition, four Seminar courses must be completed. The Seminars offer no credit hours. Students seeking the Master of Accounting degree must complete ten (10) 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  
ISC 545 - 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.)  
In addition, four Seminar courses must be completed. The Seminars offer no credit hours and are held on the first Saturday of each semester during the first two years of the MBA program.

MGT 562 - Seminar I - Team Building, Group Dynamics, and Personality (concurrent with MGT 521 or MGT 532)

MGT 564 - Seminar II - Conflict Resolution and Negotiation (concurrent with ECO 506 or MGT 530)

MGT 570 - Seminar III - Current Topics (concurrent with ACC 501 or MKT 541)

MGT 572 - Seminar IV - Developing Your Professional Career (concurrent with MGT 522 or ACC 502)

## 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 22	
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 post-secondary education, including (1) a baccalaureate degree from an accredited university, and (2) evidence that he or she has satisfied either one of the following:

- 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.
- 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.**

## DESCRIPTIONS OF ALL BUSINESS (BUS) COURSES BEGIN ON PAGE 163.

## DEPARTMENT OF ACCOUNTING

Chair: J. Russell Hardin (251) 460-6144  
Professors: Hardin, Segal, Urbancic  
Associate Professor: Hsu  
Assistant Professors: Moussalli, Suberly  
Instructors: Madden, Prescott

**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 451

### Choose two electives from the following:

ACC 416	ACC 432
ACC 452	ACC 461

### Choose one from the following:

ECO 330	FIN 332	MGT 334
MKT 336		

## 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 148.

## DEPARTMENT OF ECONOMICS AND FINANCE

Chair: Ross N. Dickens (251) 460-6729

Professor Emeritus: James Bobo

Professors: Chang, Dickens, Swofford

Associate Professor: Forbus

Assistant Professors: Hunsader, Wu

**Department of Economics and Finance web site**

<http://www.southalabama.edu/mcob/econfin.shtml>

## DESCRIPTIONS OF ALL ECONOMICS (ECO) COURSES BEGIN ON PAGE 185.

## THE FINANCE MAJOR

The Finance major 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 major 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 343	FIN 350
FIN 410	FIN 411	FIN 420

**Choose three electives from the following:**

ACC 331	ECO 315	ECO 340
FIN 345	FIN 421	FIN 430
FIN 445	FIN 470	FIN 471
FIN 490	FIN 492	FIN 494
MKT 345	MKT 348	MKT 445

**DESCRIPTIONS OF ALL FINANCE (FIN) COURSES BEGIN ON PAGE 203.****DEPARTMENT OF MANAGEMENT**

Chair: Marjorie Icenogle (251) 460-6411

Professors: Gamble, Icenogle, Larson, Maes, Moore, Pietri, Retzlaff-Roberts, Shearer, Turnipseed

Associate Professors: Mosley, Woodford

Assistant Professors: Bacon, Chow, Gillespie, Gillis, Weldy

Instructors: Harris, 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 four courses and choose one concentration area.

MGT 334 MGT 340 MGT 351 MGT 492

**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 courses are required:**

MGT 340 MGT 351 MGT 492

**Choose five electives from the following:**

MGT 311	MGT 345	MGT 390	MGT 430
MGT 441	MGT 450	MGT 451	MGT 452
MGT 454	MGT 455	MGT 456	MGT 460
MGT 462	MGT 465	MGT 470	MGT 483

**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 course is required.**

MGT 452

**Choose four electives from the following:**

MGT 450	MGT 451	MGT 454	MGT 455
MGT 456	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 meet the needs of individuals anticipating the creation of a new venture upon graduation. The concentration allows students to choose a combination of courses that best match their interest and venture opportunities.

**The following courses are required:**ACC 321 MGT 345  
MGT 465 MKT 384**Choose one elective from the following:**MGT 311 MGT 390 MGT 441 MGT 460  
MGT 470 MKT 345 MKT 374 MKT 379**Service Management Concentration**

Services are the largest and fastest growing sector of the U.S. economy with considerable job opportunities both nationally and in the region. The Service Management concentration is designed to meet the growing need for individuals anticipating management careers in service organizations. The flexible course composition of the concentration allows students to choose the combination of courses that best suit their interests and career strategies.

**The following courses are required:**

MGT 390 MGT 441 MGT 430

**Choose two courses from the following:**MGT 450 MGT 451 MGT 452 MGT 470  
MGT 483 MKT 345 MKT 374 MKT 375  
MKT 379**DESCRIPTIONS OF ALL MANAGEMENT (MGT) COURSES BEGIN ON PAGE 234.****DEPARTMENT OF MARKETING**

Chair: Mohan Menon (251) 460-6412

Professors Emeritus: Lynn Robinson  
Distinguished Professor of Marketing: Williams  
Distinguished Professor of Real Estate: Epley  
Professors: Menon, Sneath, Spake  
Associate Professor: Sharland

Assistant Professor: Finney

Instructors: Bishop, Khan

**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.

**Minimum Grade of "C" in all Marketing Courses**

All students majoring in the Department of Marketing are required to earn a minimum grade of "C" (2.0) in MKT 320 and all other marketing courses. (Note: MKT 320 Principles of Marketing is a prerequisite for all marketing courses.) A minimum grade of "C" must also be earned in all non-marketing business courses taken as part of the major requirements.

Qualified students majoring in Marketing are urged to apply for internships that are designed to provide students with practical experience in their field of study. Students who meet the requirements need to contact a faculty advisor in the area of interest and register to enroll in

the Internship class (MKT 496) as a business elective. The faculty advisor will guide the student through the internship and provide information for fulfilling the course requirements.

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 492

**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 236.**

# COLLEGE OF EDUCATION

Dean: Richard L. Hayes (251) 380-2738  
 Associate Dean of Academic and  
 Financial Affairs: Thomas L. Chilton  
 Associate Dean for Development and  
 External Affairs: Phillip Feldman  
 Director of Graduate Studies and  
 Research: Abigail Baxter  
 Director of Assessment and Evaluation:  
 James P. VanHaneghan  
 Director of Field Services: Andrea Kent  
 Director of Student Advising: Peggy M. Delmas  
**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 Academic 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 (SDE).*

## CHOICE OF BULLETIN

If a student does not attend the College for a period of one (1) calendar year or longer, the student will be required to fulfill the requirements of the program as specified by the Bulletin in effect during the year of the student's 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.

## 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 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 require-

ments 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 32 hours of the last 45 semester hours and a minimum of 15 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 to teach special education and 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.

<b>Area I - Written Composition</b>	
2 courses EH 101, EH 102	6 hrs
<b>Area II - Humanities and Fine Arts</b>	
1 course CA 110	3 hrs
1 course from ARS 101; MUL 101; DRA 110; ARH 100, ARH 103, ARH 123, ARH 240, ARH 242	3 hrs
1 course from *EH 215, EH 216, EH 225, EH 226, EH 235, EH 236	3 hrs

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1 course from EH 215, EH 216, 3 hrs  
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, ARH 240, ARH 242

### Area III - Natural Sciences and Math

1 course from MA 110, MA 112, 3 hrs  
MA 113, MA 115

2 courses from BLY 101, BLY 102; 8 hrs  
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

### Area IV - History, Social and Behavioral Sciences

1 course from \*HY 101, HY 102, 3 hrs  
HY 135, HY 136

3 courses from \*\*HY 101, HY 102, 9 hrs  
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

\*\* 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 4 hrs  
PE 101-PE 157

1 course EPY 251 3 hrs

Required electives in the Major to total 64 hrs.  
\*As a part of the General Studies Curriculum, students must complete a 6 semester hour sequence in Literature or History.

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, Elementary and Early Childhood majors must include BLY 101 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, SPE 400, EDF 315/211 including successful completion of the e-portfolio assessment of standards in EDM, SPE, EDF listed above.
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 21 (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 151 until they meet the requirement.
7. Satisfactory performance on the Alabama Prospective Teacher Test (APTT).
8. 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.
9. Proof of: Clear (SDE) background check, and professional liability insurance.

10. Sufficient physical ability and emotional stability to perform successfully as a teacher. (NOTE: These factors might be covered in the departmental interview.)

11. Recommendation of advisor and department chair.
12. Successful completion of the COE Math Test or COE Math Modules.
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 at the end of the first month of the semester prior to student teaching.
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 the greater Mobile area 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 your faculty advisor.
9. Satisfactory completion of Alabama Prospective Teacher Test (APTT) for reading, writing and math.
10. Satisfactory score on the Praxis II test for the teaching field or content area.
11. Completion of any departmental prerequisites.

12. Proof of: clear (SDE) background check and professional liability insurance.
13. 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. Violations of the Alabama Educators Code of Ethics is grounds for dismissal from the program or delay in advancing through 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 32 of the last 45 semester hours of work must be earned in residence at The University of South Alabama.
5. A community college graduate can transfer no more than 64 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 Prospective Teacher Test (APTT).
8. Satisfactory performance on the appropriate PRAXIS II test.

### RECOMMENDATION FOR CERTIFICATION

The Associate Dean for Academic 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 warrants 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.

### 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](http://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 PROSPECTIVE TEACHER TEST(S), 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 Prospective Teacher Test and Praxis II 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.

### 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 programs leading to the Master of Education degree in Art Education, Counselor Education, Early Childhood Education, Educational Administration, Educational Media, Elementary Education, English for Speakers of Other Languages, Health Education, Physical Education, Reading Teacher, Secondary Education, and Special Education, and to 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: Art Education, Early Childhood Education, Elementary Education, English for Speakers of Other Languages, Secondary Education, and Special Education. The institution must have been accredited at the time of students' study for a student to be admitted in Regular Status.

The College of Education offers an Educational Specialist degree leading to AA Certification, in Alabama, in the following areas: Educational Administration, Elementary



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Education, Secondary Education, and Special Education.

The College of Education offers a Doctor of Philosophy degree program in Instructional Design and Development.

### 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. Programs) require review by program faculty.

#### Academic Regulations

1. All degree programs require a minimum of 33 semester hours of approved course work of which 21 hours must be at 500-level or above.
2. A minimum overall program 3.0 GPA on all work attempted for Master's Degree programs (Educational Administration - 3.25, M.Ed.) 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.
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 be eligible for the appropriate State of Alabama Class B Professional Certificate. Sixth-year programs require that students be eligible for the appropriate State of Alabama Class A Professional Certificate.

### 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 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 before the end of the spring semester. 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 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 before the end of the spring semester.

Application forms can be secured by a request addressed to Director, Graduate Studies, College of Education.

### TRANSFERRED WORK

#### (After completion of nine semester hours on USA campus)

For a master's program a maximum of nine semester hours of graduate credit from an 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. Transfer request forms are available in UCOM 3020 or on the web.

### 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 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 - GRE (must be sent by testing agency to the Registrar). All Master's of Education programs require the GRE including the Analytical writing section except Health, Physical Education,

and Counseling. Health, Physical Education, and Counseling will accept the GRE or MAT.

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.
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. See departments for any other or more specific requirements.

#### 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.

### 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 GRE or MAT scores from the testing agency. Health, Physical Education, and Counseling will accept the GRE or MAT. Instructional Design and Development program (IDD) and Education Leadership require the GRE.
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.

**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 or Master of Science Requirements for Admissions sections 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 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).
4. Official GRE test scores must be sent by testing agency to the Registrar. All Alternative Master's programs require the GRE including the Analytical writing section.
5. Completion of the APTT (test scores are sent directly to the Office of Student Services in the College of Education).
6. All Alternative Master's programs, except Special Education require SPE 500, if not previously taken at the undergraduate level. SPE 510 is required for Special Education majors.
7. See department for additional prerequisites or admission requirements.
8. Proof of: Clear SDE background check.

**COMPLETION OF A TEACHER****EDUCATION PROGRAM****Master of Education Programs**

Satisfactory score on the following minimum requirements 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 of not less than ten weeks or the equivalent.
4. A minimum of 80% of 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 to take the exam.

Typically, the comprehensive examination is taken during the semester in which students complete their degree requirements. 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. Applications for the comprehensive examination can be obtained from <http://www.southalabama.edu/coe/forms/compsapp.pdf>,

submission deadlines for the application is available at <http://www.southalabama.edu/coe/forms/deadlinetestdates.pdf>.

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, Health Education, Instructional Leadership, Physical Education, Secondary Education, and Special Education.

**ADMISSION TO THE PROGRAM**

The requirements for admission to the Program are as follows:

1. The applicant shall have successfully completed a fifth-year program in the same teaching area in which the sixth-year program is sought;
2. The applicant shall have a Master's degree from an accredited institution, and appropriate valid certificate; and
3. The applicant shall have at least three years' successful experience as a teacher in the area of specialization in which the sixth-year program is sought, except in Special Education, which requires three years of teaching experience, though not all three years have to be in Special Education. 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. Letter 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. 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 will 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 an 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. Transfer request forms are available in UCOM 3020.

#### **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 620, IDE 640, IDE 650, and IDE 692, EPY 602, EDF 615, 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: Educational Administration; Elementary Education; Secondary Education; and Special Education. 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**

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**

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. 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 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. Satisfactory performance in the area of specialization (2 years), (3 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.

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#### **DEPARTMENT OF HEALTH, PHYSICAL EDUCATION AND LEISURE STUDIES**

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Chair: Frederick M. Scaffidi (251) 460-7131

Professors: Chilton, Gurchiek, Heitman, Kowaleski, Scaffidi

Associate Professor: Broach, Norrell, Pugh  
Assistant Professors: Bradford, Dong, Keshock

Senior Instructors: O'Keefe, Palombo

Instructors: Anastasio, Barter

**Department of Health, Physical Education and Leisure Studies web site**  
**<http://www.southalabama.edu/coe>**

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 concentration in 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.

#### **UNDERGRADUATE PROGRAMS**

##### **MINIMUM GENERAL STUDIES REQUIREMENTS FOR HPELS MAJORS (64 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 362, 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, two (2) additional and different one-hour activity courses; BMD 114, EPY 251, EDF 211, 315; EDM 310; SPE 400; successful completion of appropriate tests: IDE 010, APTT, COE Math Modules or Math Test, Exit Exam, PRAXIS II in teaching field.

##### **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 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 endorsed by both the American College of Sports Medicine (ACSM) and the National Strength and Conditioning Association (NSCA) to prepare students for health and fitness careers. Upon completion of this curriculum students would be eligible to pursue internationally recognized certifications such as Personal Trainer, Health Fitness Specialist, Exercise Specialist, and/or Strength and Conditioning Specialist.

**Additional departmental requirements are listed on HPELS advising sheets (see advisor).**

#### **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 362, HS 429, HS 460, HS 463; PE 100 and one (1) hour activity course; PE 201, PE 460, PE 475; PE 381 or EPY 455; PE 380 or PE 474 or PE 476; BMD 114, BMD 115; SED 340, SED 341, SED 342, EDF 211, EDF 315; EPY 251; EDM 310; SPE 400; BLY 205, SY 220; successful completion of appropriate tests: IDE 010, APTT, COE Math Modules or Math Test, 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 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

See departmental advising sheet and advisor for specific course requirements for Recreation Administration and Therapeutic Recreation.

### 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. Health and Physical Education/Exercise Science students should enroll in PE 495 and Leisure Studies students should enroll in LS 498. See advisor for details and internship planning.

### 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 Leisure Studies curriculum as assigned by the advisor.

### 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.

All Health and Physical Education teacher certification students must complete the following as partial fulfillment of the requirements for teacher education candidacy: APTT; IDE 010 or ACT (Reading) score of 21 or higher; EH 101, EH 102; CA 110; EDM 310; SPE 400; BMD 114; EDF 211, EDF 315; PE 100, PE 201; COE Math Modules or Math Test.

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.

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).

Candidacy requirements are summarized on departmental advising sheets. See academic advisor.

### 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

- the student:
  - declare a specialization,
  - take any necessary tests,
  - submit to any needed evaluations, and
  - be available for necessary interviews.
- the student's application receives approval from the advisor and departmental chair. The application must be submitted to the College of Education Advising Center Staff by the second week of the semester in which the student is eligible to be admitted.
- the student's application receives approval from the Undergraduate Candidacy Committee.
- 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:

- Completion of 60 semester hours of course work, 48 of which must be in General Studies.
- 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.
- Satisfactory performance on the College of Education Reading Examination (IDE 010) or equivalent.
- Sufficient physical ability and emotional stability to perform successfully as a professional. These and other factors could be determined in a departmental interview.
- Recommendation of the advisor and department chair.
- Completion of any departmental prerequisite courses.
- 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.
- 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.
- 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 in HPELS with specializations in:

- Health Education, and
- 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, Therapeutic Recreation or Non-Certification Health Education.

This is a non-teacher certification specialization.

### REQUIREMENTS FOR MASTER OF EDUCATION DEGREE (M.Ed. 33 hours)

The requirements for the Master of Education Degree include Educational Research and Evaluation (IDE 510), and 30 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)

EDF 501 or EDF 515.

##### 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. Special Education or Advisor Approved Elective (3 hours)

All certification programs require SPE 500 or an introductory Special Education course if not taken at the undergraduate level.

##### G. Additional Requirements

Submission of scores on either the GRE or MAT required for admission. 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

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- B. Professional Studies (3 hours)**  
EDF 501 or EDF 515.
- 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. Special Education or Advisor Approved Electives (6 hours)**  
All certification programs require SPE 500 or an introductory Special Education course if not taken at the undergraduate level.
- G. Additional Requirements**  
Submission of scores on either the GRE or MAT required for admission. Students must successfully complete a comprehensive examination. See Graduate Student Checklist on Departmental Advising Sheets.

### REQUIREMENTS FOR MASTER OF SCIENCE DEGREE PROGRAM (33 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 33 semester hours.

#### Exercise Science Course of Study

- A. Research and Evaluation (3 hours)**  
IDE 510
- B. Area of Specialization (21 hours)**  
HPE 505, HPE 516, HPE 540, 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; Advisor Approved Electives (6 hours)
- E. Additional Requirements**  
Submission of scores on either the GRE or MAT required for admission. 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 (18 hours)**
- D. Additional Requirements**  
Submission of scores on either the GRE or MAT required for admission. 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 208.

#### DESCRIPTIONS OF ALL HEALTH, PHYSICAL EDUCATION (HPE) COURSES BEGIN ON PAGE 207.

#### DESCRIPTIONS OF ALL LEISURE SERVICES (LS) COURSES BEGIN ON PAGE 222.

#### DESCRIPTIONS OF ALL INTERDEPARTMENTAL EDUCATION (IDE) COURSES BEGIN ON PAGE 211.

#### DESCRIPTION OF ALL PHYSICAL EDUCATION ACTIVITY COURSES AND PROFESSIONAL PHYSICAL EDUCATION (PE) COURSES BEGIN ON PAGE 249.

#### DEPARTMENT OF LEADERSHIP AND TEACHER EDUCATION

Chair: Dr. Harold Dodge (251) 380-2894  
Professors: Ellis, Feldman, Shaw  
Associate Professors: Bailey, Baxter, Campbell, Daughenbaugh, Dodge, Giles, Gray, Sachs, Santoli, Smith  
Assistant Professors: Baggett, Green, Kent, Kinniburgh, McGowan, Romey, Tunks, Turnipseed, Westbrook  
Emeritus Professors: Terry Cronis, Mary Beth Culp  
Senior Instructor: Byrd  
Instructors: Delmas, Kennedy, Simpson, Piper  
**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.

#### PROGRAM REQUIREMENTS Minimum General Studies (64 semester hours) For Elementary Education (K-6)

See [College of Education General Studies Requirement](#).

Elementary/Early Childhood 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 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.

#### ELEMENTARY EDUCATION (K-6)

The program in Elementary Education is designed to prepare teachers for kindergarten through grade six. Satisfactory completion of the program and accompanying tests lead to a recommendation for a Class B Certificate in Elementary Education. Students may also qualify for a Class B Certificate in Early Childhood Education (P-3) through an additional internship placement.

#### 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 are:

**Professional Studies (28 semester hours)**  
Curriculum, Teaching, and Media 7 hrs  
EEC 345\*, EEC 346\*, EDM 310

Educational Foundations 9 hrs  
EDF 315 and EDF 211, EPY 251, and SPE 400

Evaluation of Teaching and Learning 3 hrs  
EPY 455\*

Internship 9 hrs  
EEC 430\*

#### Teaching Field/Curriculum Area (36 semester hours)

EEC 332\*, EEC 335\*, EEC 336\*, EEC 337\*, RED 330\*\*, RED 331\*, RED 333\*, AED 301, MUE 301, PE 166, EEC 300

Choose one: HS 262 or HS 361

\*Only for students admitted to teacher candidacy

\*\*RED 330 must be taken prior to RED 331\*

#### CRITERIA FOR ADMISSION TO STUDENT TEACHING

In addition to meeting the College of Education criteria for admission to student teaching, Elementary/Early Childhood majors must have satisfactorily completed: 12 hours 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.

#### CRITERIA FOR ADMISSION TO TEACHER CANDIDACY

In addition to meeting the College of Education criteria for admission to teacher candidacy, Elementary/Early Childhood majors must have satisfactorily completed: EEC 300: Classroom Management and 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.

#### SECONDARY EDUCATION

The Department offers degree programs to prepare middle/high school teachers for grades 6-12.

#### 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 (37 semester hours minimum)

EDF 315, 211; EPY 251; SPE 400; EDM 310; EPY 455; SED 340, SED 341; RED 451; SED 342(1) and one of the following methods courses: SED 453, SED 454, SED 456, SED 457 and one of the following student teacher internships: SED 466, SED 467, SED 468, SED 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 and Sciences content field.

##### (1) English Language Arts (Arts and Sciences - English Double Major with Education, 54 semester hours)

RED 352; 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 or EH 216 and EH 225 or EH 226 and EH 235 or 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 310, EH 321, EH 322, EH 323, EH 324, EH 460, 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 368, EH 463, EH 468, EH 476, EH 478, or EH 479)
  4. One of the the following courses: EH 402, EH 421, or EH 422.
  5. At least two courses at the 400-level (exclusive of requirement #4, above) from the following courses: EH 403, EH 461, EH 477, EH 480, EH 481, EH 482, EH 483, EH 484, EH 485, EH 486, EH 487, EH 488, EH 490, EH 492, EH 494, EH 496, or EH 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.

## (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, 74 semester hours)**

GEO 101 and GEO 101L, PH 101 and PH 101L, MA 115 and MA 115L, ST 210, BLY 121 and 121L and BLY 122 and 122L, CH 131 and 131L and CH 132 and 132L, CH 201, PH 114 and PH 114L, PH 115 and PH 115L, BLY 205, and twenty-five (25) 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 362 or HY 366 or HY 367 or HY 368 or HY 461; HY 477 or HY 478 or HY 479; HY 432 or HY 433 or HY 434 or HY 435 or HY 436 or HY 437 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 Chemistry, and Secondary Physics.**

Please visit <http://www.southalabama.edu/coe/coursesofstudy.shtml> for specific requirements.

## SPECIAL EDUCATION

The Department has two undergraduate Special Education Programs, each leading toward a Bachelor of Science Degree: **Early Childhood Special Education and Collaborative Teaching.**

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 (block) course in the area of Special Education (i.e., 300-level or above courses which carry the SPE prefix.)

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 Special Education programs place particular emphasis upon the student-advisor relationship. Each advisor has detailed information to aid the student's progress and to ensure that the many and various requirements are met. Enrollments are limited in some courses. Students should consult with their advisor about the effect this may have on their planned course of study.

## THE BACHELOR'S DEGREE PROGRAM

All Special Education undergraduate majors' programs include a minimum of 128 semester hours. Differences in course work exist within the teaching areas and advisors provide the specific course information for each student. Professional courses are organized into blocks which must be taken in a specified sequence. The professional "block" of courses begins once each year, in the Fall.

## 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 EDF 315, EDF 211, EDM 310, SPE 400 and SPE 205. 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 (64 semester hours)

See College of Education section or departmental advising sheets for general studies requirements.

## Professional Studies

**(30 semester hours minimum)**

To include: SPE 400; EDF 315, EDF 211; EPY 251; SPE 363.

Additional Professional Studies: SPE 202, SPE 203, SPE 205, SPE 410, SPE 495, SPE 496 or SPE 497; EDM 310.

## Areas of Specialization (34 semester hours)

### Collaborative Teaching

SPE 201, SPE 311, SPE 313, SPE 342, SPE 362, SPE 373, SPE 432, SPE 443, SPE 454, SPE 484; RED 451, and SHS 290. Collaborative Teaching majors must choose an internship at either the K-6 or 6-12 grade level.

### Areas of Specialization (34 semester hours)

#### Early Childhood Special Education

SPE 201, SPE 311, SPE 313, SPE 342, SPE 362, SPE 373, SPE 432, SPE 433, SPE 454, SPE 484; RED 451, and SHS 290.

## 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: Instructional Leadership, Elementary Education, Secondary Education, and Special Education.

## 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. This program offers two certification programs approved by the Alabama State Department of Education for educational administrators: a Class A Certification Program with a Master of Education degree, and a Class AA Certification Program with an Educational Specialist Degree.

## Admission Requirements

Applications for graduate programs in Instructional Leadership are reviewed twice yearly for admission to the 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 2 and March 2.

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 2 and March 2.

#### **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 33 semester hours as outlined below with at least a 3.25 grade-point average, including a grade of "B" or "A" in all courses with EDL prefix,
  2. passing assessment modules with at least an 80% level of proficiency, and
  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 enrolling in the Residency.

**III. Educational Foundations and Educational Psychology (six semester hours minimum)**

A. Select One:

EDF 501, EDF 515

B. Select One:

EPY 502, EPY 521

**IV. Research (three semester hours minimum)**  
IDE 510

Students who have not completed a survey course of exceptionalities must take SPE 500. This is in addition to the 33 hour program.

#### **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 33 semester hours as outlined below with at least 3.25 grade-point average and a grade of "B" or "A" 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**

**(21 semester hours minimum)**

IDE 620, IDE 640, IDE 650, IDE 692, EPY 602, EDF 615, EDL 699

#### **II. Area of Certification**

**(12 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.**

#### **Comprehensive Examination**

After completing 33 semester hours of course work, the student must successfully complete a comprehensive examination covering all areas of the student's program. Application forms for the comprehensive examination are available online at <http://www.southalabama.edu/coe/forms/compsapp.pdf>.

#### **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: 33 minimum hours required (24 must be on the 500 level)

#### **A. Curriculum and Teaching**

**(six semester hours)**

EEC 553, EEC 554

#### **B. Educational Foundations**

**(six semester hours)**

EDF 515, EPY 502

#### **C. Research and Evaluation**

**(three semester hours)\*\***

IDE 510

#### **D. Technology (three semester hours)**

EDM 510

#### **E. Teaching Field (15 semester hours)**

Select one: EEC 535, EEC 536, EEC 537

Select one: RED 530, RED 531, RED 545

Electives: (9 semester hours)

Advisor approved 500 level courses

All certification programs require an introductory special education course SPE 500, if not completed at the undergraduate

level. **This is in addition to the 33 semester hour requirement.**

\*\*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.**

#### **Comprehensive Examination**

After completing 33 semester hours of course work, the student must complete successfully a comprehensive examination covering all areas of the student's program. Application forms for the comprehensive examination are available online at <http://www.southalabama.edu/coe/forms/compsapp.pdf>.

#### **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: 33 minimum hours required (24 must be on 500 level).

#### **A. Curriculum and Teaching**

**(six semester hours)**

EEC 522, EEC 523

#### **B. Educational Foundations**

**(six semester hours)**

EDF 515, EPY 502

#### **C. Research and Evaluation**

**(three semester hours)\*\***

IDE 510\*

IDE 620 (Thesis Option Only with IDE 510)

#### **D. Technology (three semester hours)**

EDM 510

#### **E. Teaching Field (15 semester hours)**

Select one: EEC 532, EEC 535, EEC 536, EEC 537

Select one: RED 530, RED 531, RED 545

Electives: (9 semester hours)

Advisor approved 500 level courses

All certification programs require an introductory special education course SPE 500, if not completed at the undergraduate level. **This is in addition to the 33 semester hour requirement.**

\*\*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. An advising sheet is available upon request from the Department of Leadership and Teacher Education, College of Education. 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. See College section of **Bulletin** for admission requirements. Successful completion of the Alabama Prospective Teachers Test (APTT) is required for admission.

#### Prerequisites

RED 330, RED 333, MA 201

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.

#### Program

The program for the Alternative M.Ed. in Elementary Education and Early Childhood Education is as follows: 42 minimum graduate hours requires (30 must be 500 level).

##### A. Curriculum and Teaching

(six semester hours)

EEC 522\* (Elem), EEC 553\* (ECE), EEC 523\* (Both)

##### B. Educational Foundations

(six semester hours)

EDF 515 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

##### 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). SPE 500 required if not previously taken and is in addition to the 42 hours.

#### MASTER'S DEGREE IN READING EDUCATION

**1. Admission.** Requirements for admission to the Class A Reading Specialist program shall include:

- At least baccalaureate-level professional educator certification in any area of education;
- Two years of successful classroom teaching experience; and
- Certification in Early Childhood Education, Elementary Education, Collaborative Teacher (K-6 or 6-12), or Secondary Education (Language Arts)
- Completion of two reading courses including an introduction to reading course.

\*All certification programs require an introductory special education SPE 500, if not completed at the undergraduate level. This is in addition to the 33 semester hour requirement.

#### 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 of Education

(six semester hours)

EDF 515, EPY 502

##### C. Research and Evaluation

(three semester hours)

IDE 510

##### D. Teaching Field (18 semester hours)

EEC 532, RED 531, RED 533, RED 534,

RED 541, RED 545

##### 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 (33 semester hours)

##### A. Curriculum and Teaching

(six semester hours)

SED 552

Specific Course for certificate area:

**Language Arts**

SED 561

**Mathematics**

SED 563

**Science Programs**

SED 564

**Social Science Programs**

SED 562

##### B. Foundations of Education

(six semester hours)

EPY 502, EDF 515

##### C. Research and Evaluation

(six semester hours)

IDE 510

(Prerequisite: EPY 455 or equivalent)

SED 560

##### 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.

**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

**Certification options are also available for Art Education, and English for Speakers of Other Languages.**

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 33 semester hour requirement.

#### 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 (45 semester hours)

##### A. Curriculum and Teaching

(nine semester hours)

SED 555, SED 559

Appropriate methods course for the teaching specialization.

##### B. Foundations of Education

(six semester hours)

EDF 515, EPY 502

##### 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 each of the areas of the comprehensive field in addition to the area on concentration.

**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. You must take a comprehensive end of program examination during the semester you complete your internship.

**Certification options are also available for Art Education, and English for Speakers of Other Languages.**

Please visit [http://www.southalabama.edu/coe/coursesofstudy\\_shtml](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, Early Childhood Special Education, and Gifted** provided they already have certification in any area of education.

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 in planning students' courses of study. Such planned programs should be approved before the completion of nine semester hours of work. Planned programs will also indicate prerequisite courses. Failure to follow the advised planned program of study could result in the student being blocked from registration.

The Special Education Program requires that students who receive a grade of "C" on courses in Special Education, 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. No faculty member other than the assigned advisor may advise Special Education students.

The student has the sole responsibility for initiating applications and meeting test and other deadline requirements.

### **WRITTEN COMPREHENSIVE EXAMINATION**

Satisfactory performance on a written comprehensive examination is required of all

graduate students prior to the completion of their program. The exam is taken during or after the final course work is complete.

### **MASTER OF EDUCATION DEGREE PROGRAM IN SPECIAL EDUCATION**

The requirements for the Master of Education include a minimum of 33 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 and needs.

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 Special Education. The 33 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:  
EPY 502, EPY 521

**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, SPE 505, and Internship (SPE 595, or advisor approved elective if student has current Class "B" certificate in Collaborative K-6).

6-12 majors take SED 552 and SED 561 or SED 562 or SED 563 or SED 564 or SPE 505, and internship (SPE 596 or advisor approved elective if student has current Class "B" certificate in Collaborative 6-12).

\*All certification programs require an introductory special education course SPE 510, if not completed within seven (7) years of entry to the master's program. **This is in addition to the 33 semester hour requirement.** Students seeking certification in both K-6 and 6-12 must complete an internship for each.

#### **PROGRAM FOR EARLY CHILDHOOD SPECIAL EDUCATION**

For students with a valid Class "B" certificate in Early Childhood Special Education. The 33 semester hour minimum program for the M.Ed. in the area of Early Childhood SPE:

**Curriculum and Teaching (six semester hours)**  
SPE 512, SPE 516

**Educational Foundations (three semester hours)**  
EPY 502

**Technology (three semester hours)**  
EDM 510

**Research and Evaluation (three semester hours)**  
IDE 510

**Teaching Field (eighteen semester hours)**  
SPE 505, SPE 515, SPE 534, SPE 535, SPE 591, SPE 592

\*All certification programs require an introductory special education course SPE 510, if not completed within seven (7) years of entry to the master's program. This is in addition to the 33 semester hour requirement.

#### **PROGRAM FOR TEACHERS OF THE GIFTED**

The 33 semester hour minimum program for the M.Ed. in the teaching of the gifted and talented includes:

**Curriculum and Teaching (three semester hours)**  
SPE 523

**Educational Foundations (six-nine semester hrs)**  
\*SPE 500

**Select One:**  
EDF 501, EDF 515

**Select One:**  
EPY 502, EPY 521

**Technology (three semester hours)**  
EDM 510

**Research and Evaluation (three semester hours)**  
IDE 510

**Teaching Field (nine semester hours)**  
SPE 521, SPE 522, SPE 524

**Internship (three semester hours)**  
SPE 598, completion of the SPE Gifted courses required prior to enrollment in the internship.

#### **Electives (six semester hours)**

**Guided electives to be selected with advisor approval.**  
Suggested courses include (on campus) SPE 511, SPE 514, SPE 515, SPE 518, SPE 591 (online), CED 584, EEC 577.

\*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 33 semester hour requirement.

#### **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 a Class "B" certification in an area of Special 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  
(fifteen semester hours)**

EDM 510, EPY 502, EPY 525, EDF 515, RED 531

**Teaching Field (24 semester hours)**

SPE 589, SPE 510, 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).

**ALTERNATIVE M.Ed. IN EARLY  
CHILDHOOD SPECIAL EDUCATION**

This is a special alternative program for individuals with a baccalaureate degree in non-teacher education fields and for individuals without Class "B" certification in Early Childhood Special 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 in Special Education have at least 12 semester hours in each of the following areas: English language arts, mathematics, sciences, and social sciences.

All prerequisites are required prior to admission to the program. See College section of **Bulletin** for admission requirements.

**Foundations Requirements  
(fifteen semester hours)**

EDM 510, EPY 502, EPY 525, EDF 515, RED 531

**Teaching Field Bulletin (24 semester hours)**

SPE 532, SPE 533, SPE 589, SPE 510, SPE 515, SPE 535 or SPE 514, SPE 591, SPE 592

**Internship (three semester hours)**

SPE 597 (Students must have a passing score on the appropriate Praxis II prior to enrollment in the internship).

**NOTE: We require all graduate students in Special Education (who are not already certified in their field of study) to observe a classroom or setting which is a model of good teaching practice in their proposed field of certification. Students are to make a total of four (4) full-day observations before the internship.**

**ADVANCED GRADUATE STUDY:  
SIXTH-YEAR (POST-MASTER'S)  
PROGRAMS  
(Ed.S. and Class AA Certification)**

Post-Master's or Sixth-Year Graduate Programs which lead to an Instructional Specialist (Ed.S.) Degree and/or AA (State of Alabama) Professional Certification are available for qualified individuals.

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 Instructional Specialist program include, IDE 620, IDE 640, IDE 650, IDE 692, EPY 602, EDF 615 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.

**COLLABORATIVE TEACHING**

**Teaching Field (12 semester hour minimum)**

Course work to be approved by student's graduate program committee.

SPE 510 is taken only if the student has not had a recent equivalent. The course then becomes an added course to the program.

**DESCRIPTIONS OF LEADERSHIP AND  
TEACHER EDUCATION COURSES:**

**DESCRIPTION OF ALL ART  
EDUCATION (AED) COURSES BEGIN  
ON PAGE 149.**

**DESCRIPTION OF ALL EDUCATIONAL  
FOUNDATIONS (EDF) COURSES BEGIN  
ON PAGE 187.**

**DESCRIPTION OF ALL EDUCATION  
LEADERSHIP (EDL) COURSES BEGIN  
ON PAGE 187.**

**DESCRIPTION OF ALL ELEMENTARY/  
EARLY CHILDHOOD EDUCATION  
(EEC) COURSES BEGIN ON PAGE 194.**

**DESCRIPTION OF ALL READING  
EDUCATION (RED) COURSES BEGIN  
ON PAGE 265.**

**DESCRIPTION OF ALL SECONDARY  
EDUCATION (SED) COURSES BEGIN  
ON PAGE 266.**

**DESCRIPTIONS OF ALL SPECIAL  
EDUCATION (SPE) COURSES BEGIN  
ON PAGE 269.**

**DESCRIPTIONS OF ALL ENGLISH  
LANGUAGE TEACHING (ELT)  
COURSES BEGIN ON PAGE 200.**

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**DEPARTMENT OF  
PROFESSIONAL STUDIES**

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Chair: Charles L. Guest, Jr. (251) 380-2861  
Professors: Davidson-Shivers, Dempsey, Hayes, Johnson, Litchfield, Robenstine, Strange, Van Haneghan  
Associate Professors: Clark, Fregeau, Guest, McIntosh, Robinson, Surry  
Assistant Professors: Hunter, Juarez, Lewis, Millner, Norris, Stefurak, Wilson  
Instructors: 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, and in Counselor Education in an educational setting leading to certification in School Counseling and School Psychometry, and the Master of Science degree in Counselor Education with an emphasis in Community 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, school psychometrist 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, at least one of which must be in teaching. The initial certificate is good 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" or more information.

**COUNSELOR EDUCATION PROGRAMS**

The programs described below are designed to provide for the acquisition of skills and competencies needed by counselors and psychometrists 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 Counseling and Psychometry Graduate Student Handbook.

**ADMISSIONS REQUIREMENTS**

Applications for graduate programs in counseling and psychometry are reviewed throughout the year. Deadlines for all application materials (specified below) are: for Fall admission - June 15; for Spring admission - November 1, and for Summer admission - April 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. Two letters of recommendation from persons familiar with the applicant's academic and/or professional abilities.
4. A written two-page statement of the applicant's career goal(s) and purpose(s) for pursuing the Master's program in counseling or psychometry.
5. Results of the Graduate Record Examination (GRE): Verbal, Quantitative, Writing ; or the Miller Analogies Test (MAT).
6. Resume.
7. Requirements for School Counseling and School Psychometry admission include baccalaureate-level or master's-level valid professional Educator certification in a teaching field.

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; and program enrollment and availability. All new students are required to attend the counseling and Psychometry 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 or School Psychometry, two years of satisfactory teaching experience is required.

#### **REQUIREMENTS FOR SCHOOL COUNSELING**

##### **(42 Semester hours Minimum)**

Major Instructional Support Area:

(33 Semester hours)  
CED 565, CED 566, CED 571, CED 572, CED 574, CED 576, CED 583, CED 584, CED 586, CED 588, CED 595 Internship (3 semester hours required; 300 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 500 Must be taken for 3 additional hours by students who have not previously satisfied the special education requirement.

#### **REQUIREMENTS FOR SCHOOL PSYCHOMETRY**

##### **(39 Semester Hour Minimum)**

Major Instructional Support Area:

(27 Semester hours)  
EPY 555, EPY 556, EPY 557, EPY 558, CED 560, CED 571, CED 583, CED 584, CED 596 Internship (3 semester hours required; 300 contact hours)

Related Studies in Educational Foundations

(9 Semester hours)  
EPY 521

One course from the following:

EDF 501, EDF 515

One additional course in EDF, EPY or related field.

Research in Education Area:

(3 Semester hours)  
IDE 510

\*SPE 500 Must be taken for 3 additional hours by students who have not previously satisfied the special education requirement.

#### **REQUIREMENTS FOR COMMUNITY COUNSELING**

##### **(48 Semester Hour Minimum)**

Required Major Professional Core:

(33 Semester hours)  
CED 560, CED 566, CED 571, CED 572, CED 574, CED 576, CED 584, CED 586, CED 588, CED 597 (6 semester hours. required; 600 contact hours)

Required Related Professional Courses

(9 Semester hours)  
IDE 510, EPY 521, EPY 555

Approved Electives: (6 Semester hours)

#### **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" Endorsement in Library Media*. These options prepare students to plan, design, and administer library/media centers and qualify them to serve as School Library Media Specialists/Librarians in P-12 schools. For students with a valid Class "B" certificate in a teaching field, both options will lead to P-12 certification in Alabama. To be eligible for the "Alabama Class "A" Endorsement in Library Media" option, students must have a master's degree and valid Alabama Class "A" certificate in a teaching field or support area, and must have completed the equivalent graduate course work listed under the Instructional Support area for the master's degree. 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**

Applicants for the Educational Media program are reviewed throughout the year. Deadlines for all application materials (specified below) are: Fall admission - June 15; Spring admission - November 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. Valid Certification: For the Master's degree, baccalaureate-level or master's level professional education certification in a teaching field. For the endorsement only, an Alabama Class "A" Certificate in a teaching field or instructional support area.
6. Results of the Graduate Record Examination (GRE), including the written 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 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 33 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
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 520 or EDM 510, 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)

**III. Instructional Support Courses (12 semester hours)**

EPY 502, EDF 515, 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” Endorsement in Library Media (21 semester hours)**

Students entering this program must have a master’s degree and a valid Alabama Class “A” Certification in a teaching field or instructional support area. 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 520 or EDM 510, 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)

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 total hours, 150 must be accumulated in a P-12 school library media center. Although it is preferred that all internship hours are accumulated in a P-12 school library media

center, other settings may be approved such as a public or university library. Internship A MUST be conducted in a school library media center. Of the 300 total hours, at least 100 must be at the elementary level (K-6) and at least 100 at a secondary school (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.southalabama.edu/> (click on Academic Information and then Educational Media) or contact Ms. Glenda Carpenter, University of South Alabama, College of Education, Department of Professional Studies, UCOM 3800, Mobile, AL 36688-0002. Telephone (251) 380-2861; E-mail: [gcarpenter@usouthal.edu](mailto:gcarpenter@usouthal.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.

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 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.

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@usouthal.edu](mailto:gmclean@usouthal.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.

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 M.S. Degree in Instructional Design and Development, candidates must satisfactorily complete the following program with a minimum grade-point average of 3.00 on all course work undertaken. Students must complete a written course of study by the end of their first semester in the program.

**REQUIREMENTS FOR THE M.S. DEGREE IN INSTRUCTIONAL DESIGN AND DEVELOPMENT PROGRAM (40 semester hours minimum)**

**I. Foundational Core Courses**

**(22 semester hours required)**

ISD 600, ISD 610, ISD 613, ISD 621, ISD 641, EPY 502, IDE 510, IDE 660

**II. Concentration Courses**

**(15 semester hours required)**

ISD 581, ISD 582, ISD 583, ISD 584, ISD 602, ISD 611, ISD 612, ISD 620, ISD 622, ISD 640, ISD 642, ISD 650, ISD 651, ISD 652, ISD 653, ISD 655, ISD 656, ISD 682, CED 678, EPY 602, EPY 610, IDE 620, IDE 621, IDE 630, IDE 631, IDE 635, IDE 685, IDE 692, SY 512, PSC 580

**III. Field Courses**

**(Minimum of 3 semester hours required)**

ISD 595, ISD 598, ISD 599

**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 Master's comprehensive exam on the Foundational Core.

In addition, the applicant's progress and preparation for advanced work will be reviewed by a committee that will make a recommendation 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 course work and/or successful completion of the Master's comprehensive exam.

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, 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 vitae

The admission decision involves evaluation of the following: the grade-point average on undergraduate and graduate course work, scores on the GRE, letters of recommendation, 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/grad\\_require.html](http://www.southalabama.edu/admissions/grad_require.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 course work,
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)**

**Instructional Core**

**(21 semester hours minimum)**

EPY 602 or ISD 614, ISD 612, ISD 620, ISD 622, ISD 651, ISD 653, ISD 695

**Research Core**

**(21 semester hours minimum)**

IDE 620, IDE 621, ISD 623, IDE 630 or IDE 631, IDE 635, IDE 710\*, IDE 711\*

(\* IDE 710 and IDE 711 are 1 semester hour each; must be repeated for three semesters.)

**Supporting Course work**

**(minimum 9 semester hours)**

Courses must be taken after admission to the Ph.D. program and Foundational Core requirements are complete. 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**

Students will be in continuous enrollment in a dissertation research seminar (IDE 710/711) from the time they are admitted into the program until the end of their 6th semester in the program. From the time of admission until the end of their 3rd semester in the doctoral program, students will enroll each academic term for one semester hour of IDE 710, Research Seminar. From the beginning of their 4th semester in the doctoral program until the end of their 6th semester, doctoral students will enroll each academic term for one semester hour of IDE 711, Research Seminar. Doctoral students must enroll in the Research Seminar even if they are not taking any other courses. After successful completion of these research seminar requirements, students choose other course work. In any case, 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.

#### Measurement/Research/Statistics Examination

This Measurement/Research/Statistics 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 and statistical skills.

#### Qualifying Examination

The Qualifying 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.

#### 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 transferred to the University of South Alabama; however, no prior commitments will be made by the Graduate School or the College of Education concerning approval of transfer credit to meet requirements in the Ph.D. program in Instructional Design and Development. 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. 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 170.

#### DESCRIPTIONS OF ALL EDUCATIONAL MEDIA (EDM) COURSES BEGIN ON PAGE 188.

#### DESCRIPTIONS OF ALL EDUCATIONAL PSYCHOLOGY (EPY) COURSES BEGIN ON PAGE 201.

#### DESCRIPTIONS OF ALL INSTRUCTIONAL DESIGN AND DEVELOPMENT PROGRAM (ISD) COURSES BEGIN ON PAGE 215.

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## COLLEGE OF ENGINEERING

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Dean: John Steadman (251) 460-6140

Director of Graduate Studies:

Thomas G. Thomas, Jr. (251) 460-6140

Assistant Dean: Robert C. Foley (251) 460-6140

**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

#### 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 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; 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.

A transfer student must complete at least 32 hours of approved 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 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. Engineering students must take at least one 6 semester hour in-depth sequence in either Humanities and Fine Arts or History, Social, and Behavioral Sciences.

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 90-day advance deadline established by the State Board of Registration for submission of examination application materials. Failure to meet the deadline could result in delayed graduation.

### 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 an 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/](http://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](#).

**DESCRIPTION OF ALL GENERAL ENGINEERING (EG) COURSES BEGIN ON PAGE 196.**

## DEPARTMENT OF CHEMICAL AND BIOMOLECULAR ENGINEERING

Chair: Srinivas Palanki (251) 460-6160

Professors: Dhawan, Harrison, Palanki, Sylvester

Assistant Professors: Leavesley, Morisani, West

Part-time Lecturers: Sadek

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.

**The Chemical and Biomolecular Engineering program's objectives are to produce graduates who during their first few years after college:**

1. Can work in an environment that requires problem solving skills, often utilizing a team based approach.
2. Can apply technical knowledge that is fundamental to the practice of chemical engineering, using techniques, skills and modern engineering tools as appropriate.
3. Can function especially well as a chemical engineer in the chemical and process industries.
4. Demonstrate proficiency in written, graphical, and oral communications.
5. Have continued the development of their knowledge and skills after graduation.
6. Appreciate professional, business and ethical responsibilities.

**The Bachelor of Science program in Chemical Engineering is accredited by the Engineering Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: (410) 347-7700.**

## 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	<u>4</u>	Gen Ed	<u>3</u>
	<b>17</b>		<b>18</b>

## SECOND YEAR

Fall		Spring	
MA 227	4	MA 238	3
CH 201	4	CH 265	4
PH 202	4	CHE 202	3
CHE 201	3	EG 270	3
Gen Ed	<u>3</u>	Gen Ed	<u>3</u>
	<b>18</b>		<b>16</b>

## THIRD YEAR

Fall		Spring	
Tech Elective I (Chem/Bio)	3	CHE 372	3
Gen Ed	3	EG 231	3
CHE 331	3	CHE 332	3
CHE 321	3	CHE 322	3
CHE 311	<u>3</u>	CHE 342	3
	<b>15</b>	Gen Ed	<u>3</u>
			<b>18</b>

## 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 461	3	CHE 442	2
Tech Elective II	<u>3</u>	Gen Ed	<u>3</u>
	<b>14</b>		<b>14</b>

## 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 in industry 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 grade-point average of 3.0 or greater (A=4.0) on all undergraduate work is required.
- b) For those students not holding a B.S. degree in chemical engineering from an ABET accredited program: a B.S. degree in engineering in a relevant field and a minimum combined score of 900 on the



## 120 COLLEGE OF ENGINEERING

verbal and quantitative sections of the Graduate Record Examination (GRE) is required.

### 2. Provisional Admission Requirements

- A minimum grade-point average of 2.5 (A=4.0) on all undergraduate work is required.
- A minimum combined score of 900 on the verbal and quantitative sections of the GRE is required.
- Applicants may substitute an American Chemical Society accredited B.S. degree in chemistry in place of the B.S. degree from an ABET accredited program.

### DEGREE REQUIREMENTS FOR MSChE

The minimum credit hour requirements for the different options pertaining to the MSChE degree are:

Thesis Option:	31 credit hours
Project Option:	34 credit hours
Course Option:	33 credit hours

### FIRST YEAR

Fall		Spring	
CHE 525	3	CHE 510	3
CHE 551	3	CHE 520	3
CHE 570	<u>3</u>	CHE Elective I	<u>3</u>
	<b>9</b>		<b>9</b>

### Summer

CHE Elective II	3
CHE Elective III	3
EG 501	<u>1</u>
(thesis & project only)	<b>7</b>

### SECOND YEAR

Fall		Spring	
Thesis	3	Thesis/Elective/	3
<b>OR</b>		Project	
Electives	6		
MS Comp Exam			

### DESCRIPTION OF ALL CHEMICAL ENGINEERING (CHE) COURSES BEGIN ON PAGE 174.

## DEPARTMENT OF CIVIL ENGINEERING

Chair: Kevin D. White (251) 460-6174

Professors: Douglass, Olsen, White

Associate Professor: Omar

Assistant Professors: Cristina, Hossain, Islam, Webb

Adjunct Associate Professor: Laier

**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.

The Civil Engineering program objectives are:

- Graduates will be prepared for engineering practice in the environmental, geotechnical, structural, transportation, and water resources/coastal engineering sub-disciplines and be prepared to pursue graduate education.
- Graduates will have the necessary written, graphical, and oral communication skills to effectively communicate to both technical and non-technical audiences.
- Graduates will be able to prepare practical engineering designs individually or as a part of a multidisciplinary design team.
- Graduates will be prepared to pursue professional registration and will be actively participating in continuing education and professional development.
- Graduates will recognize and be able to apply the principles of professional engineering practice, including ethics, environmental awareness, professionalism, societal impacts, and economics.

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 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 Commission of the ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: (410) 347-7700.**

### 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*	<u>3</u>	PH 201	<u>4</u>
	<b>15</b>		<b>17</b>

#### SECOND YEAR

Fall		Spring	
MA 227	4	MA 238 3	
Sci Elective**	4	Applied Math	3
CE 204	3	Elect***	
CE 205	1	EG 284	3
EG 283	3	EG 315	3
Gen Ed*	<u>3</u>	Gen Ed*	3
	<b>18</b>	Gen Ed*	<u>3</u>
			<b>18</b>

### THIRD YEAR

Fall		Spring	
EH 372	3	Gen Ed*	3
CE 314	3	CE 340	3
CE 315	1	CE 352	3
CE 384	3	CE 360	2
CE 385	1	CE 367	1
EG 231	3	CE 370	3
EG 360	<u>3</u>	CE 374	<u>1</u>
	<b>17</b>		<b>16</b>

### FOURTH YEAR

Fall		Spring	
CE 431	2	Design Elect*****	4
CE 443	2	Tech Elect*****	3
CE 441	1	Tech Elect*****	3
CE 470	3	Gen Ed*	3
CE 471	1	Tech Elect*****	<u>3</u>
Str Design****	3		<b>16</b>
Str Dsn Lab****	1		
CE 460	<u>3</u>		
	<b>16</b>		

\*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 PH 202

\*\*\* Either MA 237, MA 332, MA 354, ST 315, or ST 320

\*\*\*\*Either CE 480 and CE 481 (Steel Design) or CE 485 and CE 486 (Concrete Design)

\*\*\*\*\*CE 434, CE 435, CE 436, CE 437 or CE 438

\*\*\*\*\*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 grade-point average of 3.0 or greater (A=4.0) on all undergraduate work is required.
- A minimum combined score of 1000 on the verbal and quantitative sections of the GRE is required, and minimum score of 600 on the quantitative section of the GRE is also required.

- c) Names and email 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) For foreign students, a minimum score of 550 on the TOEFL and a 3.5 on the Test of Written English (TWE) 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 combined score of 1000 on the verbal and quantitative sections of the GRE is required, and minimum score of 600 on the quantitative section of the GRE is also required.
- c) Names and email addresses of three (3) references who can evaluate the applicant's previous academic and professional work must be submitted with the application.
- d) For foreign students, a minimum score of 550 on the TOEFL and a 3.5 on the Test of Written English (TWE) is required.

## 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 168.

## DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

Chair: Mohammad Alam (251) 460-6117  
 Professors: Alam, Parker, Rahman, Steadman  
 Associate Professors: Byrne, El-Saba, Khan, Sakla, Thomas  
 Assistant Professors: Alsharif, El-Sharkh, Haghani, Russ  
 Emeritus Professors: Bosarge, Gungor, Hayes  
 Part-time Instructors: Gardner, Gholson, Hayes, Lyons, Sisworahardjo

**Department of Electrical and Computer Engineering web site**  
<http://www.ece.usouthal.edu>

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 fundamental objectives of the Electrical Engineering Degree Program are to produce graduates who during their first few years after graduation:

- Are able to demonstrate a comprehensive knowledge in Electrical Engineering, founded

upon strong basic instruction in science, mathematics and engineering fundamentals. The electrical engineering topics may include electronics, control systems, signal processing, digital systems, communications, electromagnetics, instrumentation, power and electric machines.

- Have the background, means, and opportunity to plan and conduct experiments and to apply appropriate techniques for data collection, analysis, and interpretation.
- Have the necessary electrical engineering design skills, including the capacity for problem formulation, background research, solution generation, decision making, implementation, communication and teamwork.
- Can identify global, societal, legal, economic, and other key issues in arriving at ethical decisions in professional life.
- Are successful in their chosen field in the electrical engineering profession or are continuing their education at the graduate level.
- Have a commitment to professional development and life-long learning enabling continued career success in a changing technological environment.

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 fundamental objectives of the Computer Engineering Degree Program are to produce graduates who during their first few years after graduation:

- Are able to demonstrate a comprehensive knowledge in Computer Engineering, founded upon strong basic instruction in science, mathematics, and hardware and software engineering fundamentals. The computer engineering topics may include digital systems, computer architecture, electronics, control systems, hardware description languages, software design, and computer communications.

- Have the background, means, and opportunity to plan and conduct experiments and to apply appropriate techniques for data collection, analysis, and interpretation.
- Have the necessary computer engineering design skills, including the capacity for problem formulation, background research, solution generation, decision making, implementation, communication, and teamwork.
- Can identify global, societal, legal, economic and other key issues in arriving at ethical decisions in professional life.
- Are successful in their chosen field in the computer engineering profession or are continuing their education at the graduate level.
- Have a commitment to professional development and life-long learning enabling continued career success in a changing technological environment.

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, comprising three courses in each of the areas (i) and (ii) above must be successfully completed. This selection of General Education electives must include at least one (two-course) concentration in **either** area (i) **or** area (ii).

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 EG 231. 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 EG 231. 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

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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, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: (410) 347-7700.**

### BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING FIRST YEAR

Fall		Spring	
MA 125*	4	MA 126	4
CH 131*	4	EH 102*	3
EH 101*	3	PH 201	4
EG 101	2	CIS 210	3
Gen Ed	<u>3</u>	Gen Ed	<u>3</u>
	16		17

### 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	<u>3</u>	MA 237	3
	17	MA 238	3
		EG 270	<u>3</u>
			17

### THIRD YEAR

Fall		Spring	
EE 302	1	EE 328	3
EE 321	3	EE 334	4
EE 322	3	EE 355	3
EE 331	3	EE 337	1
EE 354	1	EE 365	3
EE 368	1	EE 372	3
EE 381	<u>3</u>	EE 385	<u>1</u>
	15		18

### FOURTH YEAR

Fall		Spring	
EE 356	1	EE 404	3
EE 401	1	Tech Elec**	3
EG 231	3	Tech Elec**	3
Gen Ed	3	Senior Lab***	1
Gen Ed	3	Gen Ed	<u>3</u>
Tech Elect**	3		13
Tech Elect**	<u>3</u>		
	17		

\*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 445, EE 465, EE 468, and EE 469.

Electromagnetics and Optics: EE 450, EE 452, EE 453, EE 454, EE 458, and EE 488.

Electronics: EE 430, EE 431, EE 432, EE 438, EE 439, EE 455, EE 457, 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.

\*\*\*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

Computer and Information Sciences:

Michael Doran (251) 460-6390

**The Bachelor of Science program in Computer Engineering is accredited by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, (410) 347-7700.**

### FIRST YEAR

Fall		Spring	
MA 125*	4	MA 126	4
CH 131*	4	EH 102*	3
EH 101*	3	PH 201	4
EG 101	2	CIS 210	3
Gen Ed	<u>3</u>	Gen Ed	<u>3</u>
	16		17

### SECOND YEAR

Fall		Spring	
MA 227	4	EE 223	3
MA 267	3	EE 227	1
PH 202	4	EE 263	3
EE 220	3	CIS 230	3
CIS 211	1	MA 238	3
Gen Ed	<u>3</u>	Gen Ed	<u>3</u>
	18		16

### THIRD YEAR

Fall		Spring	
EE 268	1	EE 328	3
EE 321	3	EE 334	4
EE 331	3	EE 368	1
EE 264	3	EE 322	3
Gen Ed	3	CIS 322	3
CSC 311	3	Gen Ed	<u>3</u>
EE 302	<u>1</u>		17
	17		

### FOURTH YEAR

Fall		Spring	
EE 401	1	EE 404	3
EE 445	3	EE 468	3
EE 446	1	Tech Elec**	3
EG 231	3	Tech Elec**	3
Tech Elec**	3	Senior Lab***	<u>1</u>
Tech Elec**	3		13
Tech Elec**	<u>3</u>		
	17		

\*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 457, EE 465, EE 469, EE 470, EE 471, and EE 473. CIS technical electives must be selected from CSC 410, CSC 411, CSC 412, CSC 413, CSC 414, CSC 415, CSC 433, 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 CIS 231, 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, micro-electronics, 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) A grade-point average of 3.0 or greater (A=4.0) on all undergraduate work is required.
- b) A minimum combined score of 1000 on the verbal and quantitative sections of the GRE is required.
- c) The applicant may have no more than two failures in courses taken in the undergraduate program.

**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 1000 on the verbal and quantitative sections of the GRE is required.
- c) The applicant may have no more than two failures in courses taken in the undergraduate program.

**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:	34 credit hours
Course Option:	36 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 189.**

**DEPARTMENT OF MECHANICAL ENGINEERING**

Chair: David A. Nelson (251) 460-6168  
 Professors: Donovan, Engin, Nelson  
 Associate Professors: Cauley, Phan  
 Assistant Professors: Dougherty, Hsiao, Jefferson  
 Instructors: Borowski, Foley, 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 field 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.

The educational objectives for the Bachelor of Science in Mechanical Engineering program at the University of South Alabama are that graduates:

1. are employed in positions in which they use mathematical and computational skills to analyze and solve problems involving mechanical and thermal systems;
2. use technical knowledge to plan and conduct experiments and apply the appropriate statistical techniques for data analysis;
3. demonstrate the ability to model, analyze, design and realize physical systems, components or processes in individual and team environments;
4. practice effective communications and teamwork in their professional careers;
5. make responsible and ethical decisions as engineers;
6. continue their educations through formal and informal means; and
7. successfully pursue professional registration, where it is appropriate to the graduate's situation.

**The Bachelor of Science in Mechanical Engineering program is accredited by the Engineering Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: (410) 347-7700.**

**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
	<b>16</b>		<b>17</b>

**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
	<b>17</b>	Gen Ed	3
			<b>18</b>

**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
	<b>18</b>		<b>14</b>

**FOURTH YEAR\*\*\*\***

Fall		Spring	
ME 412	1	ME 414	2
ME 413	2	ME 429	1
ME 426	3	ME 472	3
Design Elect+	3	ME Elect**	3
Tech Elect I***	3	Tech Elect III***	3
Tech Elect II***	3	Gen Ed*	3
	<b>15</b>		<b>15</b>

\*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, one fine arts, one CA 110 (Public Speaking), one history and one Social and Behavioral Science.

\*\*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, orthopaedic biomechanics, heat transfer and fluid mechanics with special emphasis on 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 combined score of 950 on the GRE, with a minimum score of 650

on the quantitative and a minimum score of 300 on the verbal section is required.

- c) For foreign students, a minimum score of 550 on the TOEFL 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 combined score of 950 on the GRE, with a minimum score of 650 on the quantitative and a minimum score of 300 on the verbal section is required.

- c) For foreign students, a minimum score of 550 on the TOEFL is required.

## 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 two in solid mechanics, one in fluid mechanics and one in thermal sciences. All candidates for the MSME degree also must complete MA 507 and MA 508. Students selecting the project or course option must complete EG 501.

## DESCRIPTIONS OF ALL MECHANICAL ENGINEERING (ME) COURSES BEGIN ON PAGE 230.

# COLLEGE OF MEDICINE

Dean of the College of Medicine:

Samuel J. Strada, Ph.D.

Director of Graduate Studies:

Ronald Balczon, Ph.D.

**(For Doctor of Medicine see separate Bulletin)**

**College Of Medicine web site**

<http://www.southalabama.edu/com/>

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. Research training is offered in traditional disciplines basic to medicine: Biochemistry and Molecular Biology, Cell Biology and Neuroscience, Microbiology and Immunology, Molecular and Cellular Pharmacology, or Physiology, and in the interdisciplinary Cancer Biology, Lung Biology Programs, and Vascular Biology.

## 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" 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](http://www.southalabama.edu).

Information for the graduate program can be obtained on-line <http://www.southalabama.edu/com/> or by contacting the Director of the Interdisciplinary Graduate Program in Basic Medical Sciences, MSB 2366, College of Medicine, University of South Alabama, Mobile, Alabama 36688-0002; Telephone: (251) 460-6153; FAX: (251) 460-6071; E-mail: [lflagge@jaguar1.usouthal.edu](mailto:lflagge@jaguar1.usouthal.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 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 and 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, the student should select a major professor and matriculate 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 and 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 closed defense of the dissertation at the end of a student's training program.
4. To assist the student in gaining superior scientific training and to accept responsibility for helping the graduate obtain opportunities for postdoctoral positions.

The student, in consultation with the major professor, shall prepare and submit for approval to the Dissertation Committee a two page research project description no later than the end of one and a half years of study.

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 department 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 student will be placed 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 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.

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#### DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY

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Chair: William Gerthoffer (251) 460-6402  
Professors: Aronson (Emeritus), Barik, Gerthoffer, Honkanen, Pannell  
Associate Professor: Lane  
Assistant Professors: Bitko, R. Gupte, S. Gupte, Rocic

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#### DEPARTMENT OF CELL BIOLOGY AND NEUROSCIENCE

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Chair: Glenn Wilson (251) 460-6490  
Professors: Gard, Kayes, LeDoux, Wilson  
Associate Professors: Balczon, Bhatnagar, Fields  
Assistant Professors: Alexeyev, Gebb, Lin, Rachek

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#### DEPARTMENT OF COMPARATIVE MEDICINE

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Chair: Jonathan Scammell (251) 460-6239  
Professor: Scammell  
Associate Professors: Brady, Gibson  
Assistant Professor: Schuler

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#### DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY

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Chair: David Wood (251) 460-7108  
Professors: Foster, Oakes, Winkler, Wood  
Associate Professors: Brewer, Rohrer  
Assistant Professors: Audia, Barrington, Brett, Burtnick

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#### DEPARTMENT OF PHARMACOLOGY

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Chair: Mark Gillespie (251) 460-6497  
Professors: Ayling, Gillespie, McMurtry, Olson, Scammell, Schaffer, Stevens, Strada, Wagner  
Associate Professors: Chinkers, King  
Assistant Professors: Al-Mehdi, Moore, Rich, Solodushko, Wu, Zhu

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#### DEPARTMENT OF PHYSIOLOGY

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Chair: Thomas Lincoln (251) 460-7004  
Professors: Ballard, Cohen, Downey, Lincoln, Parker, A. Taylor (Emeritus), Townsley  
Assistant Professors: M. Taylor, Weber, Yang

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#### CANCER BIOLOGY

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Contact: Glenn Wilson (251) 460-6490  
Advisory Committee: Balczon, Fodstadt, Honkanen, Ju, Lausch, Pannell, Samant, Shevede-Samant, Tucker

**LUNG BIOLOGY**

Coordinator: Mary Townsley (251) 460-6815  
 Advisory Committee: Stevens, Haynes, Strada,  
 A. Taylor

**VASCULAR BIOLOGY**

Coordinator: David Weber (251) 460-6840

**DESCRIPTIONS OF ALL COLLEGE OF MEDICINE COURSES:**

**DESCRIPTIONS OF ALL INTERDISCIPLINARY BASIC MEDICAL SCIENCE (IDL) COURSES BEGIN ON PAGE 212.**

**DESCRIPTIONS OF ALL BIOCHEMISTRY (BCH) COURSES 159.**

**DESCRIPTIONS OF ALL CELL BIOLOGY AND NEUROSCIENCE (CBN) COURSES BEGIN ON PAGE 168.**

**DESCRIPTIONS OF ALL MICROBIOLOGY AND IMMUNOLOGY (MIC) COURSES BEGIN ON PAGE 236.**

**DESCRIPTIONS OF ALL PHARMACOLOGY (PHA) COURSES BEGIN ON PAGE 255.**

**DESCRIPTIONS OF ALL PHYSIOLOGY (PHS) COURSES BEGIN ON PAGE 257.**

**COLLEGE OF NURSING**

Dean: Debra C. Davis (251) 434-3410  
 Associate Dean for Academic Affairs:  
 Rosemary Rhodes (251) 434-3410  
 Associate Dean for Research and Development:  
 Catherine Dearman (251) 434-3410  
 Associate Dean Baldwin County:  
 Barbara Broome (251) 929-1746  
 Professors: Broome, Chilton, D.C. Davis,  
 Dearman, Rhodes, Roussel  
 Associate Professors: Jacobs, Sanford, A. Smith,  
 K. Smith, Vande Waa  
 Assistant Professors: Fruh, Godfrey, Quiett,  
 K. Williams  
 Clinical Associate Professors: Hamilton,  
 Holloway, Lawson, Majors, Myers,  
 Varner, White  
 Clinical Assistant Professors: Azok, Bydalak,  
 Farmer, Fogger, Gilligan, Hall, Hill, Love,  
 King, T. Meyer, Morgan, Pharez, Raber,  
 C. Robinson, Walls  
 Instructors: Amberger, Bertolla, Bihan, Carlisle,  
 D.O. Davis, Dearmon, Denmark, Graves,  
 Harlan, Huey, Johnson, L. Jones, Keasler,  
 Lawrence, Lollar, McMullan, M. Meyer,  
 Menton, Minchew, Moore, Nadler, Norris,  
 Roberts, B. Robinson, Russell, Swanzy,  
 Whitworth, S.G. Williams, Wright  
 Department Chair, Adult Health Nursing:  
 Mike Jacobs  
 Department Chair, Community/  
 Mental Health Nursing: Barbara Broome  
 Department Chair, Maternal/  
 Child Health Nursing: Anita Smith  
 Director of Student Services: Mary Meyer  
 Director of RN-BSN: Bettye Odum  
 Academic Advisor: Mavis Jarrell

**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 Springhill campus. The other is on the USA Baldwin County campus in downtown Fairhope. The resources of the University, the USA Hospitals and clinics, and 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 and master's 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 Bachelors 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-Masters Certificates are awarded to students completing planned programs of study in a nursing specialty area. The following are offered:

Clinical Nurse Leader  
 Clinical Nurse Specialist in Adult/  
 Gerontological Nursing  
 Clinical Nurse Specialist in  
 Women's Health  
 Clinical Nurse Specialist in Pediatrics  
 Family Nurse Practitioner

Adult/Gerontological Nurse Practitioner  
 Adult/Gerontological Acute Care  
 Nurse Practitioner  
 Emergency Nurse Practitioner  
 Neonatal Nurse Practitioner  
 Women's Health Nurse Practitioner  
 Pediatric Nurse Practitioner  
 Family Psychiatric/  
 Mental Health Nurse Practitioner  
 Executive Nursing Administration  
 Nursing Education  
 Public Health Nursing Administration

**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.

**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 the MSN degree. Only one grade of "C" can be counted toward the DNP degree.

**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 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 9 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. 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 may also be responsible for costs related to drug testing and criminal background checks.

### DRUG SCREENS AND BACKGROUND CHECKS

Those students accepted into the Professional Component 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 may be withdrawn from students who in the judgment of the Dean and the

Admissions Committee has 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.

### 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.

### 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 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 that assists individuals, families, and communities with changing needs across the life span for health promotion and maintenance, illness care, and rehabilitation.
2. Use theoretical and empirical knowledge from nursing and related disciplines to think critically, communicate effectively, and provide professional nursing care in a variety of health care settings with diverse populations.
3. Assume responsibility and accountability for one's own nursing practice.
4. Evaluate research findings based upon evidence - based practice for use in nursing practice.
5. Participate in the improvement of the nursing profession, the health care delivery system, and the formulation of health policy through leadership, management, and teaching skills.
6. Collaborate with health care providers and consumers in promoting the health of individuals, families, and communities.

7. Incorporate ethical, moral, legal, and economic values into professional nursing roles designed to meet current and emerging health needs of a changing society.

### COLLEGE OF NURSING EARLY ACCEPTANCE PROGRAM (CONEAP)

The College of Nursing has an early acceptance program for highly qualified high school seniors. Students selected for the early acceptance program and fulfilling 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 College of Nursing and 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 documents must be submitted by February 15 of the senior year in high school to be considered. For questions and applications, contact USA Admissions, 2500 Meisler Hall, Mobile, Alabama 36688-0002 or call (800)872-5247 or (251)460-6141.

### NURSING COOPERATIVE EDUCATION PROGRAM (Co-op)

The University of South Alabama Nursing Cooperative Education program provides an opportunity for students to alternate time in the classroom with periods of paid, full-time, career-related experience.

An Academic Advisor in the College of Nursing will help students establish a degree plan that allows the smooth integration of classes and work. All students must consult their Academic Advisor to establish a complete degree plan before beginning the first work rotation.

### COOPERATIVE EDUCATION ADMISSION CRITERIA

The following are required to be considered for admission to the Co-op program. Prior to the first work experience, students must complete two semesters of study for a total of 29 credit hours toward the nursing degree. All students must be in good academic standing with the University and have at least a 2.5 prerequisite grade-point average. Admission is must maintain a minimum of 12 credit hours each semester when not participating in the Co-op program. Although no credit hours are assigned to Co-op courses, a grade of satisfactory (S) or unsatisfactory (U) is assigned



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at the end of each work term and will appear on the official University transcript. Students must achieve a grade of satisfactory (S) to remain in the Co-op program.

### CURRICULUM MODEL FOR BACHELOR OF SCIENCE DEGREE IN NURSING

#### 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	3
History Elective*	<u>3</u>	Elective	
<b>Total</b>	<b>13</b>	Humanities Elective	3
		MA 110 or MA 112	<u>3</u>
		<b>Total</b>	<b>16</b>

#### 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	<u>3</u>	HUM or	<u>3</u>
<b>Total</b>	<b>16</b>	HY Elective depending on sequence	
		<b>Total</b>	<b>16</b>

\*Must have a 2 semester sequence in either History or Literature.

#### Professional Component

#### JUNIOR YEAR

1st Semester		2nd Semester	
NU 325	4	CMN 350	3
NU 327	3	CMN 351	3
HSC 343	3	AHN 347	3
HSC 342	1	AHN 348	3
NU 300	3	HSC 332	<u>3</u>
NU 301	<u>2</u>	<b>Total</b>	<b>15</b>
<b>Total</b>	<b>16</b>		

#### 3rd Semester

NU 304	3
MCN 340	3
MCN 341	<u>3</u>
<b>Total</b>	<b>9</b>

#### SENIOR YEAR

1st Semester		2nd Semester	
MCN 345	3	NU 412	3
MCN 346	3	NU 413	3
AHN 447	3	CMN 420	3
AHN 448	3	NU 460	<u>5</u>
NU 409	<u>3</u>	<b>Total</b>	<b>14</b>
<b>Total</b>	<b>15</b>		

**Total Credits 130**

#### ACCELERATED B.S.N. TRACK

The College of Nursing has a special Accelerated BSN track for academically qualified and highly motivated individuals. The pre-professional component as listed above must be completed prior to admission to the professional component. The professional component of the curriculum which normally takes 5 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. At the end of the 12-months of study, students are awarded the BSN degree and are prepared for the RN licensure (NCLEX) examination. Students are admitted based on their academic record and prerequisite GPA. Admission is **competitive** and **limited**.

Students in the Accelerated BSN 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.

#### R.N. TO B.S.N. TRACK FOR ASSOCIATE DEGREE AND DIPLOMA NURSES

The College of Nursing has a track designed especially for registered nurses pursuing the baccalaureate in nursing degree. The college also offers a track 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 nursing curriculum can be completed in one calendar year. Courses are offered online and clinical requirements can be completed in the student's home community if approved by faculty. Each applicant's educational credentials are individually evaluated and a program of study is designed. Upon successful completion of NU 410, 36 hours of nursing credit are awarded.

#### CURRICULUM MODEL FOR THE REGISTERED NURSE

##### R.N.-B.S.N. TRACK

The following courses comprise the RN-BSN track. 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 Degree in Nursing listed above).

#### Completion of Prerequisite Courses

##### Professional Component for

##### R.N.-B.S.N. Track

#### 1st Semester

NU 410	6
NU 325	4
NU 327	<u>3</u>
<b>Total</b>	<b>13</b>

#### 2nd Semester

NU 409	3
CMN 411	3
NU 304	<u>3</u>
<b>Total</b>	<b>9</b>

#### 3rd Semester

NU 460	5
NU 412	3
NU 413	<u>3</u>
<b>Total</b>	<b>11</b>

**Total USA Nursing credits: 33**

#### ADMISSION CRITERIA FOR THE B.S.N.

The College of Nursing Admissions Committee and the Dean of the College

reserves 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 no adverse findings on a 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 accredited diploma or associate degree in nursing and a current unencumbered RN license.

#### APPLICATION PROCEDURES

Application forms are available on the College of Nursing's web site and in the Office of Student Services. A \$50.00 non-refundable application fee must be submitted with the application. Money orders or personal checks (\$20.00 fee on returned checks) are acceptable. For fall semester admission applications should be submitted by April 1.

For spring semester admission applications should be submitted by September 1.

For summer semester admission applications should be submitted by February 1.

Applications received at other times will be considered on a space available basis.

#### PROMOTION/PROGRESSION

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 5 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. 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 math 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 "I" will be given for the course and the student must complete additional remedial requirements the next term. Students failing to complete the remedial work will receive an "U" in the course. Registered nurse students in the RN-BSN and RN-MSN tracks are exempt from the math, 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.**

#### MASTER OF SCIENCE IN NURSING PROGRAM (MSN)

The College of Nursing is responsive to the unique needs of nurses and has several tracks and specialization options within the MSN program to facilitate students achieving the MSN. In addition to admitting baccalaureate prepared registered nurses, the college offers an accelerated MSN track for non-nurses, a track for associate degree or diploma prepared nurses who have a baccalaureate degree in a field other than nursing, a special track for highly qualified associate degree and diploma nurses who do not hold a baccalaureate degree, a track for non-MSN prepared certified nurse practitioners, and tracks for MSN prepared nurses who are interested in returning to school for preparation 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 eight nurse practitioner

specialist roles. Available NP options include Advanced Family Nursing, Advanced Emergency Nursing, Advanced Family Psychiatric Nursing, Advanced Pediatric Health Nursing, Advanced Neonatal Nursing, Advanced Women's Health Nursing, Advanced Adult/Gerontological Nursing, and Advanced Adult/Gerontological Acute Care Nursing. Concentrations are also available for students pursuing careers in Executive Nursing Administration, Public Health Nursing Administration, Clinical Nurse Specialist in Pediatrics, Clinical Nurse Specialist in Adult/Gerontological Health, Clinical Nurse Specialist in Women's Health, or Nursing Education. The Nursing Education tracks prepares students as educators and as clinical specialists (see [www.southalabama.edu/nursing](http://www.southalabama.edu/nursing) for more information).

#### GRADUATE ASSISTANTSHIPS

A limited number of graduate assistantships is available to students of full standing. Additional information and an application can be obtained by contacting the College of Nursing graduate office.

#### MASTER OF SCIENCE IN NURSING PROGRAM LEARNING OUTCOMES

The Master of Science in Nursing program prepares graduates for advanced nursing practice and doctoral study. Graduates of the program are able to synthesize and apply advanced knowledge, theories, and research to a specialized area of nursing practice and function as leaders in practice and to contribute to the advancement of the profession. The program outcomes are:

1. Integrate advanced knowledge and theories from nursing and related disciplines into a specialized area of advanced nursing practice.
2. Demonstrate competence in selected advanced nursing roles to meet current and emerging health needs of a changing society.
3. Use scientific inquiry to identify researchable problems and participate in nursing research.
4. Apply advanced knowledge of leadership, management, and teaching to improve nursing practice.
5. Influence the improvement of health care delivery and the formulation of health policy.
6. Contribute to the focus and direction of the nursing profession.

#### M.S.N. CURRICULUM FOR B.S.N. PREPARED REGISTERED NURSES

##### OPTION I Public Health Nursing Administration

<b>A. Core Courses (9 credits)</b>			
NU 506	3	NU 508	3
NU 507	3		
<b>B. Research Courses (3 to 6 credits)</b>			
NU 513	3		
<b>or</b>			
NU 599	3		
<b>C. Support Courses (3 credits)</b>			
NU 562	3		
<b>D. Specialty Courses (20 credits)</b>			
HSC 540	2	HSC 541	2
HSC 542	3	CMN 543	3
CMN 544	3	CMN 545	4
CMN 546	3		
<b>Total Credits 35</b>			

##### OPTION II Executive Nursing Administration

<b>A. Core Courses (9 credits)</b>			
NU 506	3	NU 508	3
NU 507	3		
<b>B. Research Courses (3 to 6 credits)</b>			
NU 513	3		
<b>or</b>			
NU 599	3		
<b>C. Support Courses (3 credits)</b>			
NU 562	3		
<b>D. Specialty Courses (19 credits)</b>			
NU 565	3	NU 566	3
NU 561	3	HSC 567	4
NU 568	3	HSC 571	3
<b>Total Credits 34</b>			

##### OPTION III Nursing Education/Clinical Nurse Specialist

<b>A. Core Courses (9 credits)</b>			
NU 506	3	NU 508	3
NU 507	3		
<b>B. Research Courses (3 to 6 credits)</b>			
NU 513	3		
<b>or</b>			
NU 599	3		
<b>C. Support Courses (6 credits)</b>			
NU 545	3		
NU 578	3		
<b>D. Specialty Courses (27 credits)</b>			
NU 518	3	NU 519	1
NU 524	3	NU 550	2
NU 546	2	NU 551	1
NU 547	1	NU 520	3
NU 548	2	AHN 526 or	4
NU 549	1	MCN 526 or	4
AHN 525 or	4	MCN 528	4
MCN 525 or			
MCN 527			
<b>Total Credits 45</b>			

##### OPTION IV Clinical Nurse Leader

<b>A. Core Courses (9 credits)</b>			
NU 506	3	NU 508	3
NU 507	3		
<b>B. Research Courses (3 to 6 credits)</b>			
NU 513	3		
NU 599	3		
<b>C. Support Courses (6 credits)</b>			
NU 545	3		
NU 578	3		
<b>D. Specialty Courses (19 credits)</b>			
NU 518	3	NU 536	5
NU 519	1	NU 537	3
NU 535	3	NU 538	4
<b>Total Credits 37</b>			

##### OPTION V Clinical Nurse Specialist

<b>A. Core Courses (9 credits)</b>			
NU 506	3	NU 508	3
NU 507	3		
<b>B. Research Courses (3 to 6 credits)</b>			
NU 513	3		
<b>or</b>			
NU 599	3		
<b>C. Support Courses (6 credits)</b>			
NU 545	3		
NU 578	3		
<b>D. Specialty Courses (18 credits)</b>			
NU 520	3	AHN 525	4
NU 524	3	<b>or</b>	
NU 518	3	MCN 525	4
NU 519	1	<b>or</b>	
		MCN 527	4

<b>and</b>		
AHN 526	4	
<b>or</b>		
MCN 526	4	
<b>or</b>		
MCN 528	4	

**Total Credits 36**

**OPTION VI Nurse Practitioner**

**A. Core Courses (9 credits)**

NU 506	3	NU 508	3
NU 507	3		

**B. Research Courses (3 to 6 credits)**

NU 513	3
NU 599	3

**C. Support Courses (9 credits)**

NU 545	3	NU 578	3
NU 518	3		

**D. Specialty Courses - Select One Track**

**Advanced Adult/Gerontological Nursing (28 - 37 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 Health 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 (30 credits)**

AHN 536	3	AHN 537	1
AHN 538	2	AHN 539	2
AHN 540	4	AHN 541	3
AHN 542	4	AHN 543	3
AHN 544	4	AHN 545	3
AHN 546	1		

**Total Credits 45-57**

**REQUIREMENTS FOR ADMISSION TO THE M.S.N. TRACK FOR B.S.N. PREPARED R.N.'S**

Admission to the MSN program is limited and selective. Students are admitted each semester as space is available in the selected specialty track. Applications are available on the college's web site and should be submitted by April 1 for consideration for fall admission, by September 1 for spring semester admission, and by February 1 for summer semester admission. A \$50.00 non-refundable application fee must be submitted with your application. Money orders or personal checks (\$20.00 fee on returned checks) are acceptable. Applications received at other times will be considered on a space available basis. 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. The following criteria supplement the Graduate School admission criteria (see Categories of Admission).

**Regular Admission**

1. Graduate of an approved bachelor's program with major in nursing.
2. Verification of a course or equivalent in research and health assessment.
3. Current unencumbered registered nurse licensure.
4. Submission of Health Data Forms and evidence of Health Insurance.
5. A grade-point average of 3.0 on all undergraduate work (A=4.00).
6. 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 experience in an area appropriate to the Specialty track.)
7. Negative drug screen.
8. Acceptable background check.  
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. Verification of a course or equivalent in research and health assessment.
3. Current unencumbered registered nurse licensure.
4. Submission of Health Data Forms and evidence of Health Insurance.
5. A minimal grade-point average of 2.75 on all undergraduate work (A=4.00).
6. Submission of a resume which documents clinical experience.  
(Note: Prior to enrolling in nurse practitioner clinical course, students are required to

7. Negative drug screen.
8. Acceptable background check.

**Non-Degree Admission**

1. Hold bachelor's degree from accredited institution.
2. Current unencumbered registered nurse licensure.
3. A minimal grade-point of 2.50 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.

**PROGRESSION FOR THE M.S.N. TRACK 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 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.

**REQUIREMENTS FOR DEGREE 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. Preparation in Public Health Nursing Administration requires a minimum of 35 semester credits for the M.S.N. degree. Minimum credits for preparation in Executive Nursing Administration requires 34 semester credits; Nursing Education/Clinical Nurse Specialist requires 45 semester credits; Clinical Nurse Leader requires 37 semester credits; Clinical Nursing Specialist requires 36 semester credits. Individualized programs of study are developed for baccalaureate prepared nurses with national certification as a nurse practitioner.

The program offers a thesis or non-thesis option. Students selecting the thesis option earn up to six credits for the thesis. Students selecting the non-thesis option earn one credit for a evidence based practice project. Students who do not complete the thesis in the allocated time must register for additional thesis hours until such work is completed. These additional hours will not apply towards the degree.

**POST-M.S.N. CERTIFICATE TRACKS**

The Post-MSN certificate tracks are designed for registered nurses with a graduate degree in nursing who seek academic preparation in a new specialty area of advanced nursing. Post-MSN students can select any of the specialty options offered by the program. Each certificate track is designed to be in compliance with national certification requirements including required support courses, didactic specialty courses, and clinical hours.

**REQUIREMENTS FOR ADMISSION TO THE POST M.S.N. CERTIFICATE TRACKS**

1. Graduate of master's or doctoral program with a major in nursing.
2. Verification of an undergraduate course or equivalent in health assessment.
3. Current unencumbered registered nurse license.
4. Submission of health data forms.
5. 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 experience in an area appropriate to the Specialty track.)
6. Admission is contingent upon a negative drug screen and results of a background check.

**PROGRESSION FOR THE POST M.S.N. TRACK**

Students follow the progression policies as for the MSN program for BSN prepared RN's.

**PROGRAM COMPLETION REQUIREMENTS FOR THE POST M.S.N. CERTIFICATE TRACKS**

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 TRACK FOR RN'S WITH A NON-NURSING BACCALAUREATE DEGREE**

This track is available to persons who are registered nurses and have a baccalaureate degree from an accredited institution in a discipline other than nursing.

**REQUIREMENTS FOR ADMISSION TO THE R.N. - M.S.N. TRACK FOR RN'S WITH A NON-NURSING BACCALAUREATE DEGREE**

Students are admitted to this track 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 FOR R.N. - M.S.N. TRACK FOR NURSES WITH NON-NURSING BACCALAUREATE DEGREES**

The following nursing courses must be completed with a GPA of at least 2.5 prior to enrolling in graduate nursing specialty courses

NU 410, CMN 411, NU 533, NU 325 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 track 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. TRACK 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.

By completing five graduate level bridge courses, time for completing the MSN degree can be reduced by one semester or 10 credits. 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. TRACK 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 96 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 will be awarded.

During 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 this phase the MSN will be awarded.

**PROGRESSION FOR THE R.N. - M.S.N. TRACK 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, and NU 532 Advanced Pharmacology. 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. TRACK FOR REGISTERED NURSES WHO DO NOT HOLD A BACCALAUREATE DEGREE**

Students in this track complete the following 33 credit curriculum for the BSN phase of the program. Undergraduate courses - NU 410, CMN 411, NU 412, NU 413, NU 460; Graduate Level Bridge Courses - NU 530, NU 531, NU 533, NU 534.

The Master of Science in Nursing phase of the program consist of a bridge course, core courses and specialty courses for each track. See curriculum below:

**OPTION I Clinical Nurse Leader**

<b>A. Bridge Courses (4 credits)</b>			
NU 534	4		
<b>B. Graduate Core Courses (6 credits)</b>			
NU 506	3	NU 507	3
<b>C. Support Course (3 credits)</b>			
NU 578	3		
<b>D. Approved Electives (2 credits)</b>			
<b>E. Specialty Courses (15 credits)</b>			
NU 535	3	NU 536	5
NU 537	3	NU 538	4
<b>Total Credits</b>	<b>30</b>		

**OPTION II Public Health Nursing Administration**

<b>A. Bridge Courses (4 credits)</b>			
NU 534	4		
<b>B. Graduate Core Courses (6 credits)</b>			
NU 506	3	NU 507	3
<b>C. Support Course (3 credits)</b>			
NU 562	3		
<b>D. Specialty Courses (20 credits)</b>			
HSC 540	2	HSC 541	2
HSC 542	3	CMN 543	3
CMN 544	3	CMN 545	4
CMN 546	3		
<b>Total Credits</b>	<b>33</b>		

**OPTION III Executive Nursing Administration**

<b>A. Bridge Courses (4 credits)</b>			
NU 534	4		
<b>B. Graduate Core Courses (6 credits)</b>			
NU 506	3	NU 507	3
<b>C. Support Course (3 credits)</b>			
NU 562	3		
<b>D. Specialty Courses (19 credits)</b>			
NU 545	3	NU 566	3
NU 561	3	NU 567	4
NU 568	3	HSC 571	3
<b>Total Credits</b>	<b>32</b>		

**OPTION IV Nursing Education/ Clinical Nurse Specialist**

<b>A. Bridge Courses (4 credits)</b>			
NU 534	4		

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**B. Graduate Core Courses (6 credits)**  
 NU 506 3 NU 507 3

**C. Support Course (3 credits)**  
 NU 578 3

**D. Specialty Courses (23 credits)**  
 NU 548 2 NU 520 3  
 NU 549 1 NU 524 3  
 NU 546 2 NU 550 2  
 NU 547 1 NU 551 1  
 AHN 525 4 AHN 526 4  
**Or Or**  
 MCN 525 4 MCN 526 4  
**Or Or**  
 MCN 527 4 MCN 528 4  
**Total Credits 36**

**OPTION V Clinical Nurse Specialist**

**A. Bridge Courses (4 credits)**  
 NU 534 4

**B. Graduate Core Courses (6 credits)**  
 NU 506 3 NU 507 3

**C. Support Course (3 credits)**  
 NU 578 3

**D. Approved Electives (3 credits)**

**E. Specialty Courses (14 credits)**  
 NU 520 3 AHN 525 4  
 NU 524 3 **Or**  
 MCN 525 4  
**Or**  
 MCN 527 4  
**And**  
 AHN 526 4  
**Or**  
 MCN 526 4  
**Or**  
 MCN 528 4  
**Total Credits 30**

**OPTION VI Nurse Practitioner**

**A. Bridge Course (4 credits)**  
 NU 534 4

**B. Graduate Core Courses (6 credits)**  
 NU 506 3 NU 507 3

**C. Support Courses (6 credits)**  
 NU 518 3 NU 578 3

**D. Specialty Courses**  
**Advanced Adult/Gerontological Nursing (28-37 credits)**  
 AHN 581 2 AHN 593 3  
 AHN 588 3 AHN 594 3  
 AHN 589 1 AHN 595 5  
 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 Health 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 (30 credits)**

AHN 536 3 AHN 537 1  
 AHN 538 2 AHN 539 2  
 AHN 540 4 AHN 541 3  
 AHN 542 4 AHN 543 3  
 AHN 544 4 AHN 545 3  
 AHN 546 1

**Total Credits 37-47**

**ACCELERATED M.S.N. TRACK FOR NON-NURSES**

The graduation program in the College of Nursing has a special accelerated track for advanced undergraduates and for individuals with non-nursing baccalaureate degrees. The curriculum can be completed in 18 to 24 months of full-time study and prepares the student for licensure as a registered nurse and for a career as a nurse educator/clinical nurse specialist, clinical nurse leader, or nurse administrator. In the first 12 months student complete undergraduate nursing foundation courses and five graduate "bridge" courses. These five graduate courses "bridge" undergraduate and graduate knowledge in pharmacology, pathophysiology, nursing research, health assessment, and nursing roles and leadership. Courses in the nursing foundation component of the curriculum are equivalent to the curriculum and contact hours 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.

At the end of the 12-month foundation component of the curriculum, students are awarded the BSN degree and are prepared for the RN licensure (NCLEX) examination. Students then begin the specialty component of the curriculum to prepare for a career in nursing education, nursing administration, or as a clinical nurse leader. Within the nurse educator track students further selected one of the following clinical concentration areas: adult

health nursing, maternal-infant nursing, community health nursing, child health nursing, or psychiatric/mental health nursing. 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 M.S.N. TRACK**

Admission is selective and competitive. The curriculum is intensive and fast paced. The College of Nursing reserve 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 an accredited baccalaureate program with a minimum 3.0 GPA on a 4.0 scale. In accordance with graduate school policy provisional admission may be granted to selected students who do not meet this standard.

**or**

Completion of all pre-requisite courses for the BSN degree with a minimum GPA of 3.0 on all college work attempted.

2. Applicants with a BS/BA degree 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, September 1 for Spring and February 1 for Summer.
4. Payment of \$50.00 non-refundable application fee.
5. Submission of health data form.
6. Submission of a negative drug test and no adverse findings on a background check.
7. Submission of 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.

**PROGRESSION FOR THE ACCELERATED M.S.N. TRACK**

Students must maintain an overall GPA of 3.0 on all work attempted in 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 specialization courses for the nurse educator/clinical nurse specialist, clinical nurse leader, or nurse administrator or in the following bridge courses; NU 530 Health Assessment, NU 531 Advanced Pathophysiology, and NU 532 Advanced Pharmacology. If a second C is earned in these courses the course in which the second "C" is obtain 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. During the foundation component of the curriculum, all students are required to pass a midcurricular exam. Students not successful in passing the exam are required to complete a 3 hour directed study course prior to progressing in the curriculum. Students are also required to complete an exit exam as part of NU 460 course requirements. If the student is unsuccessful on the exit exam a grade of “F” will be given for the course and the student must complete additional remedial requirements the next term. Students failing to complete the remedial work will receive an “F” for the NU 460.

A student may withdraw failing from only two courses, the third withdrawal failing results in dismissal. Students are required to apply for registered nurse licensure upon completion of the nursing foundation component of the curriculum and bridge courses. Prior to enrolling in the specialty component of the curriculum, students must possess their RN license or hold a temporary registered nurse license. Any student failing the licensure examination or allowing their temporary permit to expire will be withdrawn from the program.

#### CURRICULUM FOR ACCELERATED M.S.N.

##### FOUNDATION COURSES (53 credits)

HSC 342	1	MCN 341	3
NU 300	3	MCN 345	3
NU 301	2	MCN 346	3
HSC 332	3	AHN 447	3
CMN 350	3	AHN 448	3
CMN 351	3	CMN 420	3
AHN 347	3	NU 412	3
AHN 348	3	NU 413	3
MCN 340	3	NU 460	5

##### BRIDGE AND CORE COURSES (25 credits)

NU 506	3	NU 532	4
NU 507	3	NU 533	4
NU 530	4	NU 534	3
NU 531	4		

##### NURSING EDUCATION/CLINICAL NURSE SPECIALIST OPTION (23 credits)

NU 520	3	MCN 525	4
NU 524	3	or	
NU 546	2	MCN 527	4
NU 547	1	or	
NU 548	2	AHN 525	4
NU 549	1	and	
NU 550	2	AHN 526	4
NU 551	1	or	
		MCN 526	4
		or	
		MCN 528	4

**Total Credits 101**

**Or**

##### EXECUTIVE NURSING ADMINISTRATION OPTION (22 Credits)

NU 561	3	NU 567	4
NU 562	3	NU 568	3
NU 565	3	HSC 571	3
NU 566	3		

**Total Credits 100**

**Or**

#### CLINICAL NURSE LEADER OPTION (14 Credits)

NU 535	3	NU 537	2
NU 536	5	NU 538	4

**Total Credits 93**

#### ADDITIONAL INFORMATION FOR ACCELERATED 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 five graduate level bridge courses. Financial aid is restricted to the types of 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.

#### 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. 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 populations.
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 evidenced-based nursing care.

#### ADMISSION REQUIREMENTS

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 College of Nursing. These documents become the property of the University and will not be returned to the applicant. Students applying for admission must pay a non-refundable \$85.00 processing fee by the deadline date.

Application forms and other information may be obtained from the College of Nursing's

web site <http://www.southalabama.edu/nursing> or by contacting the college directly at College of Nursing, University of South Alabama, USA Springhill, Mobile, Alabama 36688; Telephone: (251)434-3410. Applications are accepted from December 1 through February 15 for admission to the program in the fall semester.

To be considered for admission the applicant must:

1. Hold a master of science in nursing degree with preparation in an area of advanced practice nursing offered by the USA College of Nursing (Adult/Gerontological Nurse Practitioner, Adult/Gerontological Acute Nurse Practitioner, Adult/Gerontological Acute Nurse Practitioner with Cardiovascular, Family Nurse Practitioner, Neonatal Nurse Practitioner, Family Psychiatric Nurse Practitioner, Pediatric Nurse Practitioner, Emergency Nurse Practitioner, Adult/Gerontological Clinical Nurse Specialist, Women's Health Clinical Nurse Specialist, Pediatric Clinical Nurse Specialist, Public Health Nursing Administration, or Executive Nursing Administration) **or** have a baccalaureate degree in nursing from an accredited institution with at least a 3.0 GPA. The curriculum for students not having a master's degree will include master's level course work and therefore will be substantially longer than the curriculum for the post-MSN student.

2. Hold an unencumbered U.S. registered nurse license.

Admission decisions will be based on an evaluation of the following required information:

1. Official transcripts of all previous college studies.
2. Submission of a portfolio which evidences potential for scholarly work:
3. Structured interview with graduate nursing faculty members, may be required.

Also to be considered in the selection process is a match between student goals and the areas of expertise of the graduate faculty.

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.

#### PROGRESSION

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 “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 one term 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.

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.

A student dismissed from the program as the result of an academic misconduct penalty will not be eligible for readmission to the DNP program or the University of South Alabama. 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 dean’s office or on the University’s web site.

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 II course 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.

**APPLICATION FOR DEGREE**

Each candidate for the doctor of nursing practice degree must make application for the degree the semester preceding the semester of graduation at the Registrar’s Office. See the [University calendar](#) for specific deadlines.

**CURRICULUM**

The DNP curriculum consists of 34 credits for the student holding a Master’s Degree in Nursing with preparation in an area of advanced nursing. The program can be completed in five semesters of full-time study or eight or eleven semesters of part-time study. The program must be completed within five years of matriculation for the MSN to DNP and seven years for the BSN to DNP. 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.

Course work is offered online and students are required to come to campus once each year for intensive classroom and evaluation sessions. 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 system level change and has a substantial effect on health care outcomes. Residency requirements for the synthesis project can be complete in the student’s home community with an approved mentor.

Courses in the curriculum are as follows:

- Critical Analysis of the Scientific Underpinnings of Advanced Nursing Practice (3 credits)
- Evidence Based Practice and Quality Improvement in Health Care (3 credits)

- Strategic Resource Management in Health Care (3 credits)
- Translating Evidence into Practice Systems (3 credits)
- Clinical Prevention and Population Health (3 credits)
- Organizational and System Leadership (3 credits)
- Project Planning and Development I (1 credit)
- Project Planning and Development II (1 credit)
- Project Planning and Development III (1 credit)
- Program Evaluation and Improvement of Clinical Outcomes (3 credits)
- Data and Decision Making in Complex Health Care Systems (3 credits)
- Residency in Systems Change I (3 credits)
- Residency in System Change II (4 credits)

**DESCRIPTIONS OF ALL NURSING COURSES:**

Nursing (NU) . . . . . 243

Adult Health Nursing (AHN) . . . . . 149

Community/Mental Health Nursing (CMN) . . . . . 179

Maternal/Child Nursing (MCN) . . . . . 228

Health Sciences (HSC) . . . . . 208

**SCHOOL OF COMPUTER AND INFORMATION SCIENCES**

Dean: Alec F. Yasinsac (251) 460-6390  
 Director, CIS Graduate Studies: R. J. Daigle  
 Coordinators: Doran (CSC), Pardue (ISC), Sweeney (ITE)  
 Professors: Daigle, Doran, Feinstein, Langan, Longenecker, Pardue, Yasinsac  
 Associate Professors: Hain, Johnsten, Landry, Sweeney  
 Assistant Professors: Li, Liginlal, Moulton, Zhou  
 Senior Instructors: Chapman, McKinney  
 Instructors: Black, Clark, Overstreet, Smith, Snow, Whitston

**School of Computer and Information Sciences web site**  
<http://www.cis.usouthal.edu>

**School of Computer and Information Systems Graduate Program**

The School of Computer and Information Sciences (CIS) provides a stimulating curriculum which includes a variety of courses for students in many disciplines, as well as for citizens in the business and industrial community.

**MISSION STATEMENT**

The School Mission Statement states:

The School of Computer and Information Sciences prepares graduates who are professionally competent, motivated to lifelong learning, and demonstrate ethical behavior in the computing sciences.

The School of Computer and Information Sciences provides an atmosphere for faculty to demonstrate research and teaching excellence.

The School of Computer and Information Sciences provides service in the computing sciences to our community and discipline.

**SCHOOL OF COMPUTER AND INFORMATION SCIENCES MAJORS**

The School of Computer and Information Sciences offers a Bachelor of Science in Computer Science (CSC), a Bachelor of Science in Information Systems (ISC), and a Bachelor of Science in Information Technology (ITE). Students enrolled in the School of Computer and Information Sciences must choose one of Computer Science, Information Systems, or Information Technology as a major. A joint program with the College of Engineering leading to the Bachelor of Science in Computer Engineering (CpE) is also offered.

**ACCREDITATION**

The Computer Science, Information Systems, and Information Technology programs are each accredited by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: (410) 347-7700. 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](http://www.abet.org/why_choose.shtml). For in-depth information on accreditation, go to [http://www.abet.org/the\\_basics.shtml](http://www.abet.org/the_basics.shtml).

**EDUCATIONAL OBJECTIVES**

The School of Computer and Information Sciences 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 OBJECTIVES OF ALL MAJORS IN THE SCHOOL OF CIS**

The shared learning outcomes for all programs in the School of CIS, Computer Science, Information Systems, and Information Technology programs, adapted from those specified by the Computing Accreditation Criteria, for Accrediting Computing Programs. Appendix A, (see <http://www.abet.org>), 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, and social responsibilities.
- (f) An ability to communicate effectively.
- (g) An ability to analyze the impact of computing on individuals, organizations, and society, including ethical, legal, security, and global policy issues.
- (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.

#### **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.

In addition to the shared learning outcomes, additional learning outcomes of the Computer Science program, adapted from those specified by the Computing Accreditation Criteria, for Accrediting Computing Programs, Appendix A, (see <http://www.abet.org>), enables students to achieve, by the time of graduation:

(CSC-a) 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 tradeoffs involved in design choices

(CSC-b) An ability to apply design and development principles in the construction of software systems of varying complexity.

#### **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.

In addition to the shared learning outcomes, an additional learning outcome of the Information Systems program, adapted from one specified by the Computing Accreditation Criteria, for Accrediting Computing Programs, Appendix A, (see <http://www.abet.org>), enables students to achieve, by the time of graduation:

(ISC-a) An understanding of processes that support the delivery and management of information systems within a specific application environment.

#### **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.

In addition to the shared learning outcomes, additional learning outcomes of the Information Technology program, adapted from those specified by the Computing Accreditation Criteria, for Accrediting Computing Programs, Appendix A, (see <http://www.abet.org>), enables students to achieve by the time of graduation:

(ITE-a) An ability to use and apply current technical concepts and practices in the core information technologies

(ITE-b) An ability to identify and analyze user needs and take them into account in the selection, creation, evaluation and administration of computer-based systems

(ITE-c) An ability to effectively integrate IT-based solutions into the user environment

(ITE-d) An understanding of best practices and standards and their application

(ITE-e) An ability to assist in the creation of an effective project plan.

#### **ADMISSION TO THE DEGREE PROGRAMS AND COURSES**

Admission to the University of South Alabama constitutes admission to the School.

#### **GENERAL REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREES IN THE SCHOOL OF COMPUTER AND INFORMATION SCIENCES**

Majors in the School of Computer and Information Sciences must complete requirements for one of the three Bachelor of Science Programs offered: Computer Science, 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 Computer and Information Sciences 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, Computer Science, Information Systems, and Information Technology, incorporates the general education requirements within the published programs.

All first-time freshmen in the School of CIS must successfully complete CIS 101: Freshman Seminar CIS 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.

In addition to an overall grade-point average of 2.0, all courses in the major, including Professional Component courses and prerequisites, 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 Computer and Information Sciences 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 CIS except for CIS 100, 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 minimum published standards. This is a one-student one-machine requirement. Students must register their laptops with the School of Computer and Information Sciences Office in FCW 20 during the first week of the semester. For more information consult **Laptop Policy** at <http://www.cis.usouthal.edu>.

#### **TRANSFER STUDENTS**

Transfer students must complete at least eighteen (18) credit hours of work at the 300-level or above at this University, in courses in their chosen program of study in the School of CIS. All undergraduate transfer students are required to take CIS 100, Information Technology in Society.

#### **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 three programs in the School of Computer and Information Sciences 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. Minimum requirements are a 3.25 GPA and a composite score of 1100 on the verbal and quantitative portions of the Graduate Record Examination (GRE) with neither score below 400. Financial aid is available to students admitted to the program.

#### **CHOICE OF CATALOGUE UNDER WHICH A STUDENT GRADUATES**

Majors in the School of Computer and Information Sciences may choose any catalogue 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 in CIS, changing their major in another college to a major in one of the programs in the School of Computer and Information Sciences or who interrupt their program of study for more than one calendar year are considered new students with respect to catalogue selection.

#### **PROFESSIONAL COMPONENT**

Upper division courses require Professional Component Standing (PCS). These courses must be completed with a minimum grade of "C" and are designated by the symbol PC for each of the three programs.



**PROFICIENCY EXAMINATION**

A proficiency examination is administered by the School of Computer and Information Sciences for placement in 250.

**REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN COMPUTER SCIENCE (CSC)**

1. **COMMUNICATION** - Twelve (12) credit hours are required as follows:
  - PC EH 101 \*English Composition I
  - PC EH 102 English Composition II
  - PC CA 275 Small Group Communications And EH 372 Technical Writing
2. **THE FINE AND PERFORMING ARTS AND THE HUMANITIES** - Fifteen (15) credit hours are required consisting of:
  - a. one course (3 semester hours) from ARS 101, DRA 110, MUL 101, ARH 100, ARH 103, ARH 123, ARH 240 or ARH 242,
  - b. one course from EH 215, EH 216, EH 225, EH 226, EH 235, EH 236

**And**

  - c. two additional courses (6 semester hours) from Art, Drama, Foreign Languages, Music, Philosophy and Literature,

**And**

  - d. PC CA 110 Public Speaking. Two courses in the SOCIAL SCIENCES or HUMANITIES 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).
3. **THE SOCIAL SCIENCES** - Twelve (12) credit hours are required from the consisting of:
  - a. one course from HY 101, HY 102, HY 135, or HY 136

**And**

  - b. three additional courses (9 semester hours) from the following approved areas: Anthropology, Criminal Justice, Economics, Geography, History, Political Science, Psychology, and Sociology. Two courses in the SOCIAL SCIENCES or HUMANITIES 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).
4. **THE NATURAL SCIENCES** - Sixteen (16) credit hours of natural sciences, which must include laboratory experiences, are required. Complete one of the following sequences:
 

A. PH 201, 201L	Cal-Based Physics I and
PH 202, 202L	Cal-Based Physics II
B. CH 131, 131L	Chemistry I and
CH 132, 132L	Chemistry II
C. GY 111, 111L	Geology I and
GY 112, 112L	Geology II
D. BLY 121, 121L	Biology I and
BLY 122, 122L	Biology II

**And**

Eight (8) credit hours of any approved natural science courses and the associated laboratory experience.

5. **MATHEMATICS AND STATISTICS'** Seventeen (17) credit hours are required as follows:

PC MA 125 Calculus I  
 PC MA 126 Calculus II  
 PC MA 267 Discrete Math

**Or**  
 PC MA 367 Combinatorial Enumeration, and  
 ST 315 Statistics

Three (3) additional hours from the approved math minor courses.

6. **CORE COURSES** - Forty-one (41) credit hours are required as follows:

PC CIS 100 Information Technology in Society

PC CIS 101 Freshman Seminar - CIS

PC CIS 120 Problem Solving and Prog Concepts I

PC CIS 121 Problem Solving and Prog Concepts II

PC CIS 230 Adv Data and File Structures

PC CSC 228 Digital Logic and Comp Architecture

CSC 311 Networking and Communications

CIS 322 Operating Systems

CSC 324 Database Concepts

CSC 331 Software Engineering Principles (W)

CSC 320 Computer Organization and Architecture

CSC 333 Program Language Theory

CSC 432 Perform Eval of Algorithms

CIS 497 Senior Project (W)

**And**

CIS 498 Senior Seminar

7. **CIS ELECTIVES** - Twelve (12) credit hours are required. Select any four (4) of the following courses:

CSC 410 Compiler Design & Const

CSC 411 Comm & 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 434 Formal Language and Automata Theory

CIS 439 Windows Programming

ITE 474 Human Computer Interface

8. **GENERAL STUDIES ELECTIVES** - Hours as needed to meet degree and 128 semester - hour requirement. All General Studies Electives must be approved by the Computer Science Coordinator.

**SUGGESTED FRESHMAN COURSES Computer Science Major**

Fall	Spring
CIS 100	CA 110
CIS 101	CIS 121
CIS 120	MA 125
MA 267	EH 102
EH 101*	FPA&H Elective
CA 275	

\*Students with a sufficient ACT/SAT score in English Composition will not be required to take EH 101.

Important information for 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> for additional guidance for use of the Computer Science 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 THE BACHELOR OF SCIENCE IN INFORMATION SYSTEMS (ISC)**

1. **COMMUNICATION** - Twelve (12) credit hours are required as follows:

PC EH 101 \*English Composition I  
 PC EH 102 English Composition II  
 PC CA 275 Small Group Communications

**And**

EH 372 Technical Writing

2. **THE FINE AND PERFORMING ARTS AND THE HUMANITIES** - Twelve (12) credit hours are required consisting of:

a. one course (3 semester hours) from ARS 101, DRA 110, MUL 101, ARH 100, ARH 103, ARH 123, ARH 240 or ARH 242,

b. one course from EH 215, EH 216, EH 225, EH 226, EH 235, or EH 236,

c. one additional course (3 semester hours) from Art, Drama, Foreign Languages, Music, Philosophy and Literature.

**And**

d. PC CA 110 Public Speaking.

Two courses in the SOCIAL SCIENCES or HUMANITIES 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).

3. **THE SOCIAL SCIENCES** - Twelve (12) credit hours are required consisting of:

a. one course from HY 101, HY 102, HY 135, or HY 136

b. two additional courses (6 semester hours) from the following approved areas: Anthropology, Criminal Justice, Economics, Geography, History, Political Science, Psychology, and Sociology.

**And**

c. PC EC 215 Principles of Microeconomics.

Two courses in the SOCIAL SCIENCES or HUMANITIES 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).

4. **THE NATURAL SCIENCES** - Eight (8) credit hours of natural sciences, which must include laboratory experiences, are required from approved areas: Physics, Chemistry, Geology, Biology, and Geography 101 and 101L, Geography 102 and 102L.

5. **MATHEMATICS AND STATISTICS** - Nine (9) credit hours are required as follows:

A. one course from  
 PC MA 120 Calculus and Its Applications

- PC MA 125 Calculus I  
PC MA 267 Discrete Math  
**And**
- B. one course from  
PC ST 210 Statistical Reasoning  
PC BUS 245 Applied Business Statistics I  
**And**
- C. one course from  
PC BUS 255 Applied Business Statistics II  
ST 310 Statistical Research Techniques  
PC ST 340 Design and Analysis of Experiments
- 6. INFORMATION SYSTEMS ENVIRONMENT** - Fifteen (15) credit hours are required as follows:
- A. Nine (9) credit hours from the following courses:  
PC ACC 211 Accounting Principles I  
PC ECO 215 Principles of Microeconomics  
MGT 300 Management Theory & Practice
- B. Six (6) credit hours of 200 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.
- 7. CORE COURSES** - Forty-six (46) credit hours are required as follows:
- PC CIS 100 Information Technology in Society  
PC CIS 101 Freshman Seminar - CIS  
PC CIS 175 Professional Productivity Applications  
CIS 115 Beginning Programming  
PC 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 475 Information, Systems Project Management  
ISC 360 Info Systems Analysis and Design (W)  
ISC 361 Database for Info Systems  
ISC 362 Information Systems Object-oriented Analysis & Design  
ISC 462 Information Systems Strategy and Policy  
ISC 474 Human/Computer Interface  
CIS 497 Senior Project (W)  
**And**  
CIS 498 Senior Seminar
- 8. CIS ELECTIVES** - Nine (9) credit hours of approved concentration electives are required. The following groups have been approved as concentration elective groups:
- A. **Group I:**  
Three (3) courses selected from:  
ITE 382 Network Administration  
ITE 384 Network Infrastructure  
ITE 476 Network Security Management  
ITE 484 Advanced Network Management
- B. **Group II:**  
Three (3) courses selected from:  
ITE 370 Advanced Application Development  
ITE 472 Advanced Data Management  
ISC 457 Data Warehousing & Decision Support  
ISC 463 Info Systems DBA and Security
- C. **Group III:**  
Three (3) courses selected from:  
ITE 375 Publishing for the World Wide Web  
ITE 380 Multimedia Production  
ITE 453 Web Site Management  
ITE 482 ITE E-Commerce Systems
- D. **Group IV:**  
Three (3) courses selected from:  
ITE 372 Advanced Operating Systems  
ITE 382 Network Administration  
ITE 373 File Systems for Digital Forensics  
ITE 473 Digital Forensics Analysis
- 9. GENERAL STUDIES ELECTIVES** - Hours as needed to meet degree and 128-semester-hour requirements. All General Studies Electives must be approved by the Information Systems Coordinator.
- SUGGESTED FRESHMAN COURSES**  
**Information Systems Major**
- | Fall    | Spring                        |
|---------|-------------------------------|
| CIS 100 | HY one of (101, 102, 135,136) |
| CIS 101 | ISC 245                       |
| CIS 175 | Fine Arts/Humanities          |
| EH 101* | EH 102                        |
| MA 120  | ACC 211                       |
| CA 110  |                               |
- \*Students with a sufficient ACT/SAT score in English Composition will not be required to take EH 101.
- Important information for 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 Technology program should consult <http://www.southalabama.edu/admissions/transfer/index.html> for transfer assistance.
- REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY (ITE)**
- 1. COMMUNICATION** - Twelve (12) credit hours are required as follows:
- PC EH 101 \*English Composition I  
PC EH 102 English Composition II  
PC CA 110 Public Speaking  
PC CA 275 Small Group Discussion  
**And One of**  
EH 372 Technical Writing  
**Or**  
EH 373 Writing in the Professions
- 2. THE FINE AND PERFORMING ARTS AND THE HUMANITIES** - Twelve (12) credit hours are required consisting of:
- a. one course (3 semester hours) from ARS 101, DRA 110, MUL 101, ARH 100, ARH 103, ARH 123, ARH 240 or ARH 242,  
b. one course from EH 215, EH 216, EH 225, EH 226, EH 235, or EH 236,  
c. one additional course (3 semester hours) from Art, Drama, Foreign Languages, Music, Philosophy and Literature,  
d. PC CA 110 Public Speaking  
Two courses in the SOCIAL SCIENCES or HUMANITIES 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).
- 3. THE SOCIAL SCIENCES** - Twelve (12) credit hours are required consisting of:
- a. one course from HY 101, HY 102, HY 135, or HY 136  
**And**  
b. three additional courses (9 semester hours) from the following approved areas: Anthropology, Criminal Justice, Economics, Geography, History, Political Science, Psychology, and Sociology.  
Two courses in the SOCIAL SCIENCES or HUMANITIES 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).
- 4. THE NATURAL SCIENCES** - Eight (8) credit hours of natural sciences, which must include laboratory experiences, are required from approved areas: Physics, Chemistry, Geology, Biology, and Geography (GEO 101 and GEO 101L; GEO 102 and GEO 102L).
- 5. MATHEMATICS AND STATISTICS** - Nine (9) credit hours are required as follows:
- A. one course from  
PC MA 120 Calculus and Its Applications  
PC MA 125 Calculus I  
PC MA 267 Discrete Math  
**And**
- B. one course from  
PC ST 210 Statistical Reasoning  
PC BUS 245 Applied Business Statistics I  
**And**
- C. one course from  
BUS 255 Applied Business Statistics II  
ST 310 Statistical Research Techniques  
ST 340 Design and Analysis of Experiments
- 6. CORE COURSES** - Forty (40) credit hours are required as follows:
- PC CIS 100 Information Technology in Society  
PC CIS 101 Freshman Seminar - CIS  
PC CIS 115 Beginning Programming  
CIS 321 Data Communications  
CIS 324 Database Design, Development, & Management  
CIS 497 Senior Project (W)

- CIS 498 Senior Seminar
- PC ITE 271 Intro to Information Tech I
- PC ITE 272 Intro to Information Tech II
- ITE 285 Intermediate Programming
- ITE 370 Advanced Application Dev
- ITE 474 Human Computer Interface
- ITE 475 IT Project Management
- ITE 480 Needs Assessment and Technology Evaluation (W)

**And**

- ITE 485 Senior Demonstration Project

7. **ITE ELECTIVES** - Twenty-one (21) credit hours are required. Students complete one of the following Focus Tracks consisting of nine (9) hours of specified courses and nine (9) hours of approved Information Technology support electives:

**A. Data Management:**

- ITE 372 Advanced Operating Systems
- ISC 457 Data Warehousing & Decision Support
- ISC 463 Info Systems DBA & Security
- ITE 472 Advanced Data Management

**B. Web Publishing:**

- ITE 375 Publishing for the World Wide Web
- ITE 382 Network Administration
- ITE 453 Web Site Management
- ITE 380 Multimedia Production

**C. Networking:**

- ITE 382 Network Administration
- ITE 384 Network Infrastructure Systems
- ITE 476 Network Security Management
- ITE 484 Advanced Network Management

**D. 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 are required. Support electives are designed to further refine and develop a set of focused skills. Support electives generally add the following types of skills to the focus track: communications, e-commerce, or business. Support electives require approval of advisor/ coordinator.

8. **GENERAL STUDIES ELECTIVES** - Hours as needed to meet degree and 128 semester-hour-requirements. All General Studies Electives must be approved by the Information Technology Coordinator.

**SUGGESTED FRESHMAN COURSES**  
**Information Technology Major**

Fall	Spring
CIS 100	CA 110
CIS 101	ITE 285
CIS 115	ITE 271
EH 101*	EH 102

- MA 120 Natural Science
- Social Science

\* Students with a sufficient ACT/SAT score in English Composition will not be required to take EH 101.

Important information for 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 COMPUTER AND INFORMATION SCIENCES**

Students wishing to obtain a minor in CIS must complete one (1) of the following four (4) options with a minimum grade of "C" in each course.

**1. Computer and Information Sciences (CIS) Option\***

- \*\*CIS 120 Problem Solving and Prog Concepts I
  - CIS 121 Problem Solving and Prog Concepts II
  - CIS 230 Adv Data & File Structures
  - CIS 322 Operating Systems
  - CSC 331 Software Engineering Principles
  - CIS 321 Data Communications and Networking
- And**
- CIS 324 Database Design, Development, & Management

**Or**

**2. Information Technology (ITE) Option\***

- CIS 115 Beginning Programming
- ITE 271 Intro to Information Technology I
- ITE 285 Scripting & Windows Prog
- ITE 272 System Architecture
- CIS 321 Data Communications and Networking
- CIS 324 Database Design, Development, & Management
- ITE 370 Advanced Application Dev

**And**

- ITE 382 Network Administration

**Or**

**3. Information Systems (ISC) Option\***

- CIS 115 Beginning Programming
- ISC 245 Info Systems in Organizations
- ISC 285 Scripting & Windows Prog
- ISC 272 System Architecture
- CIS 321 Data Comm and Networking
- CIS 324 Database Design, Development & Management

**And**

- ISC 361 Database for Info Systems

**Or**

**4. Computer Science (CSC) Option\***

- \*\*CIS 120 Problem Solving and Prog Concepts I
  - CIS 121 Problem Solving and Prog Concepts II
  - CIS 230 Adv Data & File Structures
- And 1 course from**
- CSC 228 Digital Logic and Computer Architecture
  - CSC 331 Software Engineering Principles (W)
- And 1 course from**
- CSC 311 Networking and Communications
  - CIS 321 Data Comm and Networking
- And 2 courses from**
- CSC 320 Computer Organization and Architecture
  - CIS 322 Operating Systems
  - CSC 324 Database Concepts
  - CSC 333 Programming Language Theory

**\*At least 9 hours of courses in the minor, including all 300 level courses, must be completed at the University of South Alabama.**

**\*\*Students who do not have prior programming experience will be required to enroll in CIS 115.**

**GRADUATE THE MASTER OF SCIENCE IN COMPUTER AND INFORMATION SCIENCES 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 concentration 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.
2. **INFORMATION SYSTEMS (ISC)** for students interested in business and organizational applications and information systems management.

**REQUIREMENTS FOR REGULAR AND PROVISIONAL 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 Graduate School, Categories of Admission) may qualify for admission to the School of Computer and Information Sciences Graduate Program.

- Applicants whose highest degree is a graduate degree from an accredited institution of higher education 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 in addition to the Graduate School requirements for Regular or Provisional Admission.

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; three (3) letters of reference regarding the applicant's ability to succeed in the Master of Science program in Computer and Information Sciences; professional experience; the applicant's statement of purpose; TOEFL scores (for international applicants); and program enrollment and availability.

#### NON-DEGREE ADMISSION

The School of CIS does not accept Non-Degree admissions to the Master of Science in Computer and Information Sciences.

#### LAPTOP OWNERSHIP POLICY

All students enrolling in any undergraduate or graduate courses offered by the School of CIS, except CIS 100, 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 minimum published standards. This is a one-student one-machine requirement. Students must register their laptops with the School of Computer and Information Sciences Office in FCW 20 during the first week of the semester. For more information consult **Laptop Policy** at [www.cis.usouthal.edu](http://www.cis.usouthal.edu).

#### CIS GRADUATE PROFESSIONAL COMPONENT

All CIS graduate courses require CIS Graduate Professional Component Standing. Upon entering the School of Computer and Information Sciences Graduate Program, the student meets with the coordinator of the student's specialization area (CSC or ISC) to prepare an initial draft of the student's personal program of study. To obtain a greater understanding of acquired computing skills and knowledge, the School of CIS may administer a CIS Foundation Placement Examination to students entering the School of CIS graduate program. The specialization coordinator reviews the student's previous academic work to see 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. Grades earned in prescribed Professional Component courses are used in determining probation or dismissal from the School of CIS graduate program. The CIS Foundation and

Requirement/Supporting Courses (undergraduate equivalents are listed in parenthesis) for each specialization are enumerated below:

#### 1. CIS GRADUATE FOUNDATION COURSES:

##### A. Computer Science (CSC)

Six (6) CIS Foundation courses for the CSC specialization are required:

- a. CIS 401 Accelerated Programming (CIS 120) (Problem Solving and Programming Concepts I)

**And**

- (CIS 121) (Problem Solving and Programming Concepts II)

- b. CIS 320 Advanced Data and File Structures  
c. CIS 311 Networking and Communications  
d. CIS 322 Operating Systems  
e. CSC 333 Program Language Theory  
f. CIS 324 Database Design, Development, and Management

##### B. Information Systems (ISC)

Four (4) CIS Foundation courses for the ISC specialization are:

- a. ISC 353 IS Applications Development (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

#### 2. REQUIRED SUPPORTING COURSES:

The supporting courses required for each specialization area are as follows:

##### A. Computer Science (CSC)

- MA 125 Calculus I  
MA 126 Calculus II  
MA 267 Discrete Math

**And**

- ST 315 Statistics

##### B. Information Systems (ISC)

- One Course From  
BUS 245 Applied Business Statistics I

**Or**

- ST 210 Statistical Reasoning

**And**

- MA 120 Calculus and Its Applications

#### INTERNATIONAL STUDENTS' SPECIAL REQUIREMENTS

International students must submit documentary evidence showing IELTS test scores of at least 5.5 or TOEFL test scores of at least 525 on the paper version, 197 on the computer version, or 71 of 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 CIS reserves the right to exclude students with more than three course failures. All international students will be required to take the ESL (English as a Second Language) examination

and may be required to enroll in ESL courses as part of their graduate program in addition to the normal requirements for the degree listed below.

#### CHOICE OF BULLETIN UNDER WHICH A STUDENT GRADUATES

Students entering the CIS 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 CIS, changing their major to CIS, 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 COMPUTER AND INFORMATION SCIENCES

No more than three graduate courses, maximum of nine (9) semester hours taken outside of the School of Computer and Information Sciences 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. Any such transfer courses must be approved by the Director of Graduate Studies for Computer and Information Sciences and the student's advisor and may not have been used to fulfill the requirements of another graduate degree.

#### SCHEDULING OF COURSES

The graduate program for CIS is primarily an evening program. The 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 they are 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 CIS graduate student. The five calendar year constraint also applies to all accepted transfer courses.

#### GRADUATE RESEARCH SEMINAR

The CIS 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, CIS 595, CSC 595, ISC 595, CIS 598, CSC 598, ISC 598, 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

Master's 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.cis.usouthal.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 Computer and Information Sciences. Applications can be obtained from the School of Computer and Information Sciences Office in FCW 20.

All graduate assistants must enroll in CIS 597, Computer and Information Sciences Graduate Seminar.

### COMPREHENSIVE EXAMINATION

All CIS 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 an oral examination is required of students who complete either the Thesis Concentration or the Project Concentration. The School of CIS Comprehensive Examination Policies and Procedures document and the Comprehensive Examination Application form are available at <http://www.cis.usouthal.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. Some policies and procedures that may be of interest are: Graduate Study for Advanced Undergraduates, Graduate School Academic Standards, Grade Standards, Change of Grade, Academic Dismissal, Final Grade Grievance Policy, Appeal Procedure, English Language Proficiency, Full Load of Course Work in a Semester, Change of Program, Student Responsibility, Degree Requirements for the Master's Degree, Guidelines for Theses and Dissertations, Standards for Theses and Dissertations, and Application for Degree.

### REQUIREMENTS FOR MASTERS DEGREE WITH COMPUTER SCIENCE (CSC) SPECIALIZATION

Students must satisfactorily complete any prescribed CIS Graduate Professional Component courses, a comprehensive examination, and thirty-six (36) graduate credit hours for the Master of Science degree with Computer Science specialization. The thirty-six (36) graduate credit hours consist of twelve (12) hours of CORE courses, three (3) semester hours of REQUIRED courses, and twenty-one (21) 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 520	Computer Architecture
CSC 522	Performance Evaluation of Algorithms
CSC 525	Complexity Theory

And

CSC 527	Software Engineering Principles
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#### 2. REQUIRED COURSES

(3 semester hours):

CIS 518	CIS Research Methodologies
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#### 3. CONCENTRATIONS (21 semester hours):

##### A. THESIS CONCENTRATION

Acceptance to the THESIS CONCENTRATION may occur after successfully completing each Computer Science core course with a minimum grade of "B" and CIS 518 with a grade of "C". Students must enroll in CIS 595 (Computer and Information Sciences Research Development) in the semester during which they defend their thesis prospectus. The thesis will normally be completed in one semester while enrolled in CIS 599 (Computer and Information Sciences Thesis). Students must enroll in CIS 599 in the semester during which they defend and/or submit their thesis. A grade of "C" in CIS 595 will result in dismissal from the THESIS CONCENTRATION to the COURSE ONLY CONCENTRATION. A maximum of nine (9) semester hours of Special Permission courses may be applied to the degree for the THESIS CONCENTRATION. Thesis/project dissertation guidelines and forms are available at the University of South Alabama Graduate School web site <http://www.southalabama.edu/graduateprograms/forms.html>.

##### a. Research Development

A minimum of three (3) and a maximum of six (6) semester hours credit of CIS 595, Computer and Information Sciences Research Development, may be applied towards the degree.

##### b. Thesis

A minimum of three (3) and a maximum of six (6) semester hours credit of CIS 599, Computer and Information Sciences Thesis, may be applied towards the degree.

##### c. Elective Course Work

A minimum of twelve (12) and a maximum of fifteen (15) semester hours of approved electives. A list of Pre-Approved Computer Science elective courses and a list of Special Permission courses are given in 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 CIS Comprehensive Examination Policies and Procedures document and the Comprehensive Examination The School of CIS Comprehensive Examination Policies and Procedures document and the Comprehensive Examination Application form are available at <http://www.cis.usouthal.edu>.

##### B. PROJECT CONCENTRATION

Acceptance to the PROJECT CONCENTRATION may occur after successfully completing each Computer Science core course with a minimum grade of "B" and CIS 518 with a grade of "C". A required defense of the project proposal is normally made in the semester following completion of CIS 518. Students must enroll in CSC 595, Computer Science Project Proposal Development, in the semester during which they defend their project proposal. The project will normally be completed in one

semester while enrolled in CSC 598, Computer Science Project. Students must enroll in CSC 598 in the semester during which they defend and/or submit their project. A grade of "C" in CSC 595 will result in the dismissal from the PROJECT CONCENTRATION to the COURSE ONLY CONCENTRATION. A maximum of nine (9) semester hours of Special Permission courses may be applied to the degree for the PROJECT CONCENTRATION. Thesis/project dissertation guidelines and forms are available at the University of South Alabama Graduate School web site <http://www.southalabama.edu/graduateprograms/forms.html>.

##### a. Project Proposal Development

A minimum of three (3) and a maximum of six (6) semester hours credit of CSC 595, Computer Science Project Proposal Development, may be applied towards the degree.

##### b. Project

A minimum of three (3) and a maximum of six (6) semester hours credit of CSC 598, Computer Science Project, may be applied towards the degree.

##### c. Elective Course Work

A minimum of twelve (12) and a maximum of fifteen (15) semester hours of approved electives. A list of Pre-Approved Computer Science elective courses and a list of Special Permission courses are given in this section.

##### d. Comprehensive Examination

All students in the Project Concentration must pass an oral comprehensive examination administered after the project committee accepts the project. The School of CIS Comprehensive Examination Policies and Procedures document and the Comprehensive Examination Application form are available at <http://www.cis.usouthal.edu>.

#### C. COURSE ONLY CONCENTRATION

Computer Science students who do not choose the THESIS CONCENTRATION or the PROJECT CONCENTRATION are assumed to be in the COURSE ONLY CONCENTRATION. Acceptance to the COURSE ONLY CONCENTRATION occurs after successfully completing each Computer Science core course with a minimum grade of "B" and CIS 518 with a grade of "C".

##### a. Elective Course Work

Twenty-one (21) 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. None of CSC 598, ISC 598, or CIS 599 may be applied to the COURSE ONLY CONCENTRATION. A list of Pre-Approved Computer Science elective courses and a list of Special Permission courses are given in this section.

##### b. Comprehensive Examination

All students in this Concentration must pass a written comprehensive examination. Students should take the examination as

soon as possible after successfully completing each Computer Science core course with a minimum grade of "B" and CIS 518 with a grade of "C". Students wishing to sit for the examination must apply online to the Director of CIS Graduate Studies by the Friday of the last week of classes in the semester prior to which the examination is to be taken. The site for the online application may be found by following the Links for Students selection on the School of CIS web site, <http://cis.usouthal.edu>. The policy regarding the comprehensive examination is available in the CIS office. The comprehensive examination is offered at least once a year. The School of CIS Comprehensive Examination Policies and Procedures document and the Comprehensive Examination Application form are available at <http://www.cis.usouthal.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

CSC 510	Compiler Design and Construction
CSC 511	Communications and Network Analysis
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 524	Computer Language Design
CSC 526	Database Structure and Design
CSC 532	Advanced Operating Systems
CSC 533	Artificial Intelligence and Heuristic Programming
ISC 557	Data Warehousing and Decision Support Systems
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 CIS Graduate Studies is required for CIS graduate faculty sponsorship of a Special Permission course. A maximum of three (3) 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 Science Research Development

CSC 595	Computer Science Project Proposal Development
CIS 598	Computer and Information Sciences Project
CSC 598	Computer Science Project
CIS 599	Computer and Information Sciences Thesis

#### REQUIREMENTS FOR MASTERS DEGREE WITH INFORMATION SYSTEMS (ISC) SPECIALIZATION:

Students must satisfactorily complete any prescribed CIS Graduate Professional Component courses, a comprehensive examination, and thirty-six (36) graduate credit hours for the Master of Science degree with Information Systems specialization. The thirty-six (36) graduate hours consist of twelve (12) hours of CORE courses, twelve (12) hours of REQUIRED courses, and twelve (12) 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 551	Human/Computer Interface Design
ISC 560	Info Systems Analysis and Design
ISC 561	Info Systems Database Mgt
ISC 565	Info Systems Project and Change Mgt

##### 2. REQUIRED COURSES (12 semester hours):

CIS 518	CIS Research Methodologies
ISC 545	Management Information Systems
ISC 559	Applications Design and Implementation
ISC 567	IS Function Integration

##### 3. CONCENTRATIONS (12 semester hours):

###### A. THESIS CONCENTRATION

Acceptance to the THESIS CONCENTRATION may occur after successfully completing each Information Systems core course with a minimum grade of "B" and CIS 518 with a grade of "C". Students must enroll in CIS 595 (Computer and Information Sciences Research Development) in the semester during which they defend their thesis prospectus. The thesis will normally be completed in one semester while enrolled in CIS 599 (Computer and Information Sciences Thesis). Students must enroll in CIS 599 in the semester during which they defend and/or submit their thesis. A grade of "C" in CIS 595 will result in dismissal from the THESIS CONCENTRATION to the COURSE ONLY CONCENTRATION. A maximum of nine (9) semester hours of Special Permission courses may be applied to the degree for the THESIS CONCENTRATION.

###### a. Research Development

A minimum of three (3) and maximum of six (6) semester hours credit of CIS 595, Computer and Information Sciences Research Development, may be applied towards the degree.

###### b. Thesis

A minimum of three (3) and maximum of six (6) semester hours credit of CIS 599,

Computer and Information Sciences Thesis, may be applied towards the degree.

##### c. Elective Course Work

A minimum of three (3) and a maximum of six (6) semester hours of approved electives are required. A maximum of nine (9) 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 in 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 CIS Comprehensive Examination Policies and Procedures document and the Comprehensive Examination Application form are available at <http://www.cis.usouthal.edu>.

##### B. PROJECT CONCENTRATION

Acceptance to the PROJECT CONCENTRATION may occur after successfully completing each Information Systems core course with a minimum grade of "B" and CIS 518 with a grade of "C". A required defense of the project proposal is normally made in the semester following completion of CIS 518. Students must enroll in ISC 595, Information Systems Project Proposal Development, in the semester during which they defend their project proposal. The project will normally be completed in one semester while enrolled in ISC 598, Information Systems Project. Students must enroll in ISC 598 in the semester during which they defend and/or submit their project. A grade of "C" in ISC 595 will result in dismissal from the PROJECT CONCENTRATION to the COURSE ONLY CONCENTRATION. A maximum of nine (9) semester hours of Special Permission courses may be applied to the degree for the PROJECT CONCENTRATION.

###### a. Project Proposal Development

A minimum of three (3) and maximum of six (6) semester hours credit of ISC 595, Information Systems Project Proposal Development, may be applied towards the degree.

###### b. Project

A minimum of three (3) and maximum of six (6) semester hours credit of ISC 598, Information Systems Project, may be applied towards the degree.

##### c. Elective Course Work

A minimum of three (3) and a maximum of six (6) semester hours of approved electives are required. A maximum of nine (9) 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 in this section.

##### d. Comprehensive Examination

All students in the Project Concentration

must pass an oral comprehensive examination administered after the project committee accepts the project. The School of CIS Comprehensive Examination Policies and Procedures document and the Comprehensive Examination Application form are available at <http://www.cis.usouthal.edu>.

#### C. COURSE ONLY CONCENTRATION

Information Systems students who do not choose the THESIS CONCENTRATION or the PROJECT CONCENTRATION are assumed to be in the COURSE ONLY CONCENTRATION. Acceptance to the COURSE ONLY CONCENTRATION occurs after successfully completing each Information Systems core course with a minimum grade of "B" and CIS 518 with a grade of "C".

##### a. Elective Course Work

Twelve (12) 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. None of the ISC 598, CSC 598, or CIS 599 may be applied to the COURSE ONLY CONCENTRATION. A list of Pre-Approved Information Systems courses and a list of Special Permission courses are given in this section. ISC 568 may be taken at most two (2) times for the COURSE ONLY CONCENTRATION.

##### b. Comprehensive Examination

All students in this Concentration must pass a written examination. Students should take the examination as soon as possible after successfully completing each Information Systems core course with a minimum grade of "B" and CIS 518 with a grade of "C". Students wishing to sit for the examination must apply online to the Director of CIS

Graduate Studies by the Friday of the last week of classes in the semester prior to which the examination is to be taken. The site for the online application may be found by following the Links for Students selection on the School of CIS web site, <http://cis.usouthal.edu>. The policy regarding the comprehensive examination is available in the CIS office. The comprehensive examination is offered at least once a year. The School of CIS Comprehensive Examination Policies and Procedures document and the Comprehensive Examination Application form are available at <http://www.cis.usouthal.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. PRE-APPROVED INFORMATION SYSTEMS ELECTIVES

ISC 553	Information Systems Web Site Management
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

##### B. SPECIAL PERMISSION COURSES

Approval of the Information Systems Coordinator and the Director of the CIS Graduate Studies is required for CIS graduate faculty sponsorship of a Special Permission Course. A maximum of three (3) 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 Science Research Development
ISC 595	Information Systems Project Proposal Development
CIS 598	Computer and Information Sciences Project
ISC 598	Information Systems Project
CIS 599	Computer and Information Sciences Thesis

#### DESCRIPTIONS OF ALL COMPUTER AND INFORMATION SCIENCES COURSES:

**COMPUTER AND INFORMATION SCIENCES (CIS) BEGIN ON PAGE 175.**

**COMPUTER SCIENCE (CSC) BEGIN ON PAGE 182.**

**INFORMATION SYSTEMS (ISC) BEGIN ON PAGE 214.**

**INFORMATION TECHNOLOGY (ITE) BEGIN ON PAGE 217.**

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## SCHOOL OF CONTINUING EDUCATION AND SPECIAL PROGRAMS

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Dean: Thomas L. Wells (251) 460-6283

E-mail: [twells@usouthal.edu](mailto:twells@usouthal.edu)

Associate Dean: Ellwood B. Hannum  
(251) 460-6283

E-mail: [ehannum@usouthal.edu](mailto:ehannum@usouthal.edu)

FAX: (251) 460-7824

**School of Continuing Education and Special Programs web site**  
**<http://www.southalabama.edu/scesp>**

Department of Interdisciplinary Studies  
Center for Continuing Education and  
Conference Services

Department of Developmental Studies  
Department of English as a Second Language  
International Education  
Cooperative Education Program

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.

The Department of Conference Activities and Special Courses provides noncredit courses, conferences and workshops, cultural offerings, lecture series, and special education services projects. Programs are designed to serve the needs of business and industry, help individuals lead more useful lives, challenge the active mind, employ leisure time more wisely, and develop better citizenship.

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 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 CEU's earned for each non-credit activity.

The Department of Interdisciplinary Studies offers the Adult Degree Program and the Interdisciplinary Degree 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. The department also administers the Weekend College, enabling students to take courses from the University's regular curriculum in a weekend format.

Evening, weekend, and online courses offer persons who are employed during the day an opportunity to pursue their college education on a part-time basis without interfering with their employment. These courses are the same as those offered during the day in content, quality, and quantity of work required.

### **GLOBAL PERSPECTIVES/ STUDY-RESEARCH-INTERNSHIP- COMMUNITY SERVICE ABROAD**

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 for a year, semester or summer. 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](http://www.southalabama.edu/international) to explore additional options that may be available for all majors and minors.

### **DEPARTMENT OF INTERDISCIPLINARY STUDIES**

Chair: Vaughn S. Millner (251) 460-6263  
Professors: Hannum, Wells  
Associate Professor: Millner  
Assistant Professors: Lauderdale, Norris,  
Wilkinson, Wilson  
Academic Advisors: Goodwin, Harvey, Bogar  
(USABC)  
Academic Counselor: Davis  
Interdisciplinary Degree Program Coordinator:  
Wilkinson  
**Home Page:** [www.southalabama.edu/ais](http://www.southalabama.edu/ais)  
**E-mail:** [ais@usouthal.edu](mailto:ais@usouthal.edu)

The Department of Interdisciplinary Studies provides opportunities for students through two flexible, individually designed interdisciplinary degree programs: the Adult Degree Program (ADP) and the Interdisciplinary Degree Program (IDP), and Weekend College, a coordinated effort to offer University courses during weekend hours.

### **ADULT DEGREE PROGRAM**

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 should 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 to 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 128 credit hours. 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 less than 64 hours of credit. All students are required to take AIS 301: "Adult Learning—Critical Reflections" and must satisfy the University's general education requirements (See "Academic Policies and Procedures").

In addition to the general requirements, each student must complete 15 hours of general competencies (CIS 150 or its equivalent, an advanced writing course such as EH 372 or MGT 305, a statistics course such as ST 210 or AIS 300, a course in adult development such as AIS 401 or SY 220, and a course in cultural diversity such as AIS 320 or EDF 315) and 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 300-400 level), relevant supporting courses, and a senior project (see AIS 430 course description). The concentration forms part of the graduation plan, which all majors must submit to the Interdisciplinary Studies department for approval by their senior year.

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.

Students with a 3.5 USA GPA and a 3.5 GPA in their concentration are encouraged to apply for departmental honors after enrolling in AIS 380. Contact the department for specific honors requirements.

### **INTERDISCIPLINARY DEGREE PROGRAM**

The Interdisciplinary Degree Program (IDP) is designed for traditional 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 Arts, 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 128 credit hours. Upon completion of the degree, IDP graduates should 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 concentrations that are tailored to their educational and career goals.

All first-time Interdisciplinary Degree Program students must enroll in IST 302 during their first term in the program, except for summer-entry students who must enroll in the fall semester following entry.

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.

Each student enrolled in the Interdisciplinary Degree Program must satisfy the University's general education requirements (see "Academic Policies and Procedures"), a 3 hour foundation course, and 15 hours of competencies in computer applications, applied statistics, advanced writing, human development, and cultural diversity. The student's concentration consists of a minimum of 54 hours from three related disciplines, with at least 30 hours from upper division courses. One discipline must be represented by a minimum of 15 hours, 9 of which must be upper division. The other two disciplines must each be represented by a minimum of 12 hours, 6 of which must be upper division. Additional requirements include



6 hours of internship or a senior project. Remaining course work in the concentration may be from the disciplines or relevant supporting courses.

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 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 project must be completed. Contact the IST department for specific honors requirements.

#### USA EDUCATION/STUDY ABROAD

Students in the Interdisciplinary and Adult education programs are 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 USA Office of International Education (251) 460-7053

#### 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 nontraditional students. The Weekend College program is coordinated through the Department of Interdisciplinary Studies. The scheduling of classes is done by the appropriate departments and colleges.

#### PRIOR LEARNING ASSESSMENT CENTER

The Prior Learning Assessment Center, housed in the IST Department, serves as a central location where potential and enrolled USA students can obtain information and advising on programs available at the University for the assessment of experiential and non-collegiate-sponsored learning. The center is also the primary academic unit responsible for the coordination and administration of the prior learning assessment by portfolio program.

#### DESCRIPTIONS OF INTERDISCIPLINARY STUDIES (IST) COURSES BEGIN ON PAGE 216.

#### DESCRIPTIONS OF ADULT INTERDISCIPLINARY STUDIES (AIS) COURSES BEGIN ON PAGE 152.

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### CENTER FOR CONTINUING EDUCATION AND CONFERENCE SERVICES

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Director: Martha M. Matherne (251) 431-6411  
Continuing Education Specialists: Sue Allison,  
Laurent Cadden, Catherine Drake,  
Robert Maxwell, Leigh Patton,  
Glen Vanderbeek  
Marketing Specialist: Shelley Stephens  
**Home Page: <http://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. Located at the USA Brookley 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 contacting organization. Topics include supervision, communication, management, information technology certification training, computer software applications, business and technical writing.

#### 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 art, music, dance, health and fitness, languages, cooking, 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 data processing, paralegal, secretarial, accounting, medical office management, photography, and administrative careers. Academic examination review classes are also offered.

#### PROGRAMS FOR MATURE LEARNERS

Elderhostel is a national residential program designed for individuals over the age of 55. Participants' length of 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 70 Elderhostel programs annually.

Odyssey USA is a self-managed study program for mature learners in the local community. It is affiliated with the Elderhostel Institute Network, an organization formed in 1988 to encourage the lifelong learning movement at a national level. An Executive Board of elected members provides leadership for issues relating to curriculum development and the operation of the organization.

#### PROGRAMS FOR YOUTH

The USA Camps Program has a dual purpose. It manages most camps sponsored by the University of South Alabama and facilitates all non-University camps utilizing USA's facilities and services.

The goal is to provide educational opportunities for the mental and physical development of young people.

#### HAZARDOUS OPERATIONS, SAFETY AND ENVIRONMENTAL PROGRAM

The Hazardous Operations, Safety and Environmental 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 also features an impressive laboratory where students receive hands-on instruction and real-world application experience for real emergency and rescue situations. The program's staff is continuously expanding course offerings to keep clients safe and ahead of emerging regulations.

#### OTHER OPPORTUNITIES

The Center for Continuing Education and Conference Services facility at the USA Brookley Center houses its computer laboratory. The lab is used for workshops and short courses sponsored by the University. It is also available, on a rental basis, to organizations conducting their own training.

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### DEPARTMENT OF DEVELOPMENTAL STUDIES

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Chair: Charlotte T. Matthews (251) 460-7155  
Associate Professor: Mollise  
Assistant Professor: Young  
Senior Instructors: Bru, Matthews, Rowe  
Instructors: Anderson, Kingman, 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, or RDG prefix count as free electives.

#### **DESCRIPTIONS OF DEVELOPMENTAL STUDIES (DS) COURSES BEGIN ON PAGE 185.**

#### **DESCRIPTIONS OF LANGUAGE ARTS AND SKILLS (LAS) COURSE BEGIN ON PAGE 218.**

#### **FRESHMAN SEMINAR**

The University's First Year Experience Program provides freshmen the opportunity to participate in activities designed to ease the transition to the University. CP 101, Freshman Seminar, is a course for students whose major does not offer a Freshman Seminar course. This course for first-time students assists with maximizing students' potential to achieve academic success and to adjust responsibly to the individual and interpersonal challenges presented by college life.

#### **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, pharmacy, or veterinary medicine; (3) to assist students who are uncertain as to a career or a major; and (4) to help students, especially those in the liberal arts, launch their careers by obtaining suitable employment upon graduation, or to help students plan and develop their graduate or professional education.

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 decision theory.

#### **DESCRIPTIONS OF CAREER PLANNING (CP) COURSES BEGIN ON PAGE 181.**

#### **DESCRIPTIONS OF COLLEGE READING (RDG) COURSES BEGIN ON PAGE 265.**

#### **UNIVERSITY WRITING CENTER**

The University Writing Center, located in Alpha Hall East, provides assistance in writing to any member of the University community. The University Writing Center is an instructional facility, not an editing service. The writing consultants there focus 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. Most writing consultations take place in the University Writing Center. 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.

#### **OFFICE OF STUDENT ACADEMIC SUCCESS AND RETENTION**

Director: Dr. Dorothy C. Mollise  
(251) 414-8051  
Fax: (251) 461-1398  
E-mail: [dmollise@jaguar1.usouthal.edu](mailto:dmollise@jaguar1.usouthal.edu)

The mission of the Office of Student Academic Success and Retention is to promote student success and retention through a variety of university-wide, student-centered initiatives designed to ease the transition to college, enhance academic performance, and improve retention and graduation rates. Some of these initiatives include the University Writing Center; the Freshman Seminar success course; the Supplemental Instruction Program; JAG Early Alert; summer academic bridge programs; and developmental course work for students who need additional academic preparation in mathematics, english, writing, and college reading before enrolling in college-level classes.

#### **DEPARTMENT OF ENGLISH AS A SECOND LANGUAGE (English Language Center)**

Director: Frank Daugherty, Coordinator  
(251) 460-7185; FAX: (251) 460-7201  
Instructors: Basque, Daugherty, Habib, McCormick

**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.

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 202.**

#### **INTERNATIONAL EDUCATION**

Director: Dr. Jim Ellis (251) 460-7053

FAX: (251) 460-6228

E-mail: [intledu@usouthal.edu](mailto:intledu@usouthal.edu)

International Program Specialist:

Ana C. Burgamy

**Home Page:** [www.southalabama.edu/international](http://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, 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, including the Alumni Travel Programs Abroad. 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.

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**COOPERATIVE EDUCATION AND  
INTERNSHIP PROGRAM**


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Director, Career Services: Bevley W. Green  
(251) 460-6188

Associate Director, Cooperative Education  
and Internship Program:

Holly Woodall (251) 460-6188

E-mail: [hwoodall@usouthal.edu](mailto:hwoodall@usouthal.edu)

The Cooperative Education/Internship Program enables students to combine classroom studies and paid work experience related to their major field of study. Practical experience is available in industrial, business, governmental, or service organizations.

**Undergraduate students** may apply at the Career Services Center to enter the Cooperative Education Program when they have completed 12 credit hours, attained a cumulative grade-point average of 2.0 or above, and are classified

as a full-time student upon commencement of participation in the program; however, **engineering students must** have attained a cumulative grade-point average of 2.3 or above. 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.

**Graduate students** may apply to enter the Cooperative Education/Internship Program after they are accepted into a graduate program.

**Option 1: Alternating Cooperative Education:** Students work full-time one semester and attend classes full-time the following semester on a rotating schedule until graduation.

**Option 2: Internship:** Students work for various lengths of time depending upon the unique needs of the organization providing the experience. Some internships may not be paid; experience is the reward. The option for receiving academic credit for this experience is

approved through the department chair or academic advisor.

**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 working full-time for one semester and taking full-time course work the next semester. The student returns to campus full-time for the senior year. This program offers many advantages; interested students should consult with Career Services. Application should be made for admission to the program no later than the end of the second semester of the freshman year.

**DESCRIPTIONS OF ALL  
COOPERATIVE EDUCATION (COE)  
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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 owner-ship interests, and managerial accounting concepts relevant to planning, control and analysis. Prerequisite: ACC 211.

#### 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. Prerequisite: ACC 212.

#### ACC 331 Taxation of Individuals 3 cr

Basic federal income tax law and tax planning considerations relating to individuals. Prerequisite: 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. Prerequisites: 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.) Prerequisite: ACC 212 with a 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.) Prerequisite: 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. Prerequisite: ACC 212.

#### ACC 416 Advanced Financial Accounting 3 cr

Study of business combinations, consolidation issues, interim and segmented reporting, inflation accounting. Coverage of selected professional pronouncements. Prerequisite: 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: ACC 451 with a minimum grade of "C".

#### 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. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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

Students obtain practical accounting experience, with respect to which they are to report to a faculty advisor in accounting and satisfy the requirements set forth for the course. No more than three hours of internships may be counted toward a degree in the Mitchell College of Business. Grades are awarded on a

satisfactory/unsatisfactory basis. Prerequisites: Declared accounting concentration, an overall grade-point average of at least 2.5, an accounting grade-point average of 2.5, and completion of ACC 372 with a grade of at least "C". In addition, the students must obtain the signed approval of the 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. Prerequisite: 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 516 Advanced Financial Accounting 3 cr

Study of business combinations, consolidation issues, interim and segmented reporting, inflation accounting. Coverage of selected professional pronouncements.

#### 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 required 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. Prerequisites: ACC 511, ACC 521, ACC 531 and ACC 541.

**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. Prerequisites: Approval of department chair.

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**ART EDUCATION (AED)**

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**AED 301 Art in the Elementary School 3 cr**

Knowledge and skills appropriate to the elementary school art program. Techniques and media for teaching art in the various grades.

**AED 440 Art in the N-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.

**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 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. Prerequisite: 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. Prerequisite: Permission of department chair.

**AED 594 Directed Study and Research 1, 3 cr**

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. Prerequisite: 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. Prerequisite: Permission of the department chair.

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**AFRICAN-AMERICAN STUDIES (AFR)**

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**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.**

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**ADULT HEALTH NURSING (AHN)**

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**AHN 347 Adult Health Nursing I 3 cr**

Provides the opportunity to analyze theories, concepts, research, issues and trends in caring for adults with basic and commonly occurring health care needs. Content includes internal and external environmental factors affecting the health of adults with basic and commonly occurring health care needs. Emphasis is on the role of the professional nurse in health promotion and maintenance, illness care, and rehabilitation of adults. Prerequisites: NU 325, NU 300, NU 301, HSC 342, HSC 343. Prerequisite with Corequisite: NU 327. Corequisite: AHN 348.

**AHN 348 Adult Health Nursing Clinical I 3 cr**

Clinical practice course in adult health nursing. The focus is on application of theories, concepts, research, issues and trends in caring for adults with basic and commonly occurring health care needs. Emphasis is on the role of the professional nurse and on the use of the nursing process with adults experiencing basic and commonly occurring health care needs and their families. Prerequisites: NU 325, NU 300, NU 301, HSC 342, HSC 343. Prerequisite with Corequisite: NU 327. Corequisite: AHN 347.

**AHN 447 Adult Health Nursing II 3 cr**

Provides students the opportunity to analyze theories, concepts, research, issues and trends in caring for adults with complex multisystem health care needs. Content includes internal and external environmental factors affecting the health of adults 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 adults. Prerequisites: AHN 347, AHN 348, HSC 332. Prerequisites/ Corequisites: CMN 350, CMN 351, MCN 340, MCN 341, MCN 345, MCN 346. Corequisite: AHN 448.

**AHN 448 Adult Health Nursing Clinical II 3 cr**

Clinical practice course in adult health nursing. Focus is on application of theories, concepts, research, issues and trends in caring for adults with complex multisystem health care needs. Emphasis is on the role of the professional nurse and on the use of the nursing process with adults experiencing complex multisystem health care needs and their families. Prerequisites: AHN 347, AHN 348, HSC 332. Prerequisites/ Corequisites: CMN 350, CMN 351, MCN 340, MCN 341, MCN 345, MCN 346. Corequisite: AHN 447.

**AHN 525 Clinical Practicum in Adult Gerontological CNS Practicum I 4 cr**

Application of advanced clinical concepts in Adult Health Nursing theory and other concepts are evaluated within evidenced based practice models. Prerequisites: NU 545, NU 578, NU 518, NU 519. Corequisite: NU 524 or special permission of instructor.

**AHN 536 Advanced Nursing Assessment Across the Lifespan for the ENP 3 cr**

Expands the ENP student's knowledge and skills for obtaining and recording a systematic health assessment across the life span with attention to emergency and urgent-care aspects of health assessment of clients from culturally diverse and minority groups. Emphasis is placed on synthesis and application of nursing and related theories and scientific knowledge in the development of differential/nursing diagnoses as a basis for health promotion and illness management across the lifespan, especially in the emergency, urgent, and ambulatory care settings. Prerequisites/Corequisites: NU 545 and NU 578. Corequisites: AHN 537 and AHN 538.

**AHN 537 Advanced Nursing Assessment Across the Lifespan for the ENP Practicum 1 cr**

This clinical course provides an environment for the opportunity to become proficient at obtaining and recording a systematic health history and advanced physical examination across the lifespan for clients from culturally diverse backgrounds in the emergency/urgent care setting. The focus is refinement of cognitive and clinical skills needed to provide comprehensive health assessments of individuals across the lifespan with a special emphasis on emergency, urgent, and ambulatory care. Prerequisites/Corequisites: NU 545 and NU 578. Corequisites: AHN 536 and AHN 538.

**AHN 538 Health Promotion/Disease Prevention and Issues for the ENP 3 cr**

This didactic course prepares the ENP 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

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promotion/disease prevention with strategic planning at the primary, secondary, and tertiary levels. Prevention, early diagnosis, prompt treatment, and in-dept patient education will be emphasized. Effective strategies for life-style behavioral changes will also be evaluated. Prerequisites/Corequisites: NU 545 and NU 578. Corequisites: AHN 536 and AHN 537.

### **AHN 539 Advance Emergency Nursing Practicum I** 2 cr

This practicum course provides opportunities for the ENP to apply concepts from AHN 572 ENP I in select clinical settings. Focus is on women's health, childbirth, and families in emergency, urgent, and ambulatory care settings. The emphasis is on culturally competent health care delivery, diagnostic reasoning and decision making, critical thinking and critical action. Prerequisites: AHN 541 and AHN 542. Corequisite: AHN 540.

### **AHN 540 Advanced Emergency Nursing I** 4 cr

This didactic course prepares the ENP to assess, diagnose, and manage selected health care needs of culturally diverse populations. The focus is on the advanced practice nursing of women and families in emergency, urgent, and ambulatory healthcare settings. Emphasis is placed on women's health and the pathophysiology and epidemiology underlying pregnancy/childbirth, acute, and chronic health problems. Prerequisites: AHN 541 and AHN 542. Corequisite: AHN 539.

### **AHN 541 Advanced Emergency Nursing Practicum II** 3 cr

This practicum course provides an opportunity for the ENP 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 clients across the life span in the emergency, urgent, and ambulatory settings with the primary focus on infants, children, and families. Emphasis is on collaboration with other health care providers in treating the emergent and urgent health care needs in a culturally diverse society. Prerequisites: AHN 536, AHN 537, and AHN 538. Prerequisite/Corequisite: NU 578. Corequisite: AHN 542.

### **AHN 542 Advanced Emergency Nursing II** 4 cr

This course provides an in-depth study of the emergency, urgent, and ambulatory healthcare management of infants, children, 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 infants, children, and families in emergency, urgent, and ambulatory health care settings. Various issues and theories of approach will be discussed and implemented to assist the child to develop quality self care. Depression identification and treatment modalities and common emergency, urgent, and ambulatory psychiatric problems encountered in children will be addressed. Prerequisites: AHN 536, AHN 537, and AHN 538. Prerequisite/Corequisite: NU 578. Corequisite: AHN 541.

### **AHN 543 Advanced Emergency Nursing Practicum III** 3 cr

The purpose of this clinical course is to integrate advanced knowledge and theories from nursing and related disciplines into ENP roles with adults and families in the emergency, urgent, and ambulatory healthcare settings. Prerequisites: AHN 539 and AHN 540. Corequisite: AHN 544.

### **AHN 544 Advanced Emergency Nursing III** 4 cr

This didactic course prepares the ENP to assess, diagnose, and manage selected health care needs of culturally diverse populations across adulthood. The focus is on the advanced practice nursing of adults and families in emergency, urgent, and ambulatory healthcare settings. Emphasis is placed on wellness, and the pathophysiology and epidemiology underlying acute and chronic health problems. Prerequisite: AHN 540 and AHN 539. Corequisite: AHN 543.

### **AHN 545 Advanced Emergency Nursing Internship** 4 cr

This culminating clinical course provides a preceptor and faculty facilitated experience in the ENP role. The focus is on the synthesis of knowledge and skills from all previous courses. Prerequisites: AHN 543, AHN 544 and NU 506. Corequisite: AHN 546. Prerequisites/Corequisites: NU 507, NU 508, NU 513, NU 518, NU 545, NU 578.

### **AHN 546 Advanced Emergency Nursing Seminar** 1 cr

This course provides a forum for the evaluation of issues and trends encountered in emergency, urgent and ambulatory healthcare settings with an emphasis on management of clients across the lifespan. Prerequisites, AHN 543, AHN 544 and NU 506. Corequisite: AHN 545. Prerequisites/Corequisites: NU 508, NU 513, NU 545, NU 578 and NU 507.

### **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. Prerequisite: NU 518. Corequisite: AHN 569.

### **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 provide comprehensive health assessments of adults and children and to apply diagnostic reasoning. Prerequisite: NU 518. Corequisite: AHN 568.

### **AHN 571 Health Promotion/Disease Prevention and Issues for Adult Gerontological 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. Prerequisite: NU 518. Corequisites: AHN 568 and AHN 569.

### **AHN 572 Advanced Adult Gerontological Acute 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. Prerequisites: AHN 568, AHN 569, AHN 571, NU 506. Prerequisites or Corequisites: NU 545, NU 578. Corequisite: AHN 573.

### **AHN 573 Advanced Adult Gerontological Acute 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. Prerequisites: AHN 568, AHN 569, AHN 571, NU 506. Prerequisites or Corequisites: NU 545, NU 578. Corequisite: AHN 572.

### **AHN 574 Advanced Adult Gerontological Acute 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. Prerequisites: AHN 572, AHN 573. Corequisite: AHN 575.

### **AHN 575 Advanced Adult Gerontological Acute 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. Prerequisites: AHN 572, AHN 573. Corequisite: AHN 574.

### **AHN 576 Advanced Adult Gerontological Acute 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. Prerequisites: AHN 574, AHN 575, NU 506. Corequisite: AHN 577. Prerequisites or Corequisites: NU 508, NU 513, NU 518, NU 545, NU 578, NU 507.

**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 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. Prerequisites: AHN 574, AHN 575, NU 506. Corequisite: AHN 576. Prerequisites or Corequisites: NU 508, NU 513, NU 518, NU 545, NU 578, NU 507.

**AHN 581 Health Promotion/Disease Prevention & Issues for Adult/Gerontological Nursing** 2 cr

The purpose of this didactic course is to prepare the Gerontological NP/Adult Psychiatric NP (GNP/APNP) students 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. Corequisites: AHN 578 and AHN 529.

**AHN 585 Advanced Geropsychiatric Nursing Practicum II** 3 cr

The purpose of this practicum course is to provide opportunities for Advanced Gerontological/Adult Psychiatric nursing students to apply concepts from Advanced Gerontological Nursing II in selected clinical settings. The focus is on diagnostic reasoning and decision making/critical thinking in clinical settings with older adults, who have physical problems and mental health issues. Prerequisites: AHN 583, AHN 514, and AHN 582. Corequisite: AHN 584.

**AHN 586 Advanced Gerontological Nursing Internship** 5 cr

The purpose of this culminating course is to provide a preceptor guided and faculty facilitated experience in the gerontological nursing practitioner role. The focus is on the application and synthesis of knowledge and skills acquired in all previous courses. Emphasis is on collaboration with other health care providers in a culturally diverse environment. Prerequisites: AHN 584, AHN 585, and NU 506. Corequisite: AHN 587. Prerequisites/Corequisites: NU 508, NU 513, AHN 514, NU 545, NU 578, and NU 507.

**AHN 587 Advanced Gerontological Nursing III** 3 cr

The purpose of this course is to provide the geriatric nurse practitioner student an in-depth study of health care management of older adults and their families within the framework of advanced nursing. The focus is on selected acute and chronic complex health care problems of gerontological patients. Emphasis

is on the role of Gerontological Nurse Practitioner and interaction among health care providers in a culturally diverse environment. Prerequisites: AHN 584, AHN 585, and NU 506. Corequisite: AHN 586. Prerequisites/Corequisites: NU 508, NU 513, AHN 514, NU 545, NU 578, and NU 507.

**AHN 588 Adult-Gerontological Nursing I** 3 cr

The purpose of this course is to expand the GNP/APNP 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. Corequisites: AHN 589, AHN 591.

**AHN 589 Advanced 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. Prerequisites or Corequisites: AHN 581 and 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. Prerequisites: AHN 581, AHN 588, AHN 589. Corequisite: AHN 592.

**AHN 592 Advanced Adult-Gerontological 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. Prerequisites: AHN 581, AHN 588, AHN 589. Corequisite: AHN 591.

**AHN 593 Advanced 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. Prerequisites: AHN 591, AHN 592. Corequisite: AHN 594.

**AHN 594 Advanced 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. Prerequisites: AHN 591, AHN 592. Corequisite: AHN 593.

**AHN 595 Advanced 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. Prerequisites: AHN 593, and AHN 594. Corequisite: AHN 596. Prerequisites or Corequisites: NU 508, NU 513, NU 545, NU 578, NU 507, NU 518.

**AHN 596 Advanced 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. Prerequisites: AHN 593, AHN 594. Corequisite: AHN 595. Prerequisites or Corequisites: NU 508, NU 573, NU 545, NU 578, NU 507, NU 518.

**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. Prerequisite: AHN 630.



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### **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. Prerequisites: AHN 630, AHN 631.

### **AHN 633 Diagnosis and Management of Complex Cardiovascular Disorders 2 cr**

This course provides an in-depth study of the health care management of the patient with complex cardiovascular disorders. Emphasis is on the interaction among health care providers in a culturally diverse environment.

### **AHN 635 Advanced Cardiovascular Nursing Residency I 2 cr**

In this first of two residency courses, the student initiates the DNP role within a selected area of cardiovascular advanced nursing practice. Students will work with multicultural experts in their field of interest and with a faculty facilitator to refine and initiate their DNP synthesis practice 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. Prerequisites: AHN 604, AHN 605, AHN 606, NU 607, NU 608, NU 610, NU 611, NU 612, NU 615, AHN 633. Corequisite: NU 616.

### **AHN 636 Advanced Cardiovascular Nursing Residency II 2 cr**

In this second of two residency courses, the DNP student under the guidance of the faculty facilitator continues to implement, evaluate, and disseminate findings from the synthesis project. The synthesis project provides students the opportunity to assimilate and demonstrate all DNP competencies within cardiovascular advanced nursing practice. Prerequisites: NU 616, AHN 635.

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## **ADULT INTERDISCIPLINARY STUDIES (AIS)**

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### **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. **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 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, online course in which students study human development from the biosocial, cognitive, and psychosocial perspectives with special emphasis on the adult years. Through readings, audio tapes, written exercises, and discussions, students explore the theory 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 credit 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. Prerequisite: Permission of the department chair.

### **AIS 300 Foundations of Interdisciplinary Research 3 cr**

Designed for students in the Adult Degree Program, 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 Adult Learning-Critical Reflections 3 cr**

This course introduces students to various philosophies of education with special emphases on adult education and adult development theory. The course challenges students to connect education with personal development, the workplace and the community. AIS 301 is required of all ADP majors and must be taken before AIS 380. Prerequisite: AIS 101 for students with less than 64 credit hours.

### **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**

Taught by faculty from several departments, this course examines contemporary issues faced by women in the workplace and the community from an interdisciplinary perspective. Topics vary.

### **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, and international issues.

### **AIS 350 Critical Expression (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 and other courses requiring extensive research.

### **AIS 380 Research Methods and Project Development (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 IST majors and must be taken before AIS 430: Senior Project and after satisfactory completion of the writing competency requirement. Prerequisites: AIS 301 and an approved graduation plan.

### **AIS 401 Adults in Society 3 cr**

An interdisciplinary study of the process of adult development focusing on cultural, gender, and individual differences.

### **AIS 420 Community Development and Leadership 3 cr**

Presents the foundations of community development and leadership, including basic concepts, methods and literature. Student teams gain practical application through researching an issue and designing a community deliberation to address that issue. 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 Project (W) 3 or 6 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 ADP students. Prerequisite: AIS 380.

### **AIS 490 Special Topics 1-6 cr**

A variable topics course treating special themes. May be repeated once for credit 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. Prerequisite: Permission of the department chair.

**AIS 496 Professional Studies: Internship 3 or 6 cr**

The purpose of the internship is to give the student supervised practical experience in a setting related to the student's concentration. The course may be taken for a maximum of six hours credit. Prerequisites: junior or senior standing and permission of the department chair.

**AIS 499 Honors Senior Project (H, W) 3 or 6 cr**

A substantial research project in the student's field 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 project requirement for the honors program. Prerequisites: AIS 380, 3.5 overall GPA on 60 credits from USA, and permission of the AIS 380 instructor.

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**ANTHROPOLOGY (AN)**


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**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 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 and cultural factors as expressed in language, origin of language, child language, and non-verbal communication. Prerequisite: AN 100 or AN 101 or AN 105 or AN 106.

**AN 210 Physical Anthropology 4 cr**

Course focuses on humans as biological and cultural beings 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. Corequisite: AN 210L.

**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. Prerequisite: AN 100 or AN 101 or AN 105 or AN 106 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. Prerequisite: AN 100 or AN 101 or AN 105 or AN 106.

**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. Prerequisite: AN 100 or AN 101 or AN 105 or AN 106.

**AN 335 Field Work in Archaeology 4 cr**

Archaeological field and laboratory techniques include excavation, site survey, artifact processing and analysis. Fee. Prerequisites: AN 101 or AN 106 and 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. Prerequisite: AN 100 or AN 101 or AN 105 or AN 106.

**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. Prerequisite: AN 100 or AN 105 or by 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. Prerequisite: AN 100 or AN 105.

**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. Prerequisite: AN 100 or AN 105 or by 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. Prerequisite: AN 100 or AN 105 or by 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. Prerequisite: AN 100 or AN 105 or by 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. Prerequisite: AN 100 or AN 105.

**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. Prerequisite: AN 100 or AN 105.

**AN 358 Economic Anthropology 3 cr**

An evolutionary survey of production and exchange in diverse societies. Considers the applicability of western economic theory to nonmarket economies, as well as their transformation by global capitalism. Prerequisite: AN 100 or AN 105.

**AN 394 Directed Studies 1-3 cr**

Supervised readings or projects. No more than a total of six hours may be taken for credit. Prerequisite: AN 100 or AN 101 or AN 105 or AN 106; 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. Prerequisite: AN 100 or 101 or AN 105 or AN 106.

**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. Prerequisite: 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.

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Examines anthropology's often contested status as a science or humanity. Prerequisite: AN 100 or AN 105.

### **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. Prerequisite: AN 100 or AN 105 or by permission of instructor.

### **AN 490 Special Topics 3 cr**

Different topics of anthropological importance will be studied as announced. This 3 hour course may be repeated for credit as long as the content varies, up to a maximum of 6 credit hours. Prerequisites: AN 101 or AN 105, 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. Prerequisite: AN 100 or AN 101 or AN 105 or AN 106.

### **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. Prerequisites: Advanced standing in Anthropology major and permission of course director.

### **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 3 hour course that is expected to be repeated once for a total of six hours. Prerequisites: Anthropology major; senior status; permission of a faculty mentor; 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 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, 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 3 hour course that can be repeated once for a total of six credits. Prerequisites: 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.

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## **ART HISTORY (ARH)**

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### **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. 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. European, Islamic, Indian, Chinese, Japanese, North and Meso-American, and African cultures will be covered. 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. Prerequisite: ARH 242. 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. Prerequisite: 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. Prerequisite: 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 315 to the end of the Gothic Period. Prerequisite: ARH 103.

### **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. Prerequisite: ARH 123. Fee.

### **ARH 322 Baroque and Rococo Art and Architecture 3 cr**

This course is a survey of the art and architecture of the Seventeenth and Eighteenth Centuries. Prerequisite: ARH 123. Fee.

### **ARH 340 Early Modern Art 3 cr**

A study of the art developments in the 19th and early 20th centuries. Prerequisite: 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. Prerequisite: 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. ARH 360 is a two credit-hour course that cannot be used to fulfill requirements for the Art History major or minor. It may be repeated twice if the experience differs. Prerequisites: Fifteen hours of Art History 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. Prerequisites: ARH 304, ARH 346, ARH 406, ARH 415, and permission of instructor. Fee.

### **ARH 390 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. Prerequisite: To be announced. Fee.

### **ARH 406 Roman Art 3 cr**

Architecture, painting, and sculpture in Ancient Rome and its empire. Prerequisite: ARH 103. 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. Prerequisite: ARH 103. Fee.

### **ARH 422 Northern Renaissance Art 3 cr**

Art of Flanders, Germany, and France in the 14th, 15th, and 16th centuries.

### **ARH 424 Italian Early Renaissance Art 3 cr**

Art of 14th- and 15th-century Italy. Prerequisite: ARH 123. Fee.

### **ARH 426 Sixteenth Century Italian Art 3 cr**

Art of the Italian High Renaissance and Mannerist periods. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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 once when the content varies, for a maximum of six credit hours. Prerequisite: Nine hours of Art History above the 200 level. Fee.

**ARH 493 Methodology of Art History 3 cr**

An investigation of methodologies used by art historians in their examination of artistic production. Prerequisite: 9 hours of ARH courses above the 200 level.

**ARH 494 Directed Studies/Research 3-6 cr**

Research in a selected topic in art or architectural history under the direction of a faculty member, resulting in a scholarly paper presented as an illustrated lecture. Prerequisites: Nine hours in Art History courses numbered 300 or higher and permission of the instructor. Fee.

**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. Prerequisites: ARH 103, ARH 123, and nine hours in upper-level Art History courses.

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**STUDIO ART (ARS)**


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**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 manmade forms using dry drawing media. Fee.

**ARS 122 Perceptual Drawing II 3 cr**

A continuation of ARS 121 using wet and mixed drawing media. Prerequisite: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisite: 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 stone lithography. Technical skills related to processing and printing an edition will be studied. The course will consist of studio practice, lectures, quizzes, and critiques. Prerequisites: 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. Prerequisites: ARS 121 and ARS 123.

**ARS 252 Woodcut/Relief 3 cr**

A study of relief printmaking. The class will cover woodcut, linoleumcut, 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisite: 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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.

**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.

**ARS 322 Figure Drawing II 3 cr**

Further study of the human figure using various drawing (wet and dry) media. Prerequisite: ARS 222. Fee.

**ARS 325 Conceptual Drawing II 3 cr**

A continuation of ARS 225 with emphasis on exploration of concepts found in Cubism, Surrealism, Abstract Expressionism, and Photo realism. Prerequisite: ARS 225. Fee.

**ARS 326 Color Theory 3 cr**

A studio course in the nature, theory and application of color in an aesthetic context. Prerequisites: ARS 222 or ARS 225.

## 156 COURSES

- 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. Prerequisite: 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. Prerequisites: 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, woodcut, 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 9 semester hours. Prerequisites: 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. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: ARS 272 and ARS 273. Fee.
- ARS 375 Digital Graphic Design 3 cr**  
An advanced level course utilizing computers to produce graphic design work for printed and digital media. Prerequisite: 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. Prerequisites: ARS 271 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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.
- ARS 422 Figure Drawing III 3 cr**  
Individual problems with the human figure as subject, emphasizing concept, composition and media. Prerequisite: ARS 322. Fee.
- ARS 425 Conceptual Drawing III 3 cr**  
A continuation of ARS 325 with emphasis on exploration of personal concepts. Prerequisite: 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. Prerequisites: 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. Prerequisites: 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. Prerequisite: 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. Prerequisites: ARS 362, a declared Primary Concentration in Sculpture, and permission of the instructor. Fee.
- ARS 472 Senior Graphic Design 3 cr**  
A workshop for students to carry designs from initial concept through to finished pieces. Emphasis on creating a body of work of professional quality. Prerequisites: ARS 372, ARS 373, and 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. Prerequisites: ARS 372, ARS 373, and ARS 374.
- ARS 479 Business Practices for Graphic Design 3 cr**  
Design projects investigating selected problems of visual communication; individual and group critiques and presentations. Prerequisites: ARS 372, ARS 373, and 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: ARS 382. Fee.
- ARS 488 Graphic Design Portfolio and Presentation 3 cr**  
Preparation of a portfolio of professional quality and the presentation and evaluation of that portfolio to a faculty committee. Committee approval needed to pass the course. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisite: Junior or senior standing.

**ARS 498 Senior Thesis 3 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisites: Thirty-two hours in Studio Art or a bachelor's degree in art or art education. Fee.

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**AIR FORCE STUDIES (AS)**

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**AS 101 Foundation of the U.S. Air Force I 1 cr**

Study of the Air Force in the contemporary world. The course examines the U.S. Air Force

mission and organization, officership and professionalism, military customs and courtesies, and an introduction to community skills. Leadership laboratory activities are included.

**AS 102 Foundation of the U.S. Air Force II 1 cr**

Study of the Air Force in the contemporary world. The course examines the US Air Force organization, oral and written communication, Air Force officer opportunities, Air Force installation, and group leadership exercises. Leadership laboratory activities are included.

**AS 201 The Evolution of U.S. Air Force I 1 cr**

Study of the development of air and space power from balloons and dirigibles up to the Korean Conflict. Students will be introduced to the Air Force methods of effective communication. Leadership laboratory activities are included.

**AS 202 The Evolution of U.S. Air Force II 1 cr**

Study of air and space power following the Korean War. Course deals with the peaceful employment of US air power in relief missions and civic actions program in the late 1960s and the air war in South Asia. It also covers the buildup of air power during the 1980s and the changes brought about by Desert Storm. Leadership laboratory activities include preparation for field training.

**PROFESSIONAL OFFICER COURSES**

Enrollment in the Professional Officer Course (POC) requires advanced selection and approval by the PAS. Applications are normally accepted during the year prior to POC enrollment. Cadets must be mentally and physically fit.

**AS 301 Air Force Leadership Studies I (W) 3 cr**

Integrated management course emphasizing the individual as a manager in an Air Force milieu. The individual motivation and behavioral processes, leadership, ethics, communications, and group dynamics provide a foundation or the development of the junior officer's professional skills as an Air Force officer. The basic managerial processes involving decision-making, and the use of analytic aids in planning, organizing, and controlling in a changing environment are emphasized. Laboratory provides opportunities for practical application of leadership skills.

**AS 302 Air Force Leadership Studies II 3 cr**

Organizational and personal values, quality management of forces in change, organizational power, politics, managerial strategy and tactics, military justice, and administrative laws are discussed within the context of the military organization. Actual Air Force cases are used to enhance the learning and communicative processes. Leadership laboratory included.

**AS 401 National Security Affairs and Preparation for Active Duty 3 cr**

Focuses on the Armed Forces as an integral element of society. Emphasizes the broad range of American civil-military relations, the environmental context in which US defense policy is formulated and implemented, the societal attitudes toward the military, and the role of the

professional military leader-manager in a democratic society. Each student prepares individual and group presentations for the class, writes reports, and participates in group discussions and seminars. Laboratory provides opportunities for practical application of leadership skills.

**AS 402 National Security Affairs and Preparation for Active Duty 3 cr**

Stresses the fundamental values and socialization process associated with the Armed Services; the requisites for maintaining adequate national security forces; the political, economics, and social constraints on the national defense structure; the impact of technological and international developments on strategic preparedness; and the manifold variables involved in the formulation and implementation of national policy. Leadership laboratory included.

**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.

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**DOCTOR OF AUDIOLOGY (AUD)**

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**AUD 612 Anatomy and Physiology of the Hearing Mechanism 3 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 2 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 615 Speech and Language Science 3 cr**

Study of the acoustical, perceptual, physiological aspects of speech; as well as the phenomena of communication and language development. These are discussed as they relate to the field of audiology.

**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

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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 1 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 (including the vestibular system) and the central auditory nervous system (including auditory neuropathy and tinnitus) occurring across the lifespan; imaging techniques; non-audiologic medical and surgical interventions for these conditions; and cerumen management techniques, including a cerumen management practical experience.

### **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 earmolds, hearing aids, and assistive listening devices; basic electronics, components of amplification systems and their electroacoustic properties and functioning; use of ANSI standards; earmold impressions; physical, acoustic, and electroacoustic modifications of earmolds and amplification systems.

### **AUD 631 Selection and Fitting of Amplification Systems 3 cr**

This class will address the principles of selection and fitting 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. 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 remapping.

### **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 instrumentation (transducers and electrode types); application and interpretation of evoked potential (EP) measures including ENOG, ECoChG, ABR, middle and late potentials, across the lifespan; sedation protocols; assessment protocols associated with different EP measures and the populations to which they are applied; population norms; intrinsic and extrinsic variables affecting EP results; differential diagnosis of auditory neuropathy; troubleshooting.

### **AUD 646 Pediatric Audiologic Habilitation 3 cr**

This class will address the speech and language of the hearing impaired, philosophies and methods of teaching speech and language to children with hearing impairment that utilize manual and/or oral components including American Sign Language, Signing Essential English I and II, Cued Speech, and Total Communication, and Auditory-Verbal therapy.

### **AUD 647 Adult Audiologic Rehabilitation 3 cr**

This class will address the implications of hearing loss in adulthood including the educational, vocational, social and legislative concerns of adults with hearing loss; hearing aid orientation approaches; and assessment tools and intervention techniques used in order to maximize communication skills.

### **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 650 Vestibular Assessment and Treatment 3 cr**

This class will address assessment approaches utilized in the diagnosis of vestibular disorders (such as ENG) and procedures used in the management of these disorders (such as vestibular rehabilitation techniques).

### **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 652 Educational Audiology 2 cr**

This course will address the delivery of audiology services to a school-based population. 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 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 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**

Opportunity for students to obtain additional supervised clinical experience prior to starting full-time externship. Special Fee.

**AUD 673 Supervision in Audiology 2 cr**

This course includes a description of supervision and supervisors, the development of supervisory behaviors, components of the supervisory process, models for the assessment of supervisees, analyzing the supervisory process, supervision across settings, supervision of non-audiology personnel, and accountability.

**AUD 674 Special Projects in Audiology 3 cr**

Student will be required to develop a variety of projects during their academic training some of which will be further developed and completed during this course.

**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 3 to 11 crs**

Off-campus opportunity to obtain clinical experience in a full-time setting.

## BIOCHEMISTRY (BCH)

**BCH 520 Medical Biochemistry 7 cr**

A basic course in biochemistry with emphasis on the physicochemical properties and intermediary metabolism of proteins, carbohydrates, lipids, and nucleic acids. The regulation and integration of metabolic pathways for energy transfer and biosynthesis of major cellular constituents are presented in detail. Enzymes, vitamins, hormones, biochemical genetics, and nutrition are included in the course material.

**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 620 Enzymes and Proteins 3 cr**

The techniques used for the physical and chemical characterization of proteins are presented and protein structure-function relationships, enzyme kinetics, and enzyme mechanisms are presented to provide a student with the basic knowledge to understand the role of functional proteins in life processes.

**BCH 622 Molecular Biology 3 cr**

The focus of this course is on cellular processes involving DNA repair, replication and translation. Current concepts regarding the organization and structure of chromosomes, genes, and the regulation of gene expression will be discussed. Eukaryotic molecular biology is emphasized; however, some eukaryotic and prokaryotic processes are compared and contrasted. This course stresses the methods and experimental design used to delineate and understand cellular information transfer and molecular phenomena.

**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. Prerequisite: Approved formal research proposal.

## BIOLOGY (BLY)

Prerequisites 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 prerequisite. 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. Prerequisite: 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 prerequisite. 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, micro-evolution, 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 prerequisite. 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. Prerequisite: 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 prerequisite. Together, BLY 122 and BLY 122L count as one laboratory science course, partially fulfilling general education requirements. Fee.

**NOTE: BLY 121 and BLY 122, or the equivalents, are prerequisites 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. Prerequisite: BLY 101 (usually taught in the spring semester).

**BLY 134L Ocean Science Laboratory 1 cr**

Laboratory experiences associated with BLY 134. Prerequisite: 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



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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. Prerequisite: 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. Prerequisite: 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. Prerequisite: BLY 101.

### **BLY 214\* Laboratory Studies in Microbiology** 1 cr

A series of laboratory experiments designed to provide practical experiments in basic microbial techniques. Prerequisite: 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. Prerequisite: BLY 101 or permission of chair.

### **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. Prerequisites: CH 131 and CH 132. Category A (usually taught in the fall semester).

### **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. Prerequisite: Grade of 'C' or better in BLY 121/122 and Labs, BLY 301, and CH 131.

### **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, adaptation, and phylogenetics. Theoretical and practical issues will be addressed. Prerequisites: BLY 121, BLY 122.

### **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. Prerequisite: CH 131.

### **BLY 332 Biology of Algae** 4 cr

A survey of non-vascular plants; algae, fungi, liverworts, and mosses, with emphasis on morphology and taxonomy. Category B.

### **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. Category C (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. Category C. (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. Category C.

### **BLY 363 Vertebrate Embryology** 4 cr

Avian and amphibian histogenesis and organogenesis from fertilization to time of histological maturity. Category C.

### **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. Category C (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. Category D (usually taught in the summer semester).

### **BLY 368\*\* Dolphins And Whales** 2 cr

Classification, anatomy, and ecology of cetaceans and manatees. Category C. (Usually taught in 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. Category D (Usually taught in 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. Category D. Prerequisites: BLY 325, BLY 341, BLY 436, and CH 201.

### **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. Prerequisite: Ecology

(BLY 325). This prerequisite may be waived at the discretion of the instructor. Category D (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. Category B (usually taught in the summer semester).

### **BLY 431 Plant Physiology (W)(C)** 4 cr

A critical study of higher plant function. This course includes a study of water relations, plant biochemistry, and plant development. Category A (usually taught in the spring semester). Fee.

### **BLY 432 Morphology of Vascular Plants** 4 cr

Morphological features and possible relationships of psilophytes, club mosses, horsetails, ferns, and seed plants. Illustrated whenever feasible with local plants. Category B.

### **BLY 433 Taxonomy of Flowering Plants** 4 cr

Principles of classification of flowering plants; survey of major plant families; collection and identification of representative local plants. Field trips. Category B (usually taught in the spring semester).

### **BLY 435 Biology of Fungi** 4 cr

Identification and morphology of fungi with some emphasis on their relation to human affairs. Collection required. Category B (usually taught in the spring semester).

### **BLY 436 Animal Physiology (W)(C)** 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. Prerequisites BLY 341, BLY 342, CH 131, and CH 132. Category A (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. Prerequisite: CH 201. Also cross-listed as CH 440. Category A (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. Prerequisite: BLY 440. Requires special permission. Also cross-listed as CH 441. Category A (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. Prerequisite: 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. Category D (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. Category C (usually taught in the summer semester).

**BLY 455 Ornithology (W) 4 cr**  
Principles of classification, structure, distribution, migration natural history, and adaptations 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. Category C (usually taught in alternate spring semester).

**BLY 459 General Parasitology 4 cr**  
Principles of parasitology and a survey of all major parasitic groups. Category C (usually taught in the fall semester).

**BLY 463 Vertebrate Histology 4 cr**  
Microscopic anatomy of organ systems, with emphasis on human tissues. Category C.

**BLY 466\*\* Introduction To Neurobiology 4 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. Category A (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>. Prerequisite: Ecology. Category D (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. Category C (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. Category D (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. Category D (usually taught in the summer semester).

**BLY 481\*\* Marine Technical Methods 2 cr**

An introduction to instruments and procedures normally used aboard a marine research vessel, including physical, biological, chemical, and geological parameter measures and sample collection (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 south-eastern 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. Prerequisite: BLY 325.

**BLY 485 Evolutionary Biology 3 cr**

The study of mechanisms and historical patterns of evolutionary change in biological systems ranging from genes to phylogeny. Prerequisite: BLY 311.

**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. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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. Prerequisites: BLY 311, BLY 341, 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. Prerequisites: ST 210, BLY 121, BLY 122, ONE 300 level course. Prerequisites can be waived at the discretion of the instructor. Category D (Taught every second spring semester). Fee.

**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. Prerequisites: BLY 325, BLY 341, BLY 436 and 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. Prerequisite: Ecology (BLY 325). This prerequisite 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 current literature.

**BLY 535/435 Biology of Fungi (Mycology) 4 cr**

Identification and morphology of fungi

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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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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 551/451\*\* Marine Vertebrate Zoology** 4 cr

A study of marine vertebrates with emphasis on fishes; their systematics, zoogeography, and ecology. Students will have an opportunity to assemble a collection of vertebrate species. Credit for both BLY 551 and BLY 451 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 568\*\* 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>. Prerequisites: Ecology. Credit for BLY 568 and BLY 468 is not allowed.

### **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 571/471\*\* Marine Invertebrate Zoology** 4 cr

A study of the natural history, systematics and morphology of marine invertebrates. Credit for both BLY 571 and BLY 471 is not allowed.

### **BLY 572\*\* 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. Credit for BLY 572 and BLY 472 is not allowed.

### **BLY 573\*\* Oceanology of the Gulf of Mexico** 3 cr

A descriptive study of the oceanology of the Gulf of Mexico and adjacent waters, including coastal zone, continental shelf, and deep ocean. Prerequisite: Degree in a science.

### **BLY 575/475\*\* Marine Ecology** 4 cr

The relationship of marine organisms to their environment. Credit for both BLY 575 and BLY 475 is not allowed.

### **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 589\*\* Marine Plankton** 3 cr

The course familiarizes the student with the taxonomic breadth of phytoplankton, bacterioplankton and zooplankton in estuaries, coastal seas and open oceans. Though the focus is on taxonomic familiarization, basic biology of all major taxa represented in the plankton will be covered. Students will learn fundamental, as well as "cutting-edge" field, lab and statistical techniques. Prerequisite: Graduate status in one of the physical or biological sciences.

### **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

Prerequisite: 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.**

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## **BIOMEDICAL SCIENCES (BMD)**

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### **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 the normal human body. Included is a study of basic principles of chemistry related to human physiology, a study of cells and tissues, metabolism, joints, the integumentary, skeletal, muscular and nervous systems, and the senses. Laboratory experiences are provided through demonstration and interactive laboratory experiences.

### **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. Prerequisite: BMD 114.

### **BMD 201 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. Taught fall semester.

### **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. Prerequisites: BLY 101 or BLY 121 or BMD 114. Usually taught fall, spring and summer semesters.

### **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. Prerequisites: BLY 121, BLY 122. Taught fall and spring semesters.

### **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). Prerequisite: CH 201. Taught fall semester.

**BMD 322 Biochemistry II: Energetics & 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. Prerequisites: CH 202 and BMD 321. Taught spring semester.

**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. Must be taken simultaneously with BMD 322. Prerequisite: 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. Prerequisites: BLY 121 and BLY 122; CH 131 and CH 132. Taught fall semester.

**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. Prerequisite: BMD 334. Taught spring semester.

**BMD 336 Physiology Laboratory - (W)** 1 cr

This laboratory is designed to afford students hands-on laboratory experience in membrane physiology, motor and sensory neurophysiology, cardiovascular, respiratory and renal physiology. Limited to BMD majors unless by special permission. Prerequisites: EH 102, BMD 334 and BMD 335 (or BMD 335 concurrently or BMD 434). Taught fall and spring semesters. 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. Prerequisites: BLY 121, CH 131. Usually taught spring semester.

**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. Prerequisites: BMD 321 or (CH 201 and BMD 114 and BMD 210). Taught fall semester.

**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. Prerequisite: BMD 401. Taught spring semester. Special fee.

**BMD 410 Pathophysiology** 4 cr

A systematic study of disease processes involving relationships between pathophysiological changes and clinical manifestations. Prerequisites: BMD 210 or BMD 401 or acceptable microbiology course; BMD 334 and BMD 335. Usually taught fall and spring semesters.

**BMD 415 Microscopic Anatomy** 4 cr

A course in (human) microscopic anatomy with laboratory emphasizing recognition and utilizing traditional histologic techniques to process tissue for microscopic examination. Prerequisite: BMD 311. Taught fall semester. Special fee.

**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. Prerequisites: BMD 321, BMD 322, BMD 334, and BMD 335. Taught fall semester.

**BMD 430 Neurosciences** 3 cr

A study of neuroscience which integrates neurochemistry, neuroanatomy, and neurophysiology, emphasizing cellular neurobiology, neural systems, and the neurobiology of behavior. Prerequisites: BMD 311, BMD 321, BMD 322, BMD 334, and BMD 335. Taught spring semester.

**BMD 434 Human Physiology** 6 cr

A study of human physiology from cells to systems. A strong foundation in biology and general chemistry is required. Special permission from instructor required. Prerequisites: BLY 121, BLY 122, CH 131 and CH 132. Taught fall semester.

**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. Prerequisites: BMD 311, BMD 321, BMD 322, BMD 334, BMD 335 and BMD 336. Usually taught fall, spring, and summer semesters.

**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. Prerequisites: EH 102, BMD 321 (or BMD 350), and BMD 334. Usually taught fall and spring semester.

**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. Taught fall, spring and summer semesters.

**BMD 499 Honors Research Thesis** 2-3 cr - (H, W)

Literature survey and laboratory research experience under the direction of the faculty. Prerequisites: 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. Taught fall, spring and summer semesters. Special fee.

**BMD 534 Human Physiology** 6 cr

A study of human physiology from cells to systems, a strong foundation in cell biology and general chemistry is required. This course is restricted to pharmacy students or special permission from the instructor. Prerequisites: BLY 121 and BLY 122; CH 131 and CH 132. Corequisite: BMD 536. Taught fall semester.

**BMD 536 Physiology Laboratory** 1 cr

This laboratory is designed to provide hands-on laboratory experiments to accompany the lecture material in BMD 534. This course is restricted to pharmacy students or special permission from the instructor. Corequisite: BMD 534. Taught fall semester.

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## BUSINESS (BUS)

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**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 than 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. Prerequisite: MA 112.

**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. Prerequisite: BUS 245 or ST 210.

**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. Prerequisite: 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. Prerequisite: 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 Mitchell 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. Prerequisites: Completion of HON 399 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 permissions 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. Prerequisites: Completion of HON 399, 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. Prerequisite: Completion of the business core with the exception of MGT 485.

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**COMMUNICATION (CA)**

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**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. Prerequisites: 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. Prerequisites: EH 101, EH 102; 30 wpm typing ability. Computer Fee.

**CA 221 Principles of Advertising** 3 cr

Introductory survey of the principles of modern advertising. Prerequisites: EH 101, EH 102, CA 101. Fee.

**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. Prerequisites: CA 110 and CA 200. 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. Prerequisite: CA 110. Fee.
- CA 260 New Communication Technologies** 3 cr  
Survey of new electronic media and telecommunication technologies (such as satellite-to-home broadcasting, low power TV, high-definition video, electronic mail, video-text, etc.), that are changing the traditional forms, roles, and economics of corporate, organizational, and mass communication. Historical background and basic technical aspects of each system are introduced; regulatory and economic issues are examined. The future of electronic communication in all its forms will be considered in the context of a communication environment characterized by unprecedented and rapid change. 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. Prerequisite: CA 220. Computer Fee.
- 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. Prerequisites: CA 101 or permission of instructor; EH 101, EH 102. 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. Prerequisite: 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  
Selecting and using media to fulfill marketing objectives and strategies. Prerequisites: CA 221, CA 300. Fee.
- CA 322 Advertising Copy Writing (W)** 3 cr  
Preparation of advertising materials for print and non-print media; application of basic advertising research and media planning strategies to message development. Prerequisites: 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. Prerequisite: 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. Prerequisite: EH 102. 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. Prerequisite: CA 101. 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 and 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. Prerequisite: CA 220. Fee.
- CA 351 Social Effects of Mass Communication** 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. Prerequisite: CA 101. 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. Prerequisite: CA 101. Fee.
- CA 356 Broadcast/Cable Management** 3 cr  
An examination of management and programming strategies in broadcast and cable television. Computer 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  
Study of intermediate skills needed for reporting, evaluating, and writing news stories, with particular attention given to the reporting of public affairs issues. Prerequisite: CA 220. Fee.
- CA 381 Issues in Publication Design** 3 cr  
Study of layout, editing and design for newspapers, magazines, brochures, pamphlets, and other print media outlets. Recommended: CA 281. 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 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. Prerequisite: CA 220. Computer Fee.
- CA 386 Public Relations Communication Methods (W)** 3 cr  
Study of audio, visual, and written tools and techniques with emphasis on public relations writing and editing. Prerequisites: 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

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for news stories. Emphasis is given to newspaper and magazine feature writing. Prerequisite: CA 220. Computer Fee.

**CA 388 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 388. 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 twice for up to six hours' credit. 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. Prerequisites: Approval of the instructor. Open to students with sixteen hours in the field. Fee.

**CA 400 Contemporary Theories of Human Communication 3 cr**  
An advanced investigation of communication theory in context. Fee.

**CA 410 Persuasion in Context 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). Prerequisite: CA 210 or instructor approval. Fee.

**CA 411 Interpersonal Conflict Management 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. Prerequisites: EH 101 and EH 102; CA 422. Fee.

**CA 425 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.

Prerequisites: CA 230, and CA 300. Junior or senior standing. Fee.

**CA 435 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. Prerequisites: CA 330, and CA 430. 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. Prerequisite: CA 241. Fee.

**CA 445 Ethics and Social Responsibility in Communication (W) 3 cr**  
Study of social responsibility and ethics in communication. Acquaints student with ethical standards and expectations society has for communicators. 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. Prerequisite: CA 350. Corequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: CA 200. Fee.

**CA 457 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 460 Methods of Research in Communication 3 cr**  
An introduction to research methodology in communication focusing upon historical, survey, field, and experimental research methods. Focuses on historical and survey methods. Computer Fee.

**CA 472 Senior Reporting Seminar 3 cr**  
Advanced study of news reporting and presentation techniques, including investigative reporting. Students concentrating in print will produce a professional quality-print project. Prerequisite: CA 370. Computer Fee.

**CA 475 Communication and Group Processes 3 cr**  
The nature of small group processes. Leadership, communication, and decision making in small groups. Prerequisite: 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. Prerequisites: CA 221, CA 300, CA 310, CA 321, CA 322; senior standing. 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. Prerequisites: CA 220, and EH 102. Computer 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. Prerequisites: 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. Prerequisites: 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 twice for up to six hours' credit. 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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 6 credit hours.

**CA 500 Foundations of Graduate Study in Communication** 3 cr

An introduction of graduate study in the multidisciplinary field of communication. Introduction to the major subareas of the study of communication, the faculty of the department and their areas of specialization, university research facilities, university library facilities, and the organizations that support advanced study in the field of communication. Broad overview of and relationship between theories and research methods. Prerequisite: Graduate standing. CA 500 is a prerequisite or corequisite for all CA 500 level courses. Under special circumstances CA 500 may be waived as a prerequisite for graduate students in other majors. 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: Graduate standing and CA 500. CA 500 may be taken concurrently. Fee.

**CA 509 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. Prerequisites: Graduate standing, consent of advisor and CA 500. CA 500 may be taken concurrently. Fee.

**CA 512 Theoretical Foundations in Interpersonal 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. Prerequisites: Graduate standing, consent of advisor and CA 500. CA 500 may be taken concurrently. Fee.

**CA 531 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. Prerequisites: Graduate standing, consent of advisor and CA 500. CA 500 may be taken concurrently. Fee.

**CA 540 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 546 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. Prerequisites: 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. Prerequisites: Graduate standing, consent of advisor and CA 500. CA 500 may be taken concurrently. Fee.

**CA 556 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. Prerequisites: Graduate standing, consent of advisor and CA 500. CA 500 may be taken concurrently. Fee.

**CA 576 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. Prerequisites: Graduate standing, consent of advisor and CA 500. CA 500 may be taken concurrently. Fee.

**CA 585 Public Relations Administration** 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. Prerequisites: Graduate standing, consent of advisor and CA 500. CA 500 may be taken concurrently. Fee.

**CA 590 Special Topics in Communication** 1-3 cr

A detailed examination of selected topics in communication theory. Topic announced prior to registration. Course may be repeated once when subject matter varies. Prerequisites: 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. Prerequisites: 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. Prerequisites: Graduate standing, consent of advisor and instructor.

**CA 595 Project in Communication** 1-5 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.



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**CA 599 Thesis** 1-3 cr  
Three hours of 599 credit may be applied toward the M.A. degree for students selecting to write a thesis.

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### COLLEGE OF ARTS AND SCIENCES (CAS)

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**CAS 100 New Student Seminar** 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.

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### CELL BIOLOGY AND NEUROSCIENCE (CBN)

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**CBN 501 Medical Gross Anatomy** 8 cr  
A course consisting of lectures and laboratory experience stressing the more important aspects of human morphology using both systematic and regional approaches supplemented by introductory radiological features.

**CBN 510 Medical Histology** 7 cr  
A study of the structure and function of cells, tissues, and organs, which includes lectures, demonstrations, and individual laboratory study of slides.

**CBN 511 Medical Neuroanatomy** 6 cr  
This course consists of lectures and laboratories stressing the important aspects of the structures of the central nervous system and emphasizing the functional aspects which relate to human disease.

**CBN 513 Developmental Anatomy** 2 cr  
A course which presents a synopsis of human development and related information. Clinically related topics are emphasized while normal development is closely correlated with the systemic lectures given in the gross anatomy course.

**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. Prerequisite: Approved formal research proposal.

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### CIVIL ENGINEERING (CE)

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**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. Prerequisite: 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. Prerequisites: CE 102 and one of the following: math placement score of 85 or MA 113 or MA 115 or MA 125. Corequisite: 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. Prerequisites: CE 102 and one of the following: math placement score of 85 or MA 113 or MA 115 or MA 125. Corequisite: 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. Prerequisite: CH 132. Corequisite: 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. Prerequisite: CH 132. Corequisite: 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. Prerequisites: EG 315, EG 360. Fee.

**CE 352 Transportation Engineering** 3 cr  
Principles of transportation engineering with emphasis on highways and traffic. Prerequisites: 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. Prerequisite: 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. Prerequisite: EG 360. Corequisite: 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. Prerequisites: CH 132, MA 238. Corequisite: 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. Prerequisites: CH 132, MA 238. Corequisite: 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. Prerequisite: EG 315. Corequisite: 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. Prerequisite: EG 315. Corequisite: 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. Prerequisite: 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 434 Civil Engineering Design - Geotechnical** 3(I) cr  
A focused development of an advanced topic involving analysis and design in geotechnical 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. Prerequisite: CE 443. Fee.

**CE 435 Civil Engineering Design 3(1) cr  
- Transportation**

A focused development of an advanced topic involving analysis and design in transportation 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. Prerequisite: CE 352. Fee.

**CE 436 Civil Engineering Design 3(1) cr  
- Water Resources**

A focused development of an advanced topic involving analysis and design in water resources and coastal engineering. Implementation of design concepts and methodologies from conception to final design. Completion of comprehensive design project including cost estimates, oral and written presentation of results. Prerequisite CE 460. Fee.

**CE 437 Civil Engineering Design 3(1) cr  
- Environmental**

A focused development of an advanced topic involving analysis and design in environmental engineering. Implementation of design concepts and methodologies from conception to final design. Completion of a comprehensive design project, including cost estimates. Written and oral presentation of results. Prerequisite: CE 470. Fee.

**CE 438 Civil Engineering Design 3(1) cr  
- Structural**

A focused development of an advanced topic involving analysis and design in structural engineering. Implementation of design concepts and methodologies from conception to final design. Completion of a comprehensive design project including cost estimates, written, and oral presentation or results. Prerequisite: CE 480 or CE 485. Fee.

**CE 441 Geotechnical Laboratory (W) 1 cr**

Soil identification and classification: experimental measurement of soil properties and technical reporting. Prerequisites: EH 102, CE 340. Corequisite: CE 443. Fee.

**CE 442 Foundation Engineering 3 cr**

Principles of foundation analysis, design and construction in engineering practice. Prerequisite: 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. Prerequisite: CE 340. Corequisite: CE 441. 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. Prerequisite: 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. Prerequisite: 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. Prerequisites: CE 360, CE 370, CE 374. Corequisite: 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. Prerequisites: CE 360, CE 370, CE 374. Corequisite: 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. Prerequisite: CE 470 or instructor approval. Fee.

**CE 479 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 is not intended for engineering majors.

**CE 480 Design of Steel Structures 3 cr**

Design of steel trusses, girders, building frames, and other steel structures. Prerequisite: CE 384. Corequisite: CE 481. Fee.

**CE 481 Steel Design Laboratory 1 cr**

Application of structural steel design methods to specific cases. Prerequisite: CE 384. Corequisite: 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. Prerequisite: CE 384. Corequisite: 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. Prerequisite: CE 384. Corequisite: 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. Prerequisite: Senior Status. Fee.

**CE 499 Senior Honors 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 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: CE 443 or equivalent. Fee.

**CE 542 Ground Water 3 cr**

Principals of fluid flow through porous media. Well hydraulics. Ground water contamination, including principals that govern fate, transport, and remediation. Prerequisites: 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. Prerequisite: CE 352 or equivalent. Fee.

**CE 553 Transportation Systems Evaluation 3 cr**

This course will focus on concepts and principles of transportation economic analysis,

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transportation costs and benefits, user and nonuse consequences, methods of evaluation of plans and projects, environmental impact assessments, and transportation programming and management. Prerequisite: 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. Prerequisite: 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. Prerequisite: CE 501.

### **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. Prerequisites: 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. Prerequisite: CE 470 or equivalent. Fee.

### **CE 580 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. Prerequisite: CE 384, CE 385 or Equivalent. Fee.

### **CE 581 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. Prerequisites: CE 485, CE 486, or equivalent. 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. Prerequisite: CE 480, CE 481 or Equivalent. Fee.

### **CE 585 Prestressed Concrete Design 3 cr**

Students will be introduced to the concepts of prestressing, loss of prestress, design of prestressed beams, columns and slabs. Prerequisite: 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. Prerequisite: Consent of instructor. Fee.

### **CE 594 Projects in Civil Engineering 1-3 cr**

May be repeated for credit. Prerequisite: 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. Prerequisite: Approved prospectus. Fee.

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## **COUNSELOR EDUCATION (CED)**

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### **CED 560 Seminar in Atypical Behavior 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.

### **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 Substance Abuse Counseling 3 cr**

An introduction to the basic techniques, principles, and counseling models used to treat the substance abuse population. Other topics include: etiology, diagnosis, signs and symptoms, treatment programs, and current research.

### **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 Seminar in School Counseling 3 cr**

Course covers the history, roles, and practices in the field of school counseling at the elementary, middle, and high school levels. Review of applicable theories; relative research; and survey of activities, resources, and principles, which help the counselor make a difference in the system, but, foremost, in the lives of students. Prerequisite: Grade of "B" or above in CED 571.

### **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 568 Community 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 571 Program Planning, Development and Management for Counselors 3 cr**

An introduction to the professional practice of counseling. Includes an orientation to the process of counseling, functions and responsibilities, issues and trends, and the management of the total counseling program. Emphasis is on ethical and legal issues, client developmental needs, consultation, counseling models and the history of the profession.

### **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 and Group Guidance Procedures 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 575 Introduction to Community Rehabilitation 3 cr**

Introduces the student to the broad field of community rehabilitation including the history, philosophy, present activities and future trends in rehabilitation. A multidisciplinary approach to the study of the "whole person" is emphasized and direct contact with community social service agencies is an integral part of the course.

### **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. Prerequisites: Grade of "B" or above in CED 571 or CED 575, CED 572, CED 584, and CED 586. Counseling and Psychometry majors only.

**CED 577 Vocational Evaluation and Job Placement 3 cr**

This course offers the student both theory and experience in the determination of work potential in the person with a handicap. In addition, the student learns and practices the principles of vocational surveys, job-analysis, job placement, and follow-up.

**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. Prerequisite: 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 581 Rehabilitation Case Management 3 cr**

This course provides for critical analysis of representative rehabilitation case studies. Case records are used as a basis for developing an understanding of the clients with handicaps and their problems, the rehabilitation case work process, diagnosis, eligibility requirements, and the provision of services.

**CED 582 School Counseling and Guidance 3 cr**

The School Counselor: K-12 coverage of history, roles and current practices in the field of school counseling at elementary, middle and high levels. Review of applicable theories, relative research and survey of activities, resources and principles which help the counselor make a difference in the system, but foremost in the lives of students.

**CED 583 Individual and Group Testing Laboratory 3 cr**

Supervised experience in the selection, administration, and scoring of educational and psychological tests, and the interpretation and reporting of test results. Prerequisite: EPY 555.

**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 585 Medical Aspects of Rehabilitation 3 cr**

Common symptomatology, treatment, and medical management techniques of rehabilitation and physical medicine are emphasized. Other topics include assessment of client's functional limitations, interpretations of medical information,

and planning for the client's rehabilitation. Prerequisite: CED 572.

**CED 586 Analysis of Counseling 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. Prerequisite: Counseling and Psychometry 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 Career Planning and Placement 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. Prerequisite: Counseling and Psychometry majors only.

**CED 589 Seminar in Rehabilitation Issues 3 cr**

This course provides an opportunity for the student to explore the implications of rehabilitation research and current theories; to investigate professional issues; and to further develop areas of special rehabilitative interest.

**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 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. Prerequisites: 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. Prerequisites: Special permission of the instructor, and grade of "B" or above in EPY 556, EPY 558, and CED 583.

**CED 597 Internship: Community Counseling 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. Prerequisites: 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: CED 574.

**CED 676 Advanced Practicum in Counseling 3 cr**

Supervised field experience in appropriate settings. Required weekly seminar. Prerequisites: 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.

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### **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. Prerequisites: CED 576 and special permission of the instructor.

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## **CHEMISTRY (CH)**

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### **CH 100 Fundamentals of Chemistry** 4 cr

An introduction to the fundamental concepts of chemistry. Students who have not passed the Chemistry Placement Exam, and whose Mathematics Placement Exam score does not allow them to register for MA 112, should first complete DS 090 in mathematics as a prerequisite for CH 100. Students who have not passed the Chemistry Placement Exam, and whose Mathematics Placement Exam score allows them to register for MA112, can register for CH 100 but are advised to concurrently register for MA 112. 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 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.) Prerequisite: ACS Chemistry Placement Test score of 35 or greater or CH 100. **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 prerequisite. 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.) Prerequisites: 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 prerequisite. 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.) Prerequisite: 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 prerequisite. 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 Fall Semester.) Prerequisites: 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.) Prerequisites: CH 132 with CH 132L or CH 141 with CH 141L. Corequisite: 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.) Prerequisites: CH 132 with CH 132L or CH 141 with CH 141L. Corequisite: 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.) Prerequisites: CH 201 with CH 201L. Corequisite: 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.) Prerequisites: CH 201 and CH 201L. Corequisite: 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. (Offered Fall and Spring Semesters.) Prerequisites: CH 132 with CH 132L or CH 141 with CH 141L. Corequisite: CH 265L.

### **CH 265L Introductory Analysis Laboratory** 1 cr

Laboratory exercises associated with CH 265. (Offered Fall and Spring Semesters.) Prerequisites: CH 132 with CH 132L or CH 141 with CH 141L. Corequisite: 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.) Prerequisites: EH 102, CH 265 with CH 265L; MA 126; PH 202; CH 440 (concurrent). Corequisite: CH 300L.

**CH 300L Physical Chemistry for Life Sciences Laboratory** 1 cr

Laboratory exercises associated with CH 300. (Offered Fall Semester.) Prerequisites: CH 265 with CH 265L; MA 126; PH 202; CH 440 (concurrent). Corequisite: 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.) Prerequisites: EH 102, CH 265 with CH 265L; MA 126; PH 202. Corequisite: CH 301L.

**CH 301L Physical Chemistry I Laboratory** 1 cr

Laboratory exercises associated with CH 301. (Offered Fall Semester.) Prerequisites: CH 265 with CH 265L; MA 126; PH 202. Corequisite: CH 301. Fee.

**CH 302 Physical Chemistry II** 3 cr

Quantum Theory and Applications to Atoms and Molecules, Spectroscopy, and Statistical Thermodynamics. (Offered Spring Semester.) Prerequisites: CH 301 and CH 301L. Corequisite: CH 302L.

**CH 302L Physical Chemistry II Laboratory** 1 cr

Laboratory exercises associated with CH 302. (Offered Spring Semester.) Prerequisites: CH 301 and CH 301L. Corequisite: CH 302. Fee.

**CH 394 Directed Studies** 1-4 cr

Student works in research laboratory under faculty guidance. May be repeated; cannot exceed four credits. Prerequisite: 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.) Prerequisites: CH 302 and CH 302L. Corequisite: CH 401L.

**CH 401L Intermediate Inorganic Chemistry Laboratory** 1 cr

Laboratory exercises associated with CH 401. (Offered Spring Semester.) Prerequisites: CH 302 and CH 302L. Corequisite: 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 Spring Semester.) Prerequisites: CH 202; CH 300 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.) Prerequisites: 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 Spring Semester) Prerequisites: 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 Spring Semester) Prerequisites: 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. Prerequisite: 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. Prerequisite: CH 440 or BLY 440. Fee.

**CH 443 Laboratory Studies in Biochemistry** 3 cr

Course familiarizes the student with basic laboratory techniques commonly employed in biochemical research. (Offered Spring Semester.) Prerequisite: 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.) Prerequisites: 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.) Prerequisites: CH 265 with CH 265L; CH 300 with CH 300L or CH 302 with CH 302L. Corequisite: CH 465L

**CH 465L Instrumental Analysis Laboratory** 2 cr

Laboratory exercises associated with CH 465. (Offered Fall Semester.) Prerequisites: CH 265 with CH 265L; and CH 300 with CH 300L or CH 302 with CH 302L. Corequisite: 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.) Prerequisites: 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. Prerequisite: 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.) Prerequisite: 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.) Prerequisite: 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. Prerequisite: 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 Spring Semester) Prerequisite: 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

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must be taken concurrently. (Offered in Spring Semester) Prerequisite: CH 202. Fee.

### 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.) Prerequisites: 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.) Prerequisite: 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.) Prerequisites: 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.) Prerequisites: 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.) Prerequisite: 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.) Prerequisite: 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.) Prerequisites: 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.) Prerequisites: CH 265 with CH 265L; CH 300 with CH 300L or CH 302 with CH 302L; Graduate status. Corequisite: CH 565L.

### CH 565L Instrumental Analysis Laboratory 2 cr

Laboratory exercises associated with CH 565. (Offered Fall Semester.) Prerequisites: CH 265 with CH 265L; CH 300 with CH 300L or CH 302 with CH 302L; Graduate status. Corequisite: 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.) Prerequisite: 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.) Prerequisite: 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. Prerequisite: 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.) Prerequisite: 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. Prerequisite: 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 201 Chemical Engineering Fundamentals I 3 cr

Formulation of material balances and relations involving real gases, vapors, liquids, and solids. Prerequisites: CH 132 and MA 126 or concurrent enrollment. Fee.

### CHE 202 Chemical Engineering Fundamentals II 3 cr

Formulation of energy balance and combined material and energy balances for steady-state processes. Prerequisite: CHE 201 and BLY 121 or concurrent enrollment. Fee.

### CHE 232 Chemical Engineering Thermodynamics I 3 cr

Applications of the First and Second Law. Estimation of fluid properties and heat effects. Thermodynamic analysis of meters, throttles, nozzles, and compressors. Prerequisites: PH 201, MA 227, CHE 201. Fee.

### CHE 290 Special Topics 1-5 cr

Topics of current chemical engineering interest. Fee.

### CHE 301 CHE Calculations III 3 cr

Material and energy balance process calculations emphasizing applied statistics utilizing computer programming concepts, spreadsheets, and modern mathematical computer tools. Prerequisite: CHE 202. Fee.

### CHE 311 Equilibrium Stage Operations 3 cr

Applications of material balances and equilibrium relations to stage design. Design of cascades for leaching, liquid-liquid extraction, and distillation. Prerequisites: MA 227, CHE 202. Fee.

### CHE 321 Unit Operations I 3 cr

Fundamentals of momentum transfer with applications in fluid flow through pipes and process equipment. Prerequisites: MA 238, EG 270. Fee.

### CHE 322 Unit Operations II 3 cr

Fundamentals of conductive, convective, and radiative modes of heat transfer with applications in the design of heat exchangers. Prerequisite: CHE 321 and CHE 332 or concurrent enrollment. Fee.

### CHE 331 Thermophysical Properties Estimation 3 cr

Fundamentals of thermophysical property estimation in non-ideal multicomponent electrolyte and non-electrolyte systems. Prerequisites: CH 201, CH 265, EG 270, CHE 202. Fee.

### CHE 332 Chemical Engineering Thermodynamics II 3 cr

Application of thermodynamic principles to chemical engineering problems. Prerequisites: CH 265, CHE 331 and CHE 322 or concurrent enrollment. Fee.

### CHE 342 Engineering Communication 3 cr (W)

Formal and informal reports, oral presentations, and visual aids. Prerequisites: EH 101, EH 102, CHE 321. Fee.

### CHE 372 Reactor Design 3 cr

Introduction to reactor design; study of rate theories and their formulation. Prerequisite: CHE 322, CHE 332 or concurrent enrollment. Fee.

### CHE 390 Special Topics 1-5 cr

Topics of current chemical engineering interest. Fee.

### CHE 421 Unit Operations III 3 cr

Fundamentals of molecular and convective diffusion with applications in the design of differential contactors. Prerequisites: CHE 311, CHE 322, CHE 332. 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. Prerequisites: 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 stage-

wise separation and mass transfer. Prerequisites: CHE 342, CHE 421. Fee.

**CHE 451 Process Models** 3 cr  
Mathematical modeling, simulation, and dynamics of chemical process systems for design and analysis. Prerequisite: CHE 322. Fee.

**CHE 452 Process Dynamics and Controls** 3 cr  
Negative feedback control of chemical processes. Specification of loops. Selection and tuning of controller modes. Feed forward, cascade, and digital control. Instrumentation. Prerequisite: CHE 372. Fee.

**CHE 461 Introduction to Process Design** 3 cr  
Engineering economics and elements of process design, including energy and material balances, manufacturing and product cost. Unit operation equipment sizing, and cost. Prerequisites: EG 231, CHE 332, CHE 342, CHE 372. Fee.

**CHE 462 Process Design** 3 cr  
Selection, design and specification of principal chemical processes. Prerequisites: CHE 461 and CHE 452 or concurrent enrollment. Fee.

**CHE 463 Simulation of Chemical Processes** 3 cr  
Steady state simulation of chemical processes using modern software tools. Simulation topics include physical properties, flowsheet generation, convergence, optimization, electrolytes, and solids. Prerequisite: CHE 311. Fee.

**CHE 490 Special Topics** 1-3 cr  
Topics of current chemical engineering interest. Prerequisite: 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. Prerequisites: 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, 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 6 credit hours over two semesters. Prerequisites: CHE 332, CHE 322, CH 265, CH 301 and completion of an approved project prospectus.

**CHE 510 Thermodynamics of Chemical Systems** 3 cr  
Phase and reaction equilibria in multi-component chemical engineering applications, nonideal considerations. Fee.

**CHE 520 Transport Phenomena I** 3 cr  
Unified treatment of momentum, energy, and mass transport. Emphasis on momentum and energy transport. Prerequisite: concurrent enrollment in CHE 551. Fee.

**CHE 521 Transport Phenomena II** 3 cr  
Emphasis on mass transport and transfer in flowing nonisothermal, multicomponent, reacting systems. Prerequisite: Consent of instructor. Fee.

**CHE 525 Chemical Reactor Analysis** 3 cr  
Single and multiple chemical reactions and reactor systems. Reactor characterization and design. Prerequisite: concurrent enrollment in CHE 551. Fee.

**CHE 530 Synthetic Fuels** 3 cr  
Fundamentals of gasification and liquefaction concepts applied to fossil fuels and biomass conversion. Fee.

**CHE 540 Distillation** 3 cr  
Analysis and design of separation units for multicomponent nonideal systems. 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** 3 cr  
Advanced mathematical modeling of chemical process systems for design and analysis. Fee.

**CHE 560 Mixing and Agitation** 3 cr  
Analysis and design of single-phase and multiple-phase mixing units. Fee.

**CHE 563 Simulation of Chemical Processes** 3 cr  
Steady state simulation of chemical processes using modern software tools. Simulation topics include physical properties, flowsheet generation, convergence, optimization, electrolytes, solids, and advanced simulation projects. Fee.

**CHE 570 Separation Techniques** 3 cr  
Analysis and design of separation processes other than distillation. Topics include extraction, gas absorption, crystallization, and filtration. 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. Prerequisite: Consent of department chair or departmental approval. Fee.

**CHE 592 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: Approved prospectus. Fee.

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## COMPUTER AND INFORMATION SCIENCES (CIS)

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All prerequisites must be passed with a minimum grade of "C".

**CIS 100 Information Technology in Society** 1 cr

A discussion of the impact of information technology on personal, local, national, and global issues. No prerequisites.

**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 CIS. 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 CIS. 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. A discussion of the social, ethical, economics, and philosophical implications of computing. Exposure to a representative set of applications. No prerequisites.

**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. Prerequisite: DS 090 or math placement score of 65 or higher.

**CIS 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. Prerequisite: MA 112 or math placement score of 75 or higher.

**CIS 121 Problem Solving and Programming Concepts II** 4 cr

Continuation of CIS 120. Topics include: design concepts, abstract data types, use of object libraries, dynamic storage allocation, stacks, queues, link lists, random access files, testing and software engineering practices. Prerequisites: CIS 120.

**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 prerequisites.

**CIS 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 for 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 prerequisites.

**CIS 190 Computer and Information Sciences Special Topics 1-3 cr**

Selected topics in computer and information sciences. Prerequisite: 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. Prerequisite: MA 125.

**CIS 211 Advanced C++ Programming 1 cr**

Advanced concepts in C++ Programming, constructors, destructors, classes and operation overloading. Prerequisite: CIS 210.

**CIS 227 Numerical Computation I 3 cr**

Floating point numbers, representation, and errors; software tools for scientific computing; elementary problems in scientific computing. Prerequisite: MA 126.

**CIS 230 Advanced Data and File Structures 3 cr**

Extension of elementary data structures as covered in CIS 121, techniques to organize and access collections of data. Definition, implementation, and use of Classes and Abstract Data Types (ADT). The use of ADT's and objects for solving CIS problems. Network, hierarchical, and relational data models leading to Database Management Systems. Topics include: recursion, search trees, algorithmic complexity, advanced searching and sorting algorithms, and graphs. Prerequisites: CIS 211 or CIS 121 and MA 267.

**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. Prerequisite: 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. Prerequisites: CIS 150 or placement by exam.

**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. Prerequisite: CIS 115.

**CIS 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. Prerequisite: CIS 230.

**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. Prerequisite: CIS 115 or CIS 230.

**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. Prerequisite: 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. Prerequisite: 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. Prerequisite: CIS 401.

**CIS 404 Accelerated Networks and Communications 3 cr**

This course presents network and communications concepts in an accelerated manner. Coverage includes signaling concepts, communication devices, switching, network

architectures and protocols, OSI reference model, network management and planning. This course does not count towards a graduate degree in CIS. Prerequisite: CIS 402.

**CIS 405 Programming Languages 3 cr**

This course examines formal language concepts of programming languages including syntax and basic grammars. Language features such as data types and structures, control structures, and data flow will be studied. Laboratory assignments include the use of high-level languages, as well as the use of windows API. Prerequisite: CIS 403.

**CIS 406 Information Systems in Organizations 3 cr**

An examination of the relationship of information systems in organizations and the impact on people in the organization with respect to planning and decision making. Other topics covered include general systems theory, data security and integrity, application access control, project management, and large group behaviors. Prerequisites: CIS 402, 403, 404.

**CIS 407 Database Programming 3 cr**

This course examines implementation and access of databases via event-driven applications developed with visual programming tools. Other topics covered are elementary ER modeling, data integrity, referential integrity, report development, interface design. This course does not count towards a graduate degree in CIS. Prerequisite: CIS 403.

**CIS 439 Windows Programming 3 cr**

This course continues and expands the study of programming begun in either ITE 285 or CIS 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 DEL's in producing user interfaces and applications projects. Prerequisite: CIS 230 or ITE 285.

**CIS 490 Computer and Information Sciences Special Topics 3 cr**

Advanced selected topics in computer and information sciences. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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 last semester they plan to graduate\*. Prerequisites: Application for graduation during the semester requested\* and completion of the following required course according to major:

**Computer Science:** CSC 331

**Information Systems:** ISC 360

**Information Technology\*\*:** ITE 480

\*Those seniors who plan to graduate in the summer should take this course during the spring semester before their summer graduation.

\*\*ITE 485 is a co-requisite for ITE students enrolled in CIS 497.

**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 CIS and the coordinator for the student's program. Corequisite: CIS 497. Prerequisite:

**Computer Science:** CSC 331

**Information Systems:** ISC 360

**Information Technology\*\*:** ITE 480

**CIS 499 Computer and Information 1-6 cr  
Sciences Senior Honors Project**

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. Prerequisite: Completion of an approved project prospectus and permission of the appropriate coordinator.

**CIS 500 Basic Computing Principles 3 cr  
and Applications**

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. Prerequisite: Graduate Standing.

**CIS 501 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. Prerequisite: Prior programming experience desired and permission of Coordinator.

**CIS 502 Accelerated Operating 3 cr  
Systems Computer Architecture**

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. Prerequisite: Prior programming experience desired and permission of Coordinator.

**CIS 503 Accelerated Data 3 cr  
and File Structures**

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. Prerequisite: CIS 501.

**CIS 504 Accelerated Networks 3 cr  
and Communications**

This course presents network and communications concepts in an accelerated manner. Coverage includes signaling concepts, communication devices, switching, network architectures and protocols, OSI reference model, network management and planning. This course does not count towards a graduate degree in CIS. Prerequisite: CIS 502.

**CIS 505 Programming Languages 3 cr**

This course examines formal language concepts of programming languages including syntax and basic grammars. Language features such as data types and structures, control structures, and data flow will be studied. Laboratory assignments include the use of high-level languages, as well as the use of windows API. Prerequisite: CIS 503.

**CIS 506 Information Systems 3 cr  
in Organizations**

An examination of the relationship of information systems in organizations and the impact on people in the organization with respect to planning and decision making. Other topics covered include general systems theory, data security and integrity, application access control, project management, and large group behaviors. This course does not count towards a graduate degree in CIS. Prerequisite: CIS 503, 502, 504.

**CIS 507 Database Programming 3 cr**

This course examines implementation and access of databases via event-driven applications developed with visual programming tools. Other topics covered are elementary ER modeling, data integrity, referential integrity, report development, interface design. This course does not count towards a graduate degree in CIS. Prerequisite: CIS 503.

**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. Prerequisite: CIS Graduate Professional Component.

**CIS 590 Computer and Information 3 cr  
Science Special Topics**

Advanced selected topics in computer and information sciences. Prerequisite: Permission of the Director of CIS Graduate Studies.

**CIS 594 Directed Study 3 cr**

May be taken for a maximum of three credits to count towards the degree. Prerequisite: Permission of the Director of CIS Graduate Studies.

**CIS 595 Computer and Information 1-3 cr  
Sciences Research Development**

Development of the research proposal for master's thesis. Prerequisite: Permission of the Director of CIS Graduate Studies and CIS 518.

**CIS 596 Computer and Information 0-3 cr  
Sciences Graduate Internship**

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. Prerequisite: Permission of the Director of CIS Graduate Studies.

**CIS 597 Computer and Information 1 cr  
Sciences Graduate Seminar**

This course prepares graduate assistants in the School of CIS to provide support and assistance to faculty for instruction in School of CIS classes. 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. Prerequisite: Permission of the Director of CIS Graduate Studies.

**CIS 598 Computer and Information 1-3 cr  
Sciences Project**

Approved investigation of original problems under direction of a faculty member. This course may be repeated for a maximum of three (3) hours of credit towards the degree. Prerequisite: Permission of the Director of CIS Graduate Studies.

**CIS 599 Computer and Information 1-3 cr  
Sciences Thesis**

This course may be repeated for a maximum of six (6) credits. A thesis committee will provide direction during the thesis. Prerequisite: CIS 595, approval of thesis proposal by the student's thesis committee and by the Director of CIS Graduate Studies.

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**CRIMINAL JUSTICE (CJ)**

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**CJ 205 Introduction to 3 cr  
Criminal Justice**

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 and PSC majors must pass with a "C" or better. Prerequisite: CJ 205.

**CJ 320 Modern Police Functions 3 cr**

An advanced survey of law enforcement, concentrating on the police with emphasis on

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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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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 US Supreme Court. (Identical to PSC 331). Prerequisites: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisites: EH 102 and CJ 205.

### **CJ 440 Community-Based Corrections (W) 3 cr**

Examines alternatives to incarceration for offenders with emphasis on current research. Prerequisites: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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). Prerequisite: CJ 205.

### **CJ 484 Political Corruption 3 cr**

Study of the causes and consequences of political corruption from a comparative and national perspective. Special attention is given to corruption in the area of criminal justice. Identical to PSC 484. Credit cannot be received for both CJ 484 and PSC 484. Prerequisite: 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. Prerequisite: Senior Criminal Justice Major. Taught in the fall semester. Prerequisites: EH 102 and CJ 205.

### **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 once. The maximum of 6 credit hours may be applied to the criminal justice major. Student must have senior standing and prior approval to sign up for this course. Prerequisite: CJ 205.

### **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. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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. Prerequisite: USA Honors Program

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## **CLASSICS (CLA)**

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### **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 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 Classical and Medieval** 3 cr  
Survey of Greek, Roman, and Medieval philosophy with emphasis on classical Greek philosophy. **Core Course.** 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. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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 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. Prerequisite: 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. Prerequisite: EH 102.

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## COMMUNITY/MENTAL HEALTH NURSING (CMN)

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**CMN 350 Psychiatric/Mental Health Nursing** 3 cr

Provides students the opportunity to analyze theories, concepts, research, and issues and trends in psychiatric-mental health nursing. Focus is on internal and external factors affecting the mental health of children, adolescents, adults, and families. Emphasis is on the role of the professional nurse in health promotion and maintenance, illness care, and rehabilitation of children, adolescents, adults, and families

experiencing psychiatric-mental health concerns. Prerequisites: NU 300, NU 301, NU 325, HSC 342, HSC 343. Prerequisite with Corequisite: NU 327. Corequisite: CMN 351.

**CMN 351 Psychiatric/Mental Health Nursing Clinical** 3 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. Prerequisites: NU 300, NU 301, NU 325, HSC 342, HSC 343. Prerequisite with Corequisite: NU 327. Corequisite: CMN 350.

**CMN 411 Nursing in Community Systems** 3 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. Prerequisites: NU 325, NU 410.

**CMN 420 Community Health Nursing Care** 3 cr

Provides students an in-depth exploration of community health nursing concepts and principles from an aggregate health care perspective. Focus is on the prevention of disease and the promotion of health. 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. Emphasizes the use of the nursing process to assess the complex factors in the community that affect the health of aggregates. Students are guided in the study of interventions that prevent disease and promote health. Prerequisites/Corequisites: AHN 447, AHN 448. Corequisite: NU 413, NU 412, NU 460.

**CMN 543 Public Health Nursing Administration Concepts: Assessing, Planning and Financing** 3 cr

The purpose of this course is to examine concepts and methods of assessing populations and communities for developing and planning public health programs that promote health and support access to health care. Models for financing and promoting cost effective care will be examined. The focus is on the role of the public health nursing administrator as a leader within the interdisciplinary health care

system. The emphasis is on the integration of theories and concepts from public health science and nursing to formulate policy and design programs that will promote and preserve the health of vulnerable populations in a culturally diverse society. Prerequisites: NU 506, HSC 540, HSC 541, HSC 542. Prerequisite or Corequisite: NU 508. Corequisite: CMN 544.

**CMN 544 Public Health Nursing Administration Practicum** 3 cr

The purpose of this course is to provide an opportunity for implementing public health nursing administration roles. The focus is on the application of selected theoretical frameworks with vulnerable populations in culturally diverse communities. The emphasis is on critical analysis of community data, program planning, and development. Prerequisites: NU 506, HSC 540, HSC 541, HSC 542. Prerequisite or Corequisite: NU 508. Corequisite: CMN 543.

**CMN 545 Public Health Nursing Administration Internship** 4 cr

The purpose of this culminating course is to provide a preceptor and faculty facilitated experience in public health nursing administration with a focus on the application and synthesis of knowledge and skills acquired in all previous courses. Emphasis will be on the implementation and evaluation of specific public health programs designed to meet the health concerns of populations and communities and influence the achievement of the goals set forth in Healthy People 2010. Prerequisites: CMN 543 and CMN 544. Corequisite: CMN 546. Prerequisites or Corequisites: NU 562, NU 508, NU 513, NU 507.

**CMN 546 Public Health Nursing Administration Seminar** 3 cr

The purpose of this course is to provide a forum for the evaluation of issues and trends encountered in public health nursing administration. Emphasis is on critical analysis and management of these issues by public health nursing administrators within the context of an interdisciplinary team. Prerequisites: CMN 543, CMN 544, NU 562, NU 506. Corequisite: CMN 545. Prerequisites or Corequisites: NU 508, NU 513, and NU 507.

**CMN 548 Advanced 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.

**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.

**CMN 551 Health Promotion/  
Disease Prevention and  
Issues for Psychiatric/  
Mental Health 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. Corequisites: CMN 548, CMN 549.

**CMN 552 Advanced Psychiatric/  
Mental Health 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. Prerequisites: CMN 548, CMN 549, CMN 551, NU 506. Prerequisites or Corequisites: NU 545, NU 578. Corequisite: CMN 553

**CMN 553 Advanced Psychiatric/  
Mental Health 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. Prerequisites: CMN 548, CMN 549, CMN 551, NU 506. Prerequisites or Corequisites: NU 545, NU 578. Corequisite: CMN 552

**CMN 554 Advanced Psychiatric/  
Mental/Health 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. Prerequisites: CMN 552, CMN 553. Corequisite: CMN 555

**CMN 555 Advanced Psychiatric/  
Mental Health Nursing  
Practicum 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. Prerequisites: CMN 552, CMN 553. Corequisite: CMN 554

**CMN 556 Advanced Psychiatric/  
Mental Health 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. Prerequisites: CMN 554, CMN 555, NU 506. Corequisite: CMN 557. Prerequisites or Corequisites: NU 508, NU 513, NU 545, NU 578, NU 507, and NU 518.

**CMN 557 Advanced Psychiatric/  
Mental 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 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. Prerequisites: CMN 554, CMN 555, NU 506. Corequisite: CMN 556. Prerequisites or Corequisites: NU 508, NU 513, NU 545, NU 578, NU 507, NU 518.

**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. Corequisite: CMN 569.

**CMN 569 Advanced Family Nursing 1 cr  
Practicum I**

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. Corequisite: CMN 568.

**CMN 571 Health Promotion/Disease  
Prevention and Issues for  
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. Corequisites: CMN 568, CMN 569.

**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. Prerequisites: CMN 568, CMN 569, CMN 571, NU 506. Prerequisites or Corequisites: NU 545, NU 578. Corequisite: CMN 573.

**CMN 573 Advanced Family Nursing 3 cr  
Practicum II**

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. Prerequisites: CMN 568, CMN 569, CMN 571, NU 506. Prerequisites or Corequisites: NU 545, NU 578. Corequisite: 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. Prerequisites: CMN 572, CMN 573. Corequisite: CMN 575.

**CMN 575 Advanced Family Nursing 3 cr  
Practicum III**

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. Prerequisites: CMN 572, CMN 573. Corequisite: CMN 574.

**CMN 576 Advanced Family Nursing 3 cr  
Internship**

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. Prerequisites: CMN 574, CMN 575, NU 506. Corequisite: CMN 577. Prerequisites or Corequisites: NU 508, NU 513, NU 545, NU 578, NU 507, NU 518.

**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. Prerequisites: CMN 574, CMN 575, NU 506. Corequisite: CMN 576. Prerequisites or Corequisites: NU 508, NU 513, NU 545, NU 578, NU 507, NU 518

**CMN 588 Advanced Older Adult  
Psychiatric Internship 5 cr**

The purpose of this course is to provide a preceptor and faculty facilitated experience in

the psychiatric nurse practitioner role. The focus is on application and synthesis of knowledge and skills acquired in previous courses. Prerequisites: AHN 584 and AHN 585. Corequisite: CMN 589.

**CMN 589 Advanced Older Adult Psychiatric Nursing III** 3 cr

The purpose of this course is to provide a forum for the evaluation of issues and trends encountered in psychiatric nursing care. Many mental disorders begin in adolescence and persist across the lifespan therefore the course will explore the continuum of mental health issues. Emphasis is on critical analysis and management of issues by the adult psychiatric nurse practitioner in an interdisciplinary health care delivery system. Prerequisite: AHN 584 and AHN 585. Corequisite: CMN 588.

**COOPERATIVE EDUCATION (COE) ALTERNATING**

**COE 100 Alternating Cooperative No Credit Education, 1st Training Period**

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 No Credit Education, 2nd Training Period**  
Prerequisite: COE 100.

**COE 200 Alternating Cooperative No Credit Education, 3rd Training Period**  
Prerequisite: COE 101.

**COE 201 Alternating Cooperative No Credit Education, 4th Training Period**  
Prerequisite: COE 200.

**COE 300 Alternating Cooperative No Credit Education, 5th Training Period**  
Prerequisite: COE 201.

**COE 301 Alternating Cooperative No Credit Education, 6th Training Period**  
Prerequisite: COE 300.

**COE 400 Alternating Cooperative No Credit Education, 7th Training Period**  
Prerequisite: COE 301.

**COE 401 Alternating Cooperative No Credit Education, 8th Training Period**  
Prerequisite: COE 400.

**COE 500 Alternating Cooperative No Credit Education, 1st Training Period**  
Prerequisites: Acceptance into a graduate program and acceptance into the Cooperative Education Program.

**COE 501 Alternating Cooperative No Credit Education, 2nd Training Period**  
Prerequisite: COE 500.

**COE 600 Alternating Cooperative No Credit Education, 3rd Training Period**  
Prerequisite: COE 501.

**COE 601 Alternating Cooperative No Credit Education, 4th Training Period**

Prerequisite: COE 600.

**COOPERATIVE EDUCATION (COE) PARALLEL**

**COE 110 Parallel Cooperative No Credit Education, 1st Training Period**

Prerequisites: 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 No Credit Education, 2nd Training Period**

**COE 210 Parallel Cooperative No Credit Education, 3rd Training Period**

**COE 211 Parallel Cooperative No Credit Education, 4th Training Period**

**COE 310 Parallel Cooperative No Credit Education, 5th Training Period**

**COE 311 Parallel Cooperative No Credit Education, 6th Training Period**

**COE 410 Parallel Cooperative No Credit Education, 7th Training Period**

**COE 411 Parallel Cooperative No Credit Education, 8th Training Period**

**COE 510 Parallel Cooperative No Credit Education, 1st Training Period**

Prerequisites: Acceptance into a graduate program and acceptance into the Cooperative Education Program.

**COE 511 Parallel Cooperative No Credit Education, 2nd Training Period**

Prerequisite: COE 510.

**COE 610 Parallel Cooperative No Credit Education, 3rd Training Period**

Prerequisite: COE 511.

**COE 611 Parallel Cooperative No Credit Education, 4th Training Period**

Prerequisite: COE 610.

**COOPERATIVE EDUCATION/INTERNSHIP (COE)**

**COE 120 Internship No Credit 1st Training Period**

Prerequisites: 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 No Credit 2nd Training Period**

**COE 220 Internship No Credit 3rd Training Period**

**COE 221 Internship No Credit 4th Training Period**

**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 1 cr (Medicine, Dentistry, Optometry, Pharmacy, and Veterinary Medicine)**

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. Prerequisite: Sophomore status and permission of Chair of Preprofessional Advisory Committee.

**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 1-3 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 4 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.

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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 2 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 Cardiorespiratory 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 5 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 360 Entry Level Exam Review 2 cr**

This course is designed to assist students prepare for the Entry-Level Examination (ELE) 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 ELE will be reviewed in the form of practice examinations. The entry-level examination matrix will be used as the main resource for this course.

### **CRC 415 Research Methodology 2 cr**

A survey of research designs, methods, and evaluative techniques, applicable to basic science and clinical research studies.

### **CRC 429 Cardiovascular Physiology 2 cr**

Discusses the physiology of the heart and the vasculature. Will serve as the basis for understanding cardiovascular pathophysiology.

### **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 Cardiopulmonary Diseases 3 cr**

This course will focus on patients who have cardiovascular diseases and on patients who have pulmonary diseases. Students will use the case study method to learn about certain cardiopulmonary pathophysiologies, as well as their diagnostic approaches and treatment. Advanced Cardiac Life Support (ACLS) will also be taught. Special fee.

### **CRC 432 Subacute Care 3 cr**

This course will focus on cases involving patients who are treated in nursing homes, subacute care facilities, rehabilitation programs, and the home. Topics will include health care settings and organization, polysomnography, subacute mechanical ventilation, and case management. Students will discuss the health promotion and disease prevention aspects of each case. Relevant laboratory exercises will be conducted.

### **CRC 440 Neonatal-Pediatric Cardiorespiratory Care Practicum - (W) 4 cr**

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 Cardiopulmonary Diagnostics Practicum 4 cr**

Clinical experiences will involve the care of cardiac patients who receive intensive cardiovascular procedures and pulmonary function testing. The cardiovascular procedures include electrocardiography, echocardiography, and cardiac catheterization. Students will prepare and present case studies relevant to this patient population.

### **CRC 442 Subacute Care Practicum 4 cr**

Clinical experiences involve the care of patients who are placed in subacute settings and in the sleep laboratory. 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) 1 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 identify and carry out a research project relevant to the field of Cardiorespiratory Care 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. Prerequisites: Permission of the department chair and completion of an approved project prospectus.

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## **COMPUTER SCIENCE (CSC)**

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**All prerequisites must be passed with a minimum grade of "C".**

### **CSC 190 Computer Science Special Topics 1 cr**

Selected topics in computer science. Prerequisite: 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. Prerequisite: CIS 121.

### **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. Prerequisite: CIS 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. Prerequisite: CIS 230, CSC 228.

**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. Prerequisite: CIS 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. Prerequisite: CIS 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. Prerequisite: Professional Component Standing.

**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. Prerequisite: 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. Prerequisite: Professional Component Standing and CSC 311, CIS 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. Prerequisite: Professional Component Standing, CSC 311 and CIS 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. Prerequisite: Professional Component Standing.

**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. Prerequisite: Professional Component Standing and ST 310, 315 or 320.

**CSC 415 Numerical Analysis 3 cr**

Mathematical preliminaries, solving linear systems, numerical solution of ordinary and partial differential equations. Prerequisites: Professional Component Standing.

**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. Prerequisite: Professional Component Standing.

**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. Prerequisites: Professional Component Standing and ST 315 or 320.

**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. Prerequisites: CSC 333.

**CSC 490 Computer Science Special Topics 3 cr**

Advanced selected topics in computer science. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisites: CIS Graduate Professional Component.

**CSC 515 Numerical Analysis 3 cr**

Mathematical preliminaries, solving linear systems, numerical solution of ordinary and partial differential equations. Prerequisites: CSC 327 and 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. Prerequisite: Professional Component Standing.

**CSC 520 Computer Architecture 3 cr**

Instruction set design, pipelining, instruction-level parallelism, memory hierarchy design, and multiprocessors. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: CIS Graduate Professional Component.

**CSC 526 Database Structure and Design 3 cr**

An in-depth study of the underlying principles of database management system models. Database design issues are examined



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from algorithmic and structural perspective. Prerequisite: CIS Graduate Professional Component.

### **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. Prerequisite: CIS Graduate Professional Component.

### **CSC 532 Advanced Operating Systems** 3 cr

Monitors, non-time-sharing operating systems, and multiuser systems will be discussed. Memory management techniques will be stressed. Disk and other secondary storage media and their associated drivers will be discussed. Analytic modeling techniques will be used to discuss operating systems or simulate sections of an operating system in a high-level programming language. Prerequisites: CSC 520 or equivalent.

### **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. Prerequisite: CIS Graduate Professional Component.

### **CSC 590 Computer Science Special Topics** 3 cr

Advanced selected topics in computer science. Prerequisite: Permission of the CSC Coordinator.

### **CSC 595 Computer Science Project Proposal Development** 1-3 cr

Development of the project proposal for the CSC master's project. Prerequisites: Permission of the Director of CIS Graduate Studies.

### **CSC 598 Computer Science Project** 1-3 cr

This course may be repeated for a maximum of six (6) credits. A CIS project committee will provide direction during the project. Prerequisite: CSC 595, approval of project proposal by the student's project committee, and permission by the Director of CIS Graduate Studies.

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## **COMMUNICATION SCIENCES AND DISORDERS (CSD)**

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### **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. Must be repeated until candidacy is achieved.

### **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 neuro-anatomy 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. Prerequisite: Permission of graduate advisor.

### **CSD 695 Directed Research** 1-3 cr

Research under the direction of a graduate faculty member. May be repeated. Prerequisite: 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** 2 cr

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. Prerequisite: Admission to doctoral candidacy, or Consent of Dissertation Director and Graduate Advisor.

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## **DRAMATIC ARTS (DRA)**

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### **DRA 100 Theatre Workshop: Rehearsal and Performance** 1 cr

Practical experience in acting. May be repeated for a maximum of four hours. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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 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 121 Acting II** 3 cr

A continuation of Acting I, this course emphasizes character development and analysis of classic American texts. Prerequisite: DRA 120 or permission of instructor.

<b>DRA 130 Stagecraft</b>	<b>3 cr</b>	areas other than acting or technical production. May be repeated for a total of four hours. Prerequisites: Junior status and permission of the department chair.
<b>DRA 131 Fundamentals of Stage Lighting</b>	<b>3 cr</b>	
A lecture-laboratory course in the fundamentals of stage lighting.		
<b>DRA 132 Costume Fundamentals</b>	<b>3 cr</b>	
A lecture-laboratory course in the fundamentals of costuming for the stage, including basic sewing skills as they apply to theatrical costumes.		
<b>DRA 133 Computer Graphics for the Theatre (C)</b>	<b>1 cr</b>	
An introductory course on computer drafting and graphic design for the stage.		
<b>DRA 150 Text Analysis</b>	<b>3 cr</b>	
Reading and analyzing play scripts as blueprints for dramatic actions, sights, sounds, characters, and productions.		
<b>DRA 204 Dance Techniques I</b>	<b>3 cr</b>	
A review and expansion of technique, vocabulary, and history of ballet, jazz, and theatrical dance. Prerequisites: DRA 104 and 105.		
<b>DRA 205 Dance Techniques II</b>	<b>3 cr</b>	
An exploration of modern dance techniques, vocabulary, and history with ballet as their basis. Prerequisite: DRA 204.		
<b>DRA 210 Makeup</b>	<b>1 cr</b>	
A study of the materials and techniques of theatrical makeup.		
<b>DRA 220 Stage Movement</b>	<b>3 cr</b>	
Through exercises and scene study, student-actors explore movement for the stage. Prerequisite: DRA 121 or permission of instructor.		
<b>DRA 221 Voice for Actors</b>	<b>3 cr</b>	
A workshop-lecture course in speaking voice and articulation for performance. Prerequisite: DRA 121 or permission of instructor.		
<b>DRA 250 Theatre Management</b>	<b>3 cr</b>	
A basic course in the principles of accounting, purchasing, box-office management, house management, and promotion.		
<b>DRA 261 Creative Dramatics</b>	<b>3 cr</b>	
A practical course concerned with improvisational acting with children. Of special interest to students in Education and Leisure Services.		
<b>DRA 290 Special Topics</b>	<b>3 cr</b>	
Theatre and drama topics not covered in regular curriculum. May be repeated when subject varies.		
<b>DRA 300 Advanced Workshop: Rehearsal and Performance</b>	<b>1 cr</b>	
Advanced practical experience in acting. May be repeated for a maximum of four hours. Prerequisites: Junior status and permission of the department chair.		
<b>DRA 301 Advanced Workshop: Technical Production</b>	<b>1 cr</b>	
Advanced practical experience in backstage work. May be repeated for a total of four hours. Prerequisites: Junior status and permission of the department chair.		
<b>DRA 302 Advanced Workshop: Special Activities</b>	<b>1 cr</b>	
Advanced practical experience in theatre		
<b>DRA 310 Playwriting</b>	<b>3 cr</b>	
Studies in character, plot development, and the one-act play form. Prerequisite: Permission of department chair.		
<b>DRA 320 Acting III</b>	<b>3 cr</b>	
An in-depth study of character analysis and portrayal, typically "audition techniques." Prerequisite: DRA 121 or permission of instructor.		
<b>DRA 321 Acting IV</b>	<b>3 cr</b>	
A continuation of Acting III, this course emphasizes the techniques of theatrical styles, typically "Shakespeare." Prerequisite: DRA 121 or permission of instructor.		
<b>DRA 330 Scene Design</b>	<b>3 cr</b>	
The fundamentals of scene design for the stage.		
<b>DRA 332 History of Costume</b>	<b>3 cr</b>	
Historical study of dress in relation to costuming for the stage.		
<b>DRA 340 Directing I</b>	<b>3 cr</b>	
The fundamental techniques involved in directing a stage play: analysis, casting, and blocking. Prerequisite: DRA 120.		
<b>DRA 350 Theatre History I (W)(C)</b>	<b>3 cr</b>	
A comprehensive study of the important contributions in theatre art from its beginnings to 1642.		
<b>DRA 351 Theatre History II (W)</b>	<b>3 cr</b>	
A continuation of DRA 350 from the Restoration to the present.		
<b>DRA 400 Theatre Internship</b>	<b>6 cr</b>	
Practical experience in stock, repertory, or touring theatre. Prerequisite: Junior status or permission of department chair.		
<b>DRA 431 Lighting Design</b>	<b>3 cr</b>	
The fundamentals of lighting design for the stage. Prerequisite: DRA 131.		
<b>DRA 432 Costume Design</b>	<b>3 cr</b>	
The fundamentals of costume design for the stage. Prerequisite: DRA 132.		
<b>DRA 460 Theatre for Youth</b>	<b>3 cr</b>	
The reading and production techniques of plays for children and teenagers.		
<b>DRA 490 Special Topics</b>	<b>3 cr</b>	
Various topics of special interest to students of drama. Prerequisite: Permission of department chair.		
<b>DRA 494 Directed Studies</b>	<b>1-3 cr</b>	
Independent study under faculty supervision, involving research, readings, or artistic projects. Prerequisite: Permission of department chair.		
<b>DEVELOPMENTAL STUDIES (DS)</b>		
<b>DS 014 Writing</b>	<b>3 cr</b>	
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.
<b>DS 081 Prealgebra</b>	<b>4 cr</b>	
A study of the topics from prealgebra and basic algebra skills including operations with whole numbers, fractions, and decimals; ratio and proportion, percent, and measurement; introduction to exponents, language of algebra, signed numbers, absolute value, order of operations, linear equations and inequalities, graphs and statistics. Required labs. Prerequisite: Appropriate score on the Math Placement Exam.		
<b>DS 082 Introductory Algebra</b>	<b>5 cr</b>	
This course combines topics in pre and elementary algebra including operations with whole numbers, fractions, decimals, percents, exponents, signed numbers, order of operations; ratio and proportion; measurement; functions; solving and graphing linear and quadratic equations and inequalities; operations with polynomials, and factoring polynomials. Requires 5 hours of in-class work and 1 hour of lab work. Prerequisite: Appropriate score on the Math Placement Exam.		
<b>DS 085 Trigonometry and Geometry</b>	<b>3 cr</b>	
A trigonometry and geometry course for students who need this preparation for MA 113 or 115. Topics include lines and angles, polygons, triangles, circles, solids, and composite figures, the six trigonometric functions, right triangle trigonometry, radian measure, graphing and inverse functions, identities, equations, complex numbers and polar coordinators, and logarithms. Required computer lab. Prerequisite: High School Algebra or successful completion of DS 082 or 083 and permission of Developmental Studies Academic Advisor.		
<b>DS 090 Algebra for College</b>	<b>5 cr</b>	
This course includes using set, interval, roster and scientific notation; solving and graphing: equations and inequalities, compound inequalities and absolute value equations, functions (linear and non linear), systems of linear equations and inequalities, quadratic equations (factoring, completing the square and quadratic formula), rational equations, radical equations, exponential and logarithmic equations; operations on: functions (composition, inverse), rational exponents (changing rational exponents to radicals and vice versa), polynomials, rational expressions, complex fractions, radical expressions, complex numbers; and using formulas and problem solving. Requires 5 hours of in-class work and 1 hour of lab work. Prerequisite: Appropriate score on the Math Placement Exam or successful completion of DS 082. Fee.		
<b>DS 094 Directed Studies</b>	<b>1-4 cr</b>	
Directed studies under the supervision of a faculty member. Directed study in mathematics includes required labs. Prerequisite: Permission of the Department.		
<b>ECONOMICS (ECO)</b>		
<b>ECO 215 Principles of Microeconomics</b>	<b>3 cr</b>	
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 Macroeconomics 3 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. Prerequisite: for non-business and non-economics 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. Prerequisite: ECO 215 or ECO 300 for non-business and non-economics 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. Prerequisite: ECO 216 or ECO 300 for non-business and non-economics 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. Prerequisite: ECO 215 or ECO 300 for non-business and non-economics majors.

**ECO 321 Economic Systems 3 cr**

Economic systems in leading societies and cultures are analyzed, with special reference to economic growth, full employment policies, various institutions and techniques, and the effectiveness with which they function under different systems. Prerequisite: ECO 215 or ECO 300 for non-business and non-economics 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. Prerequisite: ECO 215 or ECO 300 for non-business and non-economics 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. Prerequisite: ECO 215 or ECO 300 for non-business and non-economics majors.

**ECO 325 State and Local Government Finance 3 cr**

An analysis of the facts, problems, theories, and economic policy implications of the expenditures and revenue sources of state and local governments. Prerequisite: ECO 215 or ECO 300 for non-business and non-economics 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. Prerequisite: ECO 215 or ECO 300 for non-business and non-economics majors.

**ECO 340 Money and Banking 3 cr**

Analysis of monetary, credit, and banking institutions in the American economy, emphasizing commercial banks, the Federal Reserve System, and the Treasury. Prerequisites: ECO 215 and ECO 216, or ECO 300 for non-business and non-economics 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. Prerequisite: ECO 215 or ECO 300 for non-business and non-economics 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. Prerequisite: ECO 215 or ECO 216 or ECO 300 for non-business and non-economics majors.

**ECO 371 Economic Development 3 cr**

Economic development theory with stress on the roles of technology, management, international financing, technical assistance organizations, and international private investment. Factors that control and influence the developmental and growth process either positively or negatively. Prerequisite: ECO 215 or ECO 300 for non-business and non-economics majors.

**ECO 372 Economics of Urban Development 3 cr**

The nature of urban development, with special attention to analysis of the impact of urban expansion on natural, human, and capital resources; financial and administrative problems. The role of planning and regulation. Theoretical and practical limitations to urbanization.

Prerequisite: ECO 215 or ECO 300 for non-business and non-economics majors.

**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. Prerequisites: ECO 215 and ECO 216, or ECO 300 for non-business and non-economics 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. Prerequisites: BUS 245 or ST 210, ECO 215 and ECO 216.

**ECO 490 Special Topics 3 cr**

Designed to provide senior students an opportunity to study selected topics of particular interest. Prerequisite: 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. Prerequisites: EH 101 and EH 102 with a minimum grade of "C" and ECO 215 or ECO 300 for non-business and non-economics majors.

**ECO 494 Directed Study in Economics 3 cr**

Reading and research on selected economic topics under guidance of the departmental faculty. Credit and prerequisites vary with the nature and magnitude of individual projects. Prerequisites: 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 will complete projects under the supervision of a faculty advisor. No more than three hours of internship may be counted toward a degree in the Mitchell College of Business. Prerequisites: 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 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). Prerequisite: Approval of department chair.

**ECO 594 Independent Study in Economics 3 cr**

Readings and research on selected topics. Conferences and formal research report required. Prerequisite: Approval of department chair.

**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 EDF 211.**

**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**

Prerequisite: 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**

Emphasis on the knowledge and ability to create a learning environment based on clearly defined goals and where all stakeholders participate in a shared vision of high expectations that supports a safe and orderly learning environment. Students will demonstrate a clear understanding of how to apply their knowledge of the school organization and the curriculum to meet state and local goals and objectives, providing needed professional development and support with allocated resources. Students

will have the ability to use critical thinking and problem-solving skills to meet the needs of all members of the school community.

**EDL 502 Data-Driven Instructional Leadership**

Emphasis on the knowledge to create a leadership team which will guide the shared vision of annual learning and achievement goals. Students will demonstrate the ability to use all resources to assess and analyze data as a basis for creating, implementing, and evaluating a plan for continuous improvement using technology as well as other indicators of school success.

**EDL 503 Supervision and Professional Development**

Emphasis on the knowledge of how to set high expectations and standards for all staff and teachers and follow all state and local regulations that govern those employees. Students will demonstrate the ability to hire, support, and maintain a diverse and competent, highly-qualified staff, providing continuous professional development and maintaining his/her own continuous improvement. Students will understand how to distribute leadership among teachers and school staff and provide necessary knowledge and support in their assigned roles.

**EDL 504 Ethical and Legal Dimensions of School Leadership**

Emphasis on the knowledge of a professional code of ethics and values, based on state and local regulations, which will be used to make decisions regarding all standards and regulations and "set the tone" for the entire school program. Students will demonstrate the ability to apply the acquired knowledge as he/she develops well-reasoned educational beliefs based upon an understanding of teaching and learning. Students will acquire the tools to develop a continuing dialogue with economic and political decision-makers concerning the role of schools and to build collaborative relationships that support improved social and educational opportunities for all children. Students will have the ability to serve as role models, accepting responsibility for using their position ethically and constructively on behalf of the school district/community.

**EDL 505 Business Management of the Learning Organization**

Emphasis on the knowledge of fiscal and non-fiscal resources and the technology to manage financial and material assets and capital goods and services. The students will have the ability to understand the budget planning process that involves staff and community and create and implement a budget that supports all curricular, instructional and professional development goals, including developing a plan for technology integration for the school community.

**EDL 506 Teaching and Learning for Instructional Leaders**

Emphasis on the knowledge to ensure that decisions about curriculum, instructional strategies (including instructional technology), assessment and professional development are based on sound research, best practices, school and district data, and other contextual information and that observation and collaboration are used to design meaningful and effective experiences

that improve student achievement. Students will acquire the ability to identify and find solutions for barriers to student learning and communicate the importance of developing learning strategies for diverse populations. They will be able to align the curriculum based on identified needs and monitor student success to ensure accountability. Students will serve as a model of lifelong learning as they promote continuous learning for themselves, their students and staff.

**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 1-3 cr  
in Educational Leadership**

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**

Students will have meaningful and practical experiences in actual school setting during the course of the instructional leadership program. The internship is designed to place candidates in the cooperating school during critical times of instructional planning. Students will demonstrate their ability to apply knowledge and skills learned in core courses under the collaborative partnership of the University and the assigned school leadership. Experiences will include studying key concepts and skill used by effective leaders, observing good models, and by experiencing decision making in a school setting.

**EDL 603 Current Problems and Issues 3 cr  
in Educational Administration**

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 Seminar in Educational 3 cr  
Human Relations Skills**

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 3 cr  
and Curriculum Development**

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 3 cr  
Management Skills**

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 in 3 cr  
Educational Leadership**

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 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.

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**EDUCATIONAL MEDIA (EDM)**

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**EDM 310 Microcomputing Systems 3 cr  
in Education**

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 3 cr  
Instructional Communication**

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. Prerequisite: Permission of department.

**EDM 494 Directed Study: 1-3 cr  
ED Media**

Directed study in Educational Media. No more than two directed studies can count toward the Bachelor's degree. Prerequisite: Requires departmental approval.

**EDM 510 Microcomputing Systems 3 cr  
in Education**

Application of current and emerging technologies that support and enhance instruction and can be used to improve student achievement.

**EDM 520 Computing Applications 3 cr  
in Education**

Application of current software and hardware in various instructional environments.

**EDM 530 Workshop in 1-9 cr  
Educational Media**

In-depth study and operational experience in current trends and techniques in educational media research.

**EDM 533 Curriculum Media 3 cr  
for Children**

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 3 cr  
for Young Adults**

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 3 cr  
Curriculum Media**

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. Prerequisite: 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. Prerequisite: 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. Prerequisite: A grade of "B" or above in EDM 533 or EDM 583.

**\*Only for students admitted to teacher candidacy.**

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**ELECTRICAL AND COMPUTER ENGINEERING (EE)**


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**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. Prerequisite: 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. Prerequisites: EE 220, MA 227 and credit for or concurrent registration 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. Prerequisites: EE 220 and credit for or concurrent registration in EH102. 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. Prerequisite: CIS 210. Corequisite: 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. Prerequisite: 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. Prerequisite: EE 263. Corequisite: 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. Prerequisites: EE 223 and EE 263. Fee.

**EE 321 Transform Theory of Linear Systems** 3 cr

Continuous and discrete time systems. Fourier transforms. Laplace transforms. Bode plots. State variables. Z-transforms. Routh-Hurwitz stability criterion. Prerequisites: MA 238 and EE 223. Credit for or concurrent registration in EE 302. Fee.

**EE 322 Probability, Random Signals and Statistical Analysis** 3 cr

Probability applications in electrical engineering. Discrete and continuous probability distributions; random variables; Bernoulli trials; hypothesis testing; confidence intervals; Bayes' theorem; estimation; sampling; random processes and random signals in linear systems. Prerequisite: MA 238. Corequisite: EE 321, credit for or concurrent registration in EE 302. 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. Prerequisite: 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. Prerequisite: PH 202. 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. Prerequisites: EE 331, credit for or concurrent registration in EE 302. 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. Prerequisite: Credit for or concurrent registration in EE 334. Fee.

**EE 354 Electromagnetics I** 1 cr

Review of static electric and magnetic fields including the experimental laws of Coulomb, Gauss, Biot-Savart, Faraday and Ampere. Time varying electromagnetic fields and potentials. Poynting's theorem and Maxwell's equations. Propagation in conducting and dielectric media. Scattering of plane waves at conducting and dielectric boundaries. Prerequisites: PH 202, MA 237, MA 238. Fee.

**EE 355 Electromagnetics II** 3 cr

Solutions of the wave equation in unbounded simple media. Electromagnetic waves in parallel-wire transmission lines, metallic waveguides, resonant cavities, and optical fibers. Radiation by electric and magnetic dipoles, wire and aperture antennas, and antenna arrays, principles of energy conversion and characteristics of microwave klystron amplifiers and oscillators. Prerequisite: EE 354. Fee.

**EE 356 Electromagnetics Laboratory** 1 cr

Computer-aided and experimental field mapping; shielding techniques; field measurement of elementary radiating structures and waveguide circuits; terminal characteristics of klystrons, tunnel diodes and space wave propagation losses. Radiation characteristics of wire and aperture antennas and antenna arrays. Prerequisite: Credit for or concurrent registration in EE 355. 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. Prerequisites: 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

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level programming and hardware interfaces for control and instrumentation. Prerequisite: EE 268. Corequisite: 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. Prerequisites: EE 322, EE 321. 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. Prerequisites: Credit for or concurrent registration in EE 354 and EE 302. 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. Prerequisite: Credit for or concurrent registration in EE 302 and 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. Prerequisites: EE 368, EE 334 and credit for or concurrent registration in EE 301. 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. Prerequisites: EE 337, 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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 is 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. Prerequisite: 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. Prerequisite: EE 334. Fee.

### **EE 438 Electronic Instrumentation** 3 cr

Transducers; measurement techniques; measurement errors; operational amplifiers and applications; digital signal processing; noise sources and reduction; digital image processing; computer aided electronic instrument design and experimentation. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites 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. Corequisite: EE 473 or Equivalent Fee.

**EE 445 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. Prerequisites: EE 264 and EE 368. Fee.

**EE 446 Embedded System Design 1 cr Laboratory**

Design projects utilizing 16-bit and 32-bit microprocessor hardware and software; interfaces to memory and peripheral devices. Prerequisite: Credit for or concurrent registration in EE 445. Fee.

**EE 447 Programmable Logic Devices Lab 1 cr**

Digital design projects utilizing simulation and synthesis CAD tools and targeting programmable logic devices. Prerequisites: 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. Prerequisites: 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. Prerequisites: EE 355, EE 356. 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. Prerequisites: EE 355, EE 356. Fee.

**EE 454 Antenna Design II 3 cr**

Aperture antennas; array synthesis and frequency independent antennas. Computer-aided design of antenna systems. Prerequisite: EE 453. 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. Prerequisites: EE 355, EE 356. 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. Prerequisite: EE 355. Fee.

**EE 457 Photonic System Design 3 cr**

Energy band structure in semiconductors; optical absorption and refraction; radiative transitions; non-radiative recombination; p-n junctions; stimulated emission; semiconductor lasers; photodetectors; multiple-quantum-well devices; electro-optical, magneto-optical, acousto-optical effects; frequency doubling; frequency mixing; optical bi-stable switches; optical limiters; optical modulators, photo-refractive materials; liquid crystals; photo-active organic and biologic materials. Prerequisite: EE 331. 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. Prerequisites: EE 355, EE 356. 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. Prerequisite: EE 365. Fee.

**EE 468 Digital Computer System Design 3 cr**

Machine organization; hardware programming languages; data selection design; ALU design; control unit design; I/O and interrupt designs; memory organization; DMA; microprogramming; multi-processor and time-sharing. Prerequisites: EE 264, EE 268. Fee.

**EE 469 Advanced Digital System Design 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. Prerequisite: EE 264 and EE 268. 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). Prerequisite: 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 473 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. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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. Prerequisites: 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. Prerequisite: EE 483. Fee.

**EE 485 Power Distribution and Utilization 3 cr**

Principles and characteristics of generating



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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. Prerequisite: 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. Prerequisites: EE 302, 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. Prerequisite: Instructor's permission. Fee.

### **EE 489 Direct Energy Conversion 3 cr**

Basic principles of direct energy conversion. Thermoelectric, photovoltaic, thermionic, magnetohydrodynamic, fuel cell and nuclear (fission and fusion) methods. This course is dually listed with an equivalent graduate level course (EE 589) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Prerequisites: EE 331, EE 381 and credit for or concurrent registration in EE 385. Fee.

### **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. Prerequisite: 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. Prerequisite: 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. Prerequisites: EE 268, EE 334, EE 301, 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). Prerequisite: 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). Prerequisite: 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). Prerequisite: 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. Prerequisite: 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. Prerequisite: 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). Prerequisite: 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 multi-variable case. Prerequisite: 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. Prerequisite: 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). Prerequisite: 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). Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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). Prerequisite: 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. Prerequisites: 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). Prerequisite: 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. Prerequisite: 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. 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. Prerequisite: EE 372. Corequisite: EE 473 or equivalent. 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. Prerequisite: 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. Prerequisite: EE 302, EE 321 and 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; cryptography; 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. Prerequisite: 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). Prerequisite: 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. Prerequisite: Instructor's permission. Fee.

**EE 554 Electromagnetic Scattering and Diffraction 3 cr**

Formulation and analysis of scattering problems; radar cross-section of smooth bodies by classical and ray-optical techniques; extension to multiple bodies and impedance boundaries; introduction to inverse scattering; diffraction problems; analysis by rigorous, ray optical, and numerical methods; applications to diffraction by discontinuities, apertures and multiple bodies; introduction to inverse diffraction. Prerequisite: 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). Prerequisite: 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. Prerequisite: Instructor's permission. Fee.

**EE 557 Experimental Techniques in Microwave Engineering 3 cr**

Experimental methods to determine scattering parameters, insertion loss, mismatch and return loss, cavity parameters; detector and mixer performance characteristics; power measurements; system noise determination; antenna

radiation pattern and gain measurements. Prerequisite: Instructor's permission. 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). Prerequisite: 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. Prerequisite: 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, introduction to multiprocessor systems and interconnection networks. Prerequisite: 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 word-length 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). Prerequisite: 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. Prerequisite: EE 465 or EE 565 or equivalent or instructor's permission. Fee.

**EE 568 Pattern Recognition**

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

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- fuzzy sets and membership functions, fuzzy operators, reasoning and composition, fuzzy system design; Methods of testing - C, U and L methods. Prerequisite: EE 465 or EE 565 or equivalent or instructor's permission. Fee.

### EE 569 Advanced Digital System Design 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 undergraduate-level course (EE 469) and requires a minimum GPA of 2.75 or the instructor's permission for admission. Prerequisite: 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, and EE 473 or equivalent. 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). Prerequisite: 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. Prerequisite: EE 473 or equivalent or instructor's permission. Fee.

### EE 575 Signal Detection and Estimation 3 cr

Simple-hypothesis detection; detection of signals with unknown parameters; Bay's maximum likelihood estimation; estimation of signal parameters; detection of stochastic signals; nonparametric detection and estimation. Prerequisite: 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 inter-connections in future computers. Prerequisite: 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 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). Prerequisite: 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. Prerequisite: 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. Prerequisite: EE 302, 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. Prerequisite: Instructor's permission. Fee.

### EE 589 Direct Energy Conversion 3 cr

Basic principles of direct energy conversion. Thermoelectric, photovoltaic, thermionic, magnetohydrodynamic, fuel cell, and fission and fusion nuclear methods. This course is dually listed with an equivalent 400-level course (EE 489). Prerequisite: Instructor's permission. Fee.

### EE 590 Special Topics 1-3 cr

Topics of current interest in electrical and computer engineering. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: Approval of the thesis prospectus by the student's Advisory Committee, the Graduate School, and consent of the Director of Engineering Graduate Studies. Fee.

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## ELEMENTARY/EARLY CHILDHOOD EDUCATION (EEC)

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### 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 Classroom Management 3 cr

An introductory course in classroom management with emphasis upon effective instructional practices that inhibit student behaviors incompatible with learning. The focus is upon established guidelines including preparation for instruction, organizing instruction, assessing student performance, establishing a positive learning climate, and effective communication skills.

### 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. Corequisites: RED 330, RED 333, and EEC 346. Prerequisites: 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. Prerequisites: Candidacy, MA 201 or MA 202; RED 330 and 333, EEC 290, EEC 332, and EEC 346. Corequisites: 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. Prerequisites: Candidacy, RED 330 and RED 333; EEC 300, EEC 332, and EEC 346. Corequisites: 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. Prerequisites: Candidacy, RED 330 and RED 333; EEC 300, EEC 332, and EEC 346. Corequisites: 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. Prerequisites: RED 330 and RED 333; EEC 300, EEC 332, and EEC 346. Corequisites: EEC 335, EEC 336, and EEC 337; and RED 331.
- EEC 346 The Early Childhood-Elementary School Program 3 cr**  
This course will introduce the roles of the teacher in working with children from nursery/day care setting through the elementary grades. History, management, and parent education techniques are presented. Corequisites: EEC 332; and RED 330 and RED 333. Prerequisites: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: Candidacy and permission of the department.
- EEC 496 Internship 3 cr**  
The internship is a supervised learning experience in an approved school 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. Prerequisites: Candidacy and approval of department chair.
- EEC 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 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. Prerequisites: Participant in honors program and junior level status.
- EEC 522 Curriculum Planning in Elementary School 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 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 Elementary/Early Childhood 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. Prerequisite: EEC 535.
- EEC 577 Children's Literature for the Gifted and High Ability 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

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childhood education. No more than three hours of any departmental 594 courses can be accepted toward a degree program. Prerequisite: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: Permission of department chair.

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## **ENGINEERING, GENERAL (EG)**

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**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. Fee.

### **EG 220 Electrical Circuits 3 cr**

Steady-state AC and DC circuit analysis; balanced 3-phase systems; transformers; AC/DC motors and AC generators; operational amplifiers; and digital system components. Prerequisites: 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. Prerequisite: EG 220 or EG 270 or EG 283. Fee.

### **EG 270 Engineering Thermodynamics 3 cr**

First and second law of thermodynamics and applications. Prerequisites: 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. Prerequisite: MA 126. Fee.

### **EG 284 Dynamics 3 cr**

Kinematics and kinetics of particles and rigid bodies. Work/energy and momentum methods. Prerequisites: EG 283, MA 126. Fee.

### **EG 290 Special Topics in Engineering 1-5 cr**

Subjects of special interest in engineering. Prerequisite: 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. Prerequisites: 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. Prerequisites: MA 238, EG 284. 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 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. Prerequisite: Permission of Instructor.

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## **ENGLISH (EH)**

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### **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 prerequisites 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. Prerequisite: students must have been accepted in the Honors Program.

### **EH 203 Literary Genres 3 cr**

Variable-content course featuring literary forms. May be repeated once for credit when topic varies. Prerequisites: EH 101 and EH 102.

### **EH 204 Literary Themes 3 cr**

Variable-content course treating particular concepts that recur in literature. May be repeated once for credit when topic varies. Prerequisites: EH 101 and EH 102.

### **EH 207 Literature and Gender 3 cr**

A variable-topics course to study gender issues in literary texts. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: EH 101 and EH 102. **Core Course.**
- EH 242 Black Writers in America** 3 cr  
A survey of literature by major African-American authors from the days of slavery to the present. Readings will include fiction, poetry, drama, autobiography, and polemical prose. Prerequisites: EH 101 and EH 102.
- EH 280 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.
- EH 288 Academic Writing (W)** 3 cr  
Practice in the writing necessary in various academic disciplines. Prerequisites: EH 101 and EH 102.
- 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. Prerequisites: EH 101 and EH 102.
- EH 301 Poetry: Critical Reading and Analysis** 3 cr  
Introduction to close reading and interpretation of poetry, including written explications and analysis. Prerequisites: EH 101 and EH 102.
- EH 302 Drama: Critical Reading and Analysis** 3 cr  
Introduction to close reading and interpretation of drama, including written analysis. Prerequisites: EH 101 and EH 102.
- EH 303 Fiction: Critical Reading and Analysis** 3 cr  
Introduction to close reading and interpretation of fiction, including written analysis. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: EH 101 and EH 102.
- EH 321 Renaissance Literature** 3 cr  
Non-dramatic literature of the English Renaissance through 1600. Prerequisites: EH 101 and EH 102.
- EH 322 Shakespeare's Comedies and Romances** 3 cr  
Study of Shakespeare's comedies and romances. Prerequisites: EH 101 and EH 102.
- EH 323 Shakespeare's Tragedies and Histories** 3 cr  
Study of Shakespeare's tragedies and histories. Prerequisites: EH 101 and EH 102.
- EH 324 Seventeenth-Century Literature** 3 cr  
Non-dramatic literature 1600-1660. Prerequisites: EH 101 and EH 102.
- EH 331 American Novel to 1900** 3 cr  
American novel from its beginning to 1900. Prerequisites: EH 101 and EH 102.
- EH 332 American Nonfiction Prose** 3 cr  
Major American nonfiction prose. Prerequisites: EH 101 and EH 102.
- EH 334 American Poetry to 1900 (W)** 3 cr  
American poetry from its beginning to 1900. Prerequisites: 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. Prerequisites: 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. Prerequisites: EH 101 and EH 102.
- EH 343 18th-Century British Novel** 3 cr  
Eighteenth-century British novel. Prerequisites: 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.) Prerequisites: 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 & 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.) Prerequisites: 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. Prerequisites: EH 101 and EH 102.
- EH 352 Victorian Poetry** 3 cr  
The poetry and critical ideas of Tennyson, Browning, Arnold, and the Pre-Raphaelites, with some attention to other writers. Prerequisites: EH 101 and EH 102.
- EH 353 Victorian Prose** 3 cr  
Prose, exclusive of the novel, with emphasis on Carlyle, Newman, Mill, Ruskin, and Arnold. Prerequisites: EH 101 and EH 102.
- EH 354 19th-Century British Novel** 3 cr  
Novels of the Romantic and Victorian periods. Prerequisites: 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. Prerequisites: EH 101 and EH 102.
- EH 361 American Novel Since 1900** 3 cr  
"Twentieth and twenty-first century" American novels. Prerequisites: EH 101 and EH 102.
- EH 367 British Novel Since 1900** 3 cr  
"Twentieth and twenty-first century" British novels. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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

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a classroom situation. Non-education majors interested in a sophisticated approach to the study of grammar might also benefit from this course. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: EH 101 and EH 102.

### **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. Prerequisites: EH 101 and EH 102.

### **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. The course will include a performance component. Prerequisites: EH 101 and EH 102.

### **EH 462\* Restoration and 18th-Century Drama (W) 3 cr**

A historical and generic study of plays by authors such as Wycherley, Etheridge, Behn, Dryden, Otway, Congreve, Steele, Goldsmith, and Sheridan. The course will include a performance component. Prerequisites: EH 101 and EH 102.

### **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. Prerequisites: 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. Prerequisites: EH 101 and EH 102.

### **EH 467\* Milton (W) 3 cr**

Milton's major poems, with emphasis on Paradise Lost. Poetic methods and structure analyzed. Prerequisites: EH 101 and EH 102.

### **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. Prerequisites: EH 101 and EH 102.

### **EH 470\* Studies in Medieval Literature 3 cr**

Seminar in specific topics from medieval literature. Prerequisites: EH 101, 102 and junior standing.

### **EH 471\* Studies in Renaissance Literature 3 cr**

Seminar in specific topics from Renaissance literature. Prerequisites: EH 101, EH 102 and junior standing.

### **EH 472\* Studies in Shakespeare 3 cr**

Seminar in specific topics from Shakespeare. Prerequisites: EH 101, EH 102 and junior standing.

### **EH 474\* Studies in Restoration and 18th-Century Literature 3 cr**

Seminar in specific topics from Restoration and 18th-Century Literature. Prerequisites: EH 101, EH 102 and junior standing.

### **EH 475\* Studies in 19th-Century Literature 3 cr**

Seminar in specific topics from 19th-century literature. Prerequisites: EH 101, EH 102 and junior standing.

### **EH 476\* Studies in 20th-Century Literature 3 cr**

Seminar in specific topics from 20th-century literature. Prerequisites: EH 101, EH 102 and junior standing.

### **EH 477\* Studies in Genre 3 cr**

Seminar in specific topics from various genres. Prerequisites: EH 101, EH 102 and junior standing.

### **EH 478\* Studies in Film 3 cr**

Seminar in specific topics from film studies. Prerequisites: EH 101, EH 102 and junior standing.

### **EH 479\* Studies in Modern/ Postmodern Poetry 3 cr**

Seminar in specific topics from modern/postmodern poetry. Prerequisites: EH 101, EH 102 and junior standing.

### **EH 480\* Studies in Gender and Literature 3 cr**

Seminar in specific topics dealing with gender issues in literature. Prerequisites: EH 101, EH 102 and junior standing.

### **EH 481\* Studies in Composition and Rhetoric (W) 3 cr**

Seminar in specific topics dealing with writing, rhetoric, or language studies. Prerequisites: EH 101, EH 102 and junior standing.

### **EH 482\* Studies in American Literature 3 cr**

Seminar in specific topics from American literature. Prerequisites: EH 101 and EH 102 and junior standing.

### **EH 483\*, 484\* Advanced Fiction Writing I, II 3 cr**

Advanced work in writing the story and the novel, for students of exceptional talent. Prerequisites: 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. Prerequisite: EH 101 and EH 102, EH 395 and EH 396 or 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. Prerequisites: 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. Prerequisites: EH 101, EH 102 and junior standing.
- EH 492\* Seminar** 3 cr  
Specific topics in literature. Can be taken twice for credit when topic varies. May be repeated once for credit. Prerequisites: EH 101, EH 102 and junior standing.
- EH 494\* Directed Studies** 1-3 cr  
Directed individual study. Prerequisites: 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. Prerequisites: Permission of the department chair and the supervising professor. Prerequisites: EH 101, EH 102 and junior standing.
- EH 497, 498 Advanced Creative Nonfiction I, II** 3 cr  
Advanced work in writing creative nonfiction, for students of exceptional talent. Emphasis on producing high-quality writing with an eye toward publication. Prerequisites: EH 101, EH 102, EH 393, EH 394 or 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, and chaired by the project faculty mentor. 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 MA 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.
- 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.
- 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.
- 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.
- EH 508 Professional Writing Theories and Applications** 3 cr  
Study of the theories, practices, and histories of professional writing.
- EH 510 Studies in Medieval Literature** 3 cr  
Theme-based study of medieval texts; possible topics include late medieval chivalry, medieval sexualities, Arthurian tradition.
- EH 513 Studies in Chaucer** 3 cr  
A study of selections of Chaucer's *Canterbury Tales* and dream visions.
- EH 514 Renaissance Poetry** 3 cr  
Examination of non-dramatic Renaissance poetic development, including the sonnet.
- EH 516 Studies in Shakespeare I** 3 cr  
A study of Shakespeare's comedies and romances.
- EH 517 Studies in Shakespeare II** 3 cr  
A study of Shakespeare's histories and tragedies.
- 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, Marvel, Wroth, Lanier, and Phillips. The course will emphasize the close reading of poems.
- 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.
- 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, Stern, and Burney, with emphasis on the establishment of the novel as a respected genre.
- EH 527 The Age of Sensibility** 3 cr  
A study of several late eighteenth-century literary figures such as Stern, Johnson, Boswell, Goldsmith, Sheridan, Wollstonecraft, Radcliffe, and Blake.
- 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.
- 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.
- EH 536 Victorian and Edwardian Poetry** 3 cr  
A study of several major Victorian and Edwardian poets such as Tennyson, Browning, Arnold, Pre-Raphaelites, Swinburne, Hopkins, and Hardy.
- EH 538 Victorian and Edwardian Prose** 3 cr  
A study of selected masters of Victorian and Edwardian prose fiction such as Dickens, Thackeray, George Eliot, Morris, Hardy, Kipling and expository prose such as Newman, Carlyle, Mill, Ruskin, Arnold, and Stevenson.
- 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.
- 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.
- EH 545 American Realism** 3 cr  
A study of writers of the American Realist Movement such as Twain, James, Crane, Dreiser, Chopin, Chestnut, and Jewett.
- 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.
- 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.
- 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.
- EH 572 Modern American Fiction** 3 cr  
Examination of selected works of such authors as Anderson, Dickey, Faulkner, Fitzgerald and Hemingway.
- EH 573 Contemporary Fiction** 3 cr  
Provides an overview of significant works since 1950 by such authors as Flannery O'Connor, Cormac McCarthy, Walker Percy, John Updike, Marge Piercy, Alice Walker, and Amy Tan.
- EH 583 Graduate Fiction Writing Workshop I** 3 cr  
Special individual instruction in fiction writing. This course requires special permission.
- EH 584 Graduate Fiction Writing Workshop II** 3 cr  
Special individual instruction in fiction writing. This course requires special permission.



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### **EH 585 Graduate Poetry Writing Workshop I** 3 cr

Special individual instruction in poetry writing. This course requires special permission.

### **EH 586 Graduate Poetry Writing Workshop II** 3 cr

Special individual instruction in poetry writing. This course requires special permission.

### **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.

### **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.

### **EH 594 Directed Studies** 1-3 cr

Directed individual study on a topic not covered by a listed course. Prerequisite: prior permission of the directing professor and the department chair.

### **EH 599 Thesis** 1-6 cr

One to six credits per semester with a maximum of six hours of credit.

**\*Courses may be taken by Advanced Undergraduates and Graduates**

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## **ENGLISH LANGUAGE TEACHING (ELT)**

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### **ELT 525 Foundations of Teaching English of Other Languages** 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.

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## **EMERGENCY MEDICAL SERVICES (EMS)**

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### **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.

### **EMT 325 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 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. Prerequisite: 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** 3 cr  
Student completes an individual project in a specific EMS area under the guidance and supervision of an EMS faculty member.

**EMT 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.

## EMERGENCY MEDICAL TRAINING (EMT)

**EMT 100 Cardiopulmonary Resuscitation** 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.

**EMT 110 First 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.

**EMT 200 Basic Emergency Care** 6 cr

Includes all required modules of the 1994 EMT Basic National Standard Curriculum Patient assessment, airway management, hemorrhage control, management of fractures, care of special injuries, emergency childbirth, environmental emergencies, transportation of the sick and injured, and radio communications. Prerequisite: AHA BLS for Health Care Providers. Corequisite: EMT 205.

**EMT 205 Basic Emergency Clinical Internship** 1 cr

Pre-hospital care and transportation of the sick and injured using principles of basic life support, correlated with emergency room experience. Time distributed between emergency room, ambulance, communications center, and interfacility transport vehicle.

**EMT 206 Basic Skills Laboratory** 1 cr

Basic Emergency Medical Technician Skill practicum. Designed to allow Basic EMT students extensive practice of required psychomotor skills.

**EMT 210 Medical Terminology** 3 cr

Medical vocabulary including prefixes, suffixes and their etymological derivation. Proper pronunciation stressed as well as logic, grammar, and spelling.

**EMT 290 Special Topics** 1-3 cr

Selected topics in Emergency Medical Services and Emergency Response Training. May be repeated for credit when course content varies.

**EMT 310 Human Systems and the Disease Process** 3 cr

An overview of the human body and its systems. Emphasis is placed on the understanding of the functions of human systems and subsystems. Includes concepts of pathophysiology included in the 1999 DOT paramedic curriculum.

**EMT 315 EMS Pharmacology I** 3 cr

Introduction to pharmacology for the EMS professional. Includes drug classification, drug calculations, routes and methods of administration, and IV access.

**EMT 335 Essentials of Paramedicine** 3 cr

Preparatory course for ALS EMS students. Includes airway management, EMS Systems, therapeutic communications, roles and responsibilities, injury prevention, and legal issues.

**EMT 340 Introduction to EMT Cardiology** 3 cr

Rhythm interpretation in Lead II EKG. Rapid recognition, defibrillation and/or therapeutic management of potentially lethal rhythms and myocardial infarction. Twelve lead placement and basic recognition.

**EMT 345 EMS Pharmacology II** 3 cr

Emphasis on specific drugs within classifications, drug names, actions, indications, contraindications, side effects, precautions, dosages, clinical applications and listings of prescription and over-the-counter medications.

**EMT 350 Patient Assessment and Management** 3 cr

Includes history taking, physical examination, clinical decision making, communications, documentation and assessment-based management of medical and trauma patients.

**EMT 355 Paramedic Emergency Care I** 3 cr

Includes pulmonology and cardiology, including ACLS. Additional modules may be added in accordance with State and Department of Transportation standards and guidelines.

**EMT 365 Advanced Trauma Management** 3 cr

Includes trauma systems, mechanism of injury, management of hemorrhage, shock, burns, soft tissue, head and facial, spinal, thoracic, abdominal and musculoskeletal trauma.

**EMT 375 EMS Response to Women and Children** 3 cr

The unique problems for the EMS Provider when responding to women or children. Includes gynecology, obstetrics, abuse and assault, pediatrics and neonatology.

**EMT 394 Directed Studies** 1-3 cr

Directed study, under the guidance of a faculty advisor, of a topic in the fields of Emergency Medical Services or Emergency Response Training. Requires permission of department chair.

**EMT 425 Paramedic Emergency Care II** 3 cr

Includes all medical emergency modules of the 1999 National Standard Paramedic curriculum not included in EMT 355 and EMT 375.

**EMT 440 EMS Operations and Special Considerations** 3 cr

Includes special circumstances regarding geriatric patient, abuse and assault, patients

with special challenges, acute interventions for the chronic care patient, ambulance operations, incident command rescue, Hazmat, and crime scene awareness.

**EMT 455 Paramedic Skills Lab** 1 cr

Advanced out-of-hospital practicum. Designed to integrate all previously learned theory, management concepts and behavioral objectives of the 1999 National Standard Paramedic curriculum.

**EMT 465 Paramedic Clinical I** 3 cr

Supervised clinical experiences emphasizing patient care in the hospital and outpatient clinical settings.

**EMT 466 Paramedic Clinical II** 3 cr

Supervised clinical experiences emphasizing patient care in the hospital and outpatient clinical settings.

**EMT 475 Paramedic Field Internship** 6 cr

Supervised field experiences with an out-of-hospital advanced life support service emphasizing patient care and team leadership skills.

**EMT 485 Advanced Cardiac Life Support** 3 cr

Course based on American Heart Association's ACLS program. Includes in depth review of all cases required for a full ACLS course. Recommended for health care providers and health care provider students. Prerequisite: EMT 100 or equivalent (BLS-HCP).

**EMT 490 Special Topics** 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.

**EMT 494 Directed Studies** 1-3 cr

Directed study, under the guidance of a faculty advisor, of a topic in the fields of Emergency Medical Services or Emergency Response Training. Requires permission of department chair.

**EMT 495 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.

## 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.

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### **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. Prerequisite: 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 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: A grade of "B" or above in EPY 502.

### **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.**

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## **EARTH SCIENCES (ES)**

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### **ES 492 Honors Earth Sciences Seminar** 3-4 cr

Multidisciplinary (Geography, Geology, Meteorology) topics not covered in current Department of Earth Sciences courses. Topic announced prior to registration. Prerequisites: 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** 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. Prerequisites: 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. Prerequisites: Geography, Geology, Meteorology major, senior status; acceptance into the Departmental or University Honors Program; satisfactory completion of ES 497 or HON 301.

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## **ENGLISH AS A SECOND LANGUAGE (ESL)**

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### **ESL 004 Intermediate ESL Structure** 3 cr

An intermediate-level study of syntax and grammar.

### **ESL 005 Intermediate ESL Reading and Vocabulary** 3 cr

Emphasis on developing reading speed, comprehension, and vocabulary through reading of a variety of intermediate-level texts.

### **ESL 006 Intermediate ESL Composition** 3 cr

Concentration on sentence structure and development of the paragraph.

### **ESL 008 Intermediate ESL Oral Skills** 3 cr

Concentration on listening, comprehension, and speaking fluency.

### **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 020 TOEFL Preparation** 3 cr

A preparatory class for the Internet-based Test of English as a Foreign Language. Students practice with exercises and test for the four sections of the TOEFL: Listening Comprehension, Writing, Reading Comprehension, and Speaking.

### **ESL 021 American Short Story** 3 cr

Students are familiarized with great American authors and their work of fiction in written and dramatized forms. Listening skills are developed

through video presentations, writing skills through book reports, reading skills through analysis of texts, and oral skills through oral reports.

**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 023 Current Events 3 cr**

Designed to stimulate students' language development through discussion, debate, and readings on topics of current interest in the news.

**ESL 024 Listening Skills 3 cr**

Emphasis is on improving listening comprehension using recorded interviews and radio broadcasts. Listening tasks are authentic and are not simplified in any way.

**ESL 025 English on the Internet 3 cr**

Students improve a number of English skills by exploring the numerous ESL web sites for TOEFL preparation, pronunciation, grammar, vocabulary acquisition, slang, humor and many other areas. Writing is practiced via e-mail, and students create their own web page.

**ESL 026 The English Verb 3 cr**

An intensive review of the English verb system, including tense, voice and aspect. Ample examples, plus written and oral exercises and activities, are designed to make students more secure in their usage.

**ESL 027 Practical Vocabulary and Idioms 3 cr**

Students rapidly extend their vocabulary through intensive study of high-frequency words arranged thematically, such as by profession or in everyday situations. Groups of special expressions linked to certain verbs, slang expressions, and idioms are also taught.

**ESL 028 Beginning English 3 cr**

An introduction to the language for people who know little or no English. The goal is to achieve a basic proficiency in understanding, speaking, reading and writing English.

**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.

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**ENVIRONMENTAL TOXICOLOGY (EXT)**

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**EXT 594 Directed Studies 1-3 cr in Environmental Toxicology**

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 1-6 cr in Environmental Toxicology**

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.

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**FINANCE (FIN)**

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**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-term financial management, and financial planning. This course is for non-business and non-economics majors only. Prerequisites: 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: 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 from accounting, economics, finance, and management. Prerequisite: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisite: 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. Prerequisites: FIN 315, FIN 420.

**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. Prerequisite: 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. Prerequisites: FIN 315, FIN 343 (FIN 343 may be taken concurrently).

**FIN 471 Depository Institutions Management II 3 cr**

In-depth analysis of consumer, real estate, commercial, and agricultural lending areas of depository institutions. Prerequisite: FIN 315.

**FIN 490 Special Topics 3 cr**

Designed to provide senior students an opportunity to study selected topics of particular interest. Prerequisites: FIN 315 and approval of department chair.

**FIN 492 Seminar: Finance 3 cr**

Oral reports on readings of various aspects of business finance. Prerequisites: FIN 315 and Finance major.

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### **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. Prerequisites: 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 will complete directed projects under the supervision of a faculty advisor. No more than three hours of internship may be counted toward a degree in the Mitchell College of Business. Grades are awarded on a satisfactory/unsatisfactory basis. Prerequisites: FIN 315, FIN 343, declared finance or depository institution major and a 2.5 GPA, and approval of 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). Prerequisite: 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. Prerequisite: Approval of the department chair.

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## **GEOGRAPHY (GEO)**

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### **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.** Corequisite: 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.** Corequisite: 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 inter-relationship 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. **Core Course.**

### **GEO 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 GY 310). Prerequisite: At least one of the following - GY 111, GEO 101, GEO 102, permission of instructor.

### **GEO 312 World Economic Geography (C, 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. Prerequisites: GEO 114 and EH 102.

### **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. Prerequisite: At least one of the following - GEO 101, GEO 102, GEO 114 or GEO 115.

### **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. Prerequisite: 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. Prerequisite: 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. Prerequisite: EH 102.

### **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. Prerequisites: EH 102 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. Prerequisite: GEO 102, GEO 102L, CIS 150, or permission of instructor. Fee.

### **GEO 332 Remote Sensing I 4 cr**

Interpretation of maps, air photos and satellite images (identical to GY 332). Prerequisite: GEO 102 and GEO 102L or permission of instructor. Fee.

### **GEO 341 Climatology 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). Prerequisite: GEO 353 or MET 353. Minimum grade of "C" needed in course prerequisite. Fee.

### **GEO 342 Severe Weather 3 cr**

A study of the causes, structure, and impact of tornadoes, hurricanes, thunderstorms and severe weather systems (identical to MET 342). Prerequisite: GEO or MET 353. Minimum grade of "C" needed in course prerequisite.

### **GEO 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 (identical to MET 353). Prerequisites: MET 140, MET 140L and MA 112. Minimum grade of "C" needed in course prerequisites. Fee.

### **GEO 365 Urban Geography (C) 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. Prerequisite: GEO 114.

**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. Prerequisite: At least one of the following - GEO 101, GEO 102, GEO 114 or GEO 115.

**GEO 381 Cultural Geography 3 cr**

Study of the development and differentiation of cultural landscapes and the economic, political, technological and cultural processes that shape them. Prerequisite: GEO 114 or GEO 115.

**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. Prerequisite: GEO 101 or permission of instructor.

**GEO 411 Soils 3 cr**

A review of soil formation, processes and properties (identical to GY 411). Prerequisite: 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. Prerequisites: GEO 102 and GEO 102L or GY 111 and GY 111L.

**GEO 420 Geostatistics 4 cr**

Applied bivariate and multivariate statistics to problems in geology, geography, 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).

**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. Prerequisites: Senior Standing, CIS 150, ST 210. Fee.

**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 442 Remote Sensing II 4 cr**

Analysis of remotely sensed digital data for detection and mapping of Earth resources (identical to GY 442). Fee. Prerequisites: GEO

or GY 332. Minimum grade of "B" needed in course prerequisite. Fee.

**GEO 460 Introduction to GIS 4 cr**

Fundamentals of Geographic Information Systems technology, including software functionality (ArcGIS), data processing, cartography and spatial analysis (identical to GY 460). Fee. Prerequisite: CIS 150 with a grade of "B" or better or computer proficiency exam.

**GEO 461 GIS Applications I - Environment 4 cr**

Application of Geographic Information Systems to studies of the natural environment (identical to GY 461). Prerequisites: GEO or GY 460 or permission of instructor. Minimum grade of "B" needed in course prerequisite. Fee.

**GEO 462 GIS Applications II - Business and Social Sciences 4 cr**

Application of Geographic Information Systems to Business and the Social Sciences. Prerequisites: GEO 460 or GY 460 or permission of instructor. Minimum grade of "B" needed in course prerequisite. Fee.

**GEO 480 Field Work in Geography (W) 4 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. Prerequisite: Senior standing. Fee.

**GEO 490 Special Topics 1-3 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 Study is allowed.

**GEO 496 Internship in Geography 1-3 cr**

On-the-job learning through occupational or professional work with an approved firm or agency. Open only to geography majors only. 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.

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## GRADUATE INTERDISCIPLINARY STUDIES (GIS)

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**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.

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## GERONTOLOGY (GRN)

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**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 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.

**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.

**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. 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. Prerequisites: 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 594 Directed Studies**

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 a setting selected by the student. 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. Prerequisites: Completion of at least

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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.

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### GENDER STUDIES (GS)

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#### 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 490 Gender Studies 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 Gender Studies 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.

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### GEOLOGY (GY)

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#### 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. Corequisite: GY 111L.

#### GY 111L Physical Geology Lab 1 cr

Laboratory course for Physical Geology. Corequisite: 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. Corequisite: GY 112L.

#### GY 112L Earth History Lab 1 cr

Laboratory course for Earth History. Corequisite: GY 112. Fee.

#### GY 113 Honors Geoscience 3 cr Field Work - H

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. Prerequisites: 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. Prerequisite: GY 111, or permission of instructor. Fee.

#### GY 302 Crystallography and Mineralogy (C) 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. Prerequisites: GY 111, GY 112, CH 100 or CH 131, or permission of instructor. Fee.

#### GY 303 Igneous and Metamorphic Petrology (C) 4 cr

The study of the formation and classification of igneous and metamorphic rocks. Prerequisites: 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. Prerequisite: 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. Prerequisites: 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). Prerequisite: 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). Prerequisites: GEO 102 and GEO 102L or permission of instructor. Fee.

#### GY 401 Paleontology 3 cr

Major invertebrate fossil groups, their identification, and their geologic distribution. Prerequisites: GY 112 and GY 112L, or permission of instructor. Fee.

#### GY 402 Sedimentary Petrology (C) (W) 3 cr

A study of sediments and their classification, as well as sedimentary processes, petrography and diagenesis. Prerequisites: GY 111, GY 112, EH 102 or permission of instructor. Fee.

#### GY 403 Structural Geology (C) 4 cr

Study of the deformation of the internal Earth and the structures that result. Prerequisites: 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). Prerequisite: GEO 102 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 (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 GEO 420. Prerequisite: MA 125 or ST 210.

#### GY 421 Applied Environmental Geology (W) - C 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. Prerequisite: 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. Prerequisite: GY 111 and GY 112. Credit for both GY 422 and GY 522 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. Prerequisite: GY 111, or permission of the instructor. Credit for both GY 425 and GY 525 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. Prerequisite: GY 425. Credit for both GY 426 and GY 526 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. Prerequisite: 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. Prerequisite: GY 302 or permission of instructor. Fee.

#### GY 442 Remote Sensing II 4 cr

Analysis of remotely sensed digital data for detection and mapping of earth resources (identical to GEO 442). Prerequisites: GEO 332 or GY 332. Minimum grade of "B" needed in course prerequisite. 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. Prerequisites: GY 111 and GY 112.

**GY 450 Geology-Thin-Section Preparation** 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 detailing the petrography of the samples examined. Prerequisites: GY 302, GY 303, and GY 402 and permission of the instructor. Fee.

**GY 460 Introduction to GIS** 4 cr

Fundamentals of Geographic Information Systems technology, including software functionality (ArcGIS), data processing, cartography and spatial analysis (identical to GEO 460). Prerequisite: CIS 150 with a grade of "B" or better or computer proficiency exam. Fee.

**GY 461 GIS Applications I - Environment - C** 4 cr

Application of Geographic Information Systems to studies of the natural environment (identical to GEO 461). Prerequisite: GY 460 or GEO 460 or permission of the instructor. Minimum grade of "B" needed in course prerequisite. Fee.

**GY 480 Field Geology (W)** 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. Prerequisites: GY 303, GY 403, and HS 170 or equivalent first aid course.

**GY 490 Special Topics** 1-4 cr

Geological topics not covered in current geology courses. Prerequisite: 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. Prerequisites: Permission of the Chair; Junior or Senior standing.

**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. Prerequisites: Permission of chair; Junior or senior standing.

**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. Prerequisite: 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. Prerequisite: 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. Prerequisite: GY 302 or permission of instructor. Fee.

**GY 543 Selected Applications in Remote Sensing** 3 cr

Critical assessment of selected remote sensing applications in Earth science. Prerequisite: GEO 332/GY 332 or permission of instructor. Credit for both GY 442 and GY 543 will not be allowed. 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. Prerequisites: MAS 603, GY 402 or permission of the instructor. Credit for both GY 422 and GY 544 will not be allowed. Fee.

**GY 590 Special Topics** 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. Prerequisite: Permission of chair.

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**HONORS (HON)**

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**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 prerequisite for all Honors Senior Project Credit.

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**HEALTH, PHYSICAL EDUCATION (HPE)**

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**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



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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 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.

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## **HEALTH AND SAFETY (HS)**

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### **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 429 School Laboratory Experiences - Health** 0-3 cr

Professional laboratory observation and participation in health settings at local public schools.

### **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. Admission to teacher candidacy or permission of instructor.

### **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. Prerequisite: 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.

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## **HEALTH SCIENCES NURSING (HSC)-OPEN TO MAJORS IN OTHER DISCIPLINES**

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### **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** 3 cr

Nursing application of the therapeutic use of nutrients and diets in the hospital setting and in the community. Prerequisite: Admission to Professional Component or special permission of instructor.

**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-apothecary concepts are stressed. Prerequisite: Admission to professional component or special permission of instructor.

**HSC 343 Clinical Pharmacology 3 cr**

Clinical application of drug therapy and the concepts relating to the mechanisms of drug actions, interactions, and adverse reactions, including the immunologic-idiosyncratic-allergic drug responses. Emphasis is on pharmacokinetics, dosage, methods of administration, and adverse effects of drugs according to major classifications. Current research in pharmacology is also incorporated in course content. Prerequisites: 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 manmade 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.

**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, 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. Economic and political structure; 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 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. Prerequisite: Grade of "C" or above in EH 102.

**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.

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- 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. Identical with REL 343. Credit cannot be received for both HY 343 and REL 343.
- 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. Identical with REL 353. Credit cannot be received for both HY 353 and REL 353.
- 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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 388 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 388.
- 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: History major, Junior or Senior standing, permission from the Chair.
- HY 451 States, National, Nationalism (W)** 3 cr  
This course examines the rise of nationalism in Europe and explains why some nationalist movements create new states and others end disastrously with genocide.
- 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. Prerequisite: 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. Prerequisite: 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 480 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 494 Directed Studies** 1-3 cr  
Directed individual study. Prerequisite: Approval of department chair.
- HY 495 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 499\* Senior Honors Paper** 1-6 cr  
The research and writing of a major historical paper. Prerequisite: permission of the chair.
- HY 530 American Historiography** 3 cr  
Examination of major American historians; study of techniques, styles, ideas, interpretations, and critical evaluations.
- HY 532 Colonial America** 3 cr  
Colonial period to the Revolution.
- HY 533 The American Revolution** 3 cr  
This course emphasizes changes occurring in American society ca. 1750-1800.
- 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 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 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 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 570 American Biography** 3 cr  
A study of American biography, autobiography, and methodology.
- HY 577 The Old South** 3 cr  
History of the South of the Civil War.
- HY 578 The New South** 3 cr  
History of the South from Reconstruction to the 1920s.
- HY 579 The Modern South** 3 cr  
Social, economic, political, intellectual, and cultural history of the U.S. South from 1920 -1990.
- 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 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 class is conceived as part seminar and part practicum. It 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 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. Prerequisites: Special permission of department chair.
- HY 595 Archival Practice** 3 cr  
Introduces graduate students to archival theory and practice.
- 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 departmental chair 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. Prerequisite: 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.  
**\*HY 499 may not be taken by graduate students.**
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- INTERDEPARTMENTAL EDUCATION (IDE)**
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- IDE 010 Reading Exam** 0 cr  
All students in the College of Education are required to demonstrate proficiency in the communicative skills. The proficiency is measured by performance on the College of Education Reading Test (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

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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. Prerequisite: Permission of advisor.

### **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.

### **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. Prerequisite: IDE 620.

### **IDE 630 Advanced Research Design 3 cr**

An extensive examination of the nature and character of experimental design in educational research. Includes the development of appropriate analytical techniques. Prerequisite: IDE 510 or IDE 621.

### **IDE 631 Qualitative Research in Education 3 cr**

Covers major qualitative research approaches including phenomenology, ethnography, case study, and grounded theory. Techniques of qualitative data collection, validation, data analysis and interpretation, and writing research reports are stressed. Prerequisite: IDE 510 or IDE 692.

### **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. Prerequisite: 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 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.

### **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. Prerequisite: 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 1 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. Prerequisites: 3 credit hours of IDE 710.

### **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 3 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. Prerequisite: Doctoral candidacy.

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## **INTERDISCIPLINARY BASIC MEDICAL SCIENCE (IDL)**

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### **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 anticancer 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 570 Medical Pathology 7 cr**

The course is taught as an introduction to the study of the diseases of man by developing working definitions and classifications of disease on the basis of known causes and effects. After surveying the structural changes characterizing disease, the mechanisms involved in clinical and lab manifestations are analyzed for human diseases.

### **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. Prerequisite: 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 prerequisite 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 prerequisite to advanced study of basic medical sciences. Didactic lectures will be complemented with discussions of the literature. Prerequisite: 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 direction 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 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. Prerequisites: 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. Prerequisite: 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. Prerequisites: 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. Prerequisite: Approved formal research proposal.

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**INTERDISCIPLINARY STUDIES (IDS)**

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**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. Prerequisites: 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. Prerequisite: 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.

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**INTERNATIONAL STUDIES (IS)**

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**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. Prerequisite: IS 100.

**IS 391 Study Abroad** 0 cr

An international exchange program for University of South Alabama students. Grading is S/U. Prerequisite: 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,

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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. Prerequisite: 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. Prerequisite: IS 100.

**IS 494 Directed Studies** 1-3 cr  
Directed research in the field of international studies. Prerequisite: 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. Prerequisites: 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. Prerequisite: Permission of the International Studies Director.

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### **INFORMATION SYSTEMS (ISC)**

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**All prerequisites must be passed with a minimum grade of "C".**

**ISC 190 Information Systems Special Topics** 1 cr  
Selected topics in information systems. Prerequisite: 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.

**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. Prerequisite: 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, database programming, object-oriented programming, debugging, and additional controls and objects. Programming projects are required. Credit cannot be received for both ITE 285 and ISC 285. Prerequisite: CIS 115.

**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. Prerequisite: 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. Prerequisite: Some prior programming experience is desired and permission of Coordinator. Prerequisite: DS 090, MA 112 or higher, or math placement score of 65 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. Prerequisite: 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. Prerequisites: Professional Component, 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. Prerequisite: ISC 245.

**ISC 457 Data Warehousing and Decision Support** 3 cr  
This course examines the analysis and design issues as well as architectural infrastructures associated with enterprise data warehouses for decision support. Prerequisites: Professional Component standing and CIS 324.

**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. Prerequisites: Professional Component and 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. Prerequisite: Professional Component standing.

**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. Prerequisites: Professional Component and CIS 324.

**ISC 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. Credit cannot be received for both ITE 474 and ISC 474. Prerequisites: Professional Component Standing.

**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. Prerequisite: Professional Component Standing.

**ISC 490 Information Systems Special Topics** 3 cr  
Advanced selected topics in information systems. Prerequisites: Professional Component and permission of the ISC Coordinator.

**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. Prerequisite: Permission of the Director of CIS Graduate Studies.

**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. Prerequisite: 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. Prerequisite: CIS Graduate Professional Component.

**ISC 557 Data Warehousing and Decision Support Systems 3 cr**

This course examines the analysis and design issues as well as the architectural infrastructures associated with enterprise-wide data warehouses. Prerequisite: CIS Graduate Professional Component.

**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. Prerequisite: CIS 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. Prerequisite: 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. Prerequisite: CIS 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. Prerequisite: CIS 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. Prerequisite: CIS 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. Prerequisite: CIS 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. Prerequisites: ISC 560, 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, outsourcing, and customers. Prerequisite: 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. Prerequisite: CIS Graduate Professional Component.

**ISC 590 Information Systems Special Topics 3 cr**

Advanced selected topics in information systems. Prerequisite: CIS Graduate Professional Component and Permission of the ISC Coordinator.

**ISC 595 Information Systems Project Proposal Development 1-3 cr**

Development of the project proposal for the ISC master's project. Prerequisites: CIS 518 and permission of the Director of CIS Graduate Studies.

**ISC 598 Information Systems Project 1-3 cr**

This course may be repeated for a maximum of six (6) credits. A CIS project committee will provide direction during the project. Prerequisites: ISC 595, approval of project proposal by the student's project committee, and permission by the Director of CIS Graduate Studies.

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**INSTRUCTIONAL DESIGN AND DEVELOPMENT PROGRAM (ISD)**


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**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.



## 216 COURSES

- 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 media 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 course work 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. Prerequisites: 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. Prerequisite: 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: ISD 621.
- ISD 656 Training Interventions** 3 cr  
Practical experience in designing and implementing facilitator-led training in various large-scale organizations.
- 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.
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- ### INTERDISCIPLINARY STUDIES TRADITIONAL (IST)
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- IST 302 Integrating Self, Education, and Career** 3 cr  
Provides students an opportunity via an interdisciplinary approach to critically reflect on the experience of self, education, and career, and the relationship among these three phenomena.
- 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 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.

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**INFORMATION TECHNOLOGY (ITE)**

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All prerequisites must be passed with a minimum grade of "C".

**ITE 190 Information Technology Special Topics** 1 cr

Selected topics in information technology. Prerequisite: 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. Prerequisite: 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. Prerequisite: CIS 115.

**ITE 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, database programming, object-oriented programming, debugging, and additional controls and objects. Programming projects are required. Credit cannot be received for both ISC 285 and ITE 285. Prerequisite: 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. Prerequisite: 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. Prerequisite: Professional Component Standing.

**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. Prerequisite: Professional Component.

**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. Prerequisites: Professional Component Standing.

**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. Prerequisite: Professional Component Standing.

**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. Prerequisites: Professional Component Standing and CIS 321.

**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. Prerequisites: Professional Component Standing and CIS 321.

**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. Prerequisites: ITE 375 and CIS 321.

**ITE 472 Advanced Data Management** 3 cr

This course extends previous material presented in the earlier database courses. The focus here 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. Prerequisites: Professional Component Standing and CIS 324.

**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. Prerequisite: Professional Component Standing and 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. Credit cannot be received for both ISC 474 and ITE 474. Prerequisites: Professional Component Standing.

**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. Prerequisite: Professional Component Standing.

**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 policies. Labs will require students to analyze systems for potential threats, implement security procedures, monitor systems for security breaches,

and institute recovery or repairs. Prerequisites: Professional Component Standing and 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. Prerequisites: Professional Component Standing and either EH 372 or EH 373.

**ITE 482 ITE E-Commerce Systems** 3 cr

This course examines the tools and techniques of electronic commerce on the World Wide Web. Interaction with the user and the enterprise is examined from the perspectives of: security, data integrity, and performance. Students will be required to complete a project that simulates Web-based e-commerce. Programming skills are required. Prerequisite: ITE 453.

**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 policies, 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. Prerequisites: Professional Component Standing and 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. Corequisite: CIS 497.

**ITE 490 Information Technology Special Topics** 3 cr

Advanced selected topics in information technology. Prerequisite: Permission of the ITE Coordinator.

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**LANGUAGE ARTS AND SKILLS (LAS)**

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**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.

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**LANGUAGES FOREIGN (LG)**

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**LG 024 Foreign Language Proficiency Test** 0 cr

Elementary level proficiency test administered to Arts and Sciences students who wish to demonstrate proficiency in a foreign language other than French, German, or Spanish.

**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. Prerequisite: EH 102.

**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. Prerequisite: 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 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. Prerequisite: 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. Prerequisite: completion of the Study Abroad requirement.

**LG 490 Special Topics** 1-3 cr

Topics to be determined by student need and interest. Course may be repeated when content varies. A subtitle identifying the topic will be entered 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: LG 112 or equivalent. Fee. **Core Course.**

**LG 212 Intermediate French II** 3 cr  
The second semester of the intermediate sequence. Prerequisite: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisite: LG 212 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: LG 311, LG 312 or equivalent.

**LG 416 Identités 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: LG 152 or equivalent. Fee. **Core Course.**

**LG 252 Intermediate German II** 3 cr  
The second semester of the intermediate sequence. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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

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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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: LG 252 or equivalent.

### CLASSICAL GREEK

**LG 141 Introductory Classical Greek I**

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**

Introductory Classical Greek II is the second half of a two-course sequence in Classical Greek. Prerequisite: LG 141.

**LG 241 Intermediate Classical Greek I**

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. Prerequisite: LG 142.

**LG 242 Intermediate Classical Greek II**

Intermediate Classical Greek II is the second of a two-semester sequence in intermediate Classical Greek. Prerequisite: 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. Prerequisite: 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. Prerequisite: LG 102.

**LG 202 Intermediate Latin II 3 cr**

The second of a two-semester sequence in intermediate Latin. Prerequisite: 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. Prerequisite: 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. Prerequisite: LG 172 or equivalent. Fee. **Core Course.**

**LG 272 Intermediate Russian II 3 cr**

The second semester of intermediate Russian. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Classwork and assignments are geared towards increasing the student's vocabulary and understanding of Russian stylistics. All texts, lectures, and discussions in Russian. Prerequisite: 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. Prerequisite: LG 131 or equivalent. Fee. **Core Course.**

**LG 134 Accelerated Introductory Spanish (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 Spanish with a "B" average or better. This course covers the material taught in LG 131 and LG 132 and satisfies the Arts and Sciences language requirement. By permission of the instructor. **Core Course.** Fee.

**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. Prerequisites: LG 132, LG 134, or equivalent. Fee. **Core Course.**

**LG 232 Intermediate Spanish II 3 cr**

The second semester of the intermediate sequence. Prerequisite: LG 231 or equivalent. Fee. **Core Course.**

**LG 234 Accelerated Intermediate Spanish (Honors) 6 cr**

A one-semester intensive intermediate course for students who have successfully completed LG 134 (Accelerated Introductory Spanish), or the equivalent. This course covers the material taught in LG 231 and LG 232. **Core Course.** By permission of the instructor. Prerequisites: LG 132, LG 134 or equivalent. Fee.

**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. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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. Prerequisites: LG 232, LG 234 or equivalent.

**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. Prerequisites: LG 333, LG 334, or LG 336.

**LG 432 Readings in Spanish Literature Through the 18th Century 3 cr**

Representative readings reflecting major literary movements and cultural events in Spain prior to the twentieth century. Extensive class discussions, oral and written reports in the language are required. Prerequisites: LG 333, LG 334, or LG 336.

**LG 433 Readings in Spanish Literature of the 19th and 20th Century 3 cr**

Representative readings reflecting major

literary movements and cultural events in Spain in the twentieth century. Extensive class discussions, oral and written reports in the language are required. Prerequisites: LG 333, LG 334, or LG 336.

**LG 434 Readings in Latin American Literature Through the 19th Century 3 cr**

Representative readings reflecting major literary movements and cultural events in Latin America prior to the twentieth century. Extensive class discussions, oral and written reports in the language are required. Prerequisites: LG 333, LG 334, or LG 336.

**LG 435 Readings in Latin American Literature of the 20th Century 3 cr**

Representative readings reflecting major literary movements and cultural events in Latin America in the twentieth century. Extensive class discussions, oral and written reports in the language are required. Prerequisites: 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. Prerequisite: Completion of two-year sequence in an LTLS approved language or equivalent. Fee.

**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. Prerequisite: 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. Prerequisite: LGS 107 or equivalent. Fee. **Core Course.**

**LGS 207 Intermediate Arabic II 3 cr**

A continuation of intermediate Arabic I. Prerequisite: 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. Prerequisite: 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. Prerequisite: LGS 122 or equivalent. Fee. **Core Course.**

**LGS 222 Intermediate Chinese II 3 cr**

A continuation of intermediate Chinese I. Prerequisite: 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. Prerequisite: 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. Prerequisite: LGS 142 or equivalent. Fee. **Core Course.**

**LGS 242 Intermediate Greek II 3 cr**

A continuation of intermediate Greek I. Prerequisite: LGS 241 or equivalent. Fee. **Core Course.**

**ITALIAN**

**LGS 161 Introductory Italian I 3 cr**

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. Study requires extensive use of audio-tapes. LGS 161 is part of the department's Lesser Taught Languages Program. 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

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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. Prerequisite: 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. Prerequisite: 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. Prerequisite: LGS 201 or equivalent. Fee. **Core Course.**

### PORTUGUESE

**LGS 181 Introductory Portuguese I 3 cr**  
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. Study requires extensive use of audio-tapes. LGS 181 is part of the department's Lesser Taught Languages Program. Fee. **Core Course.**

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## LEISURE STUDIES (LS)

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**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 375\* Administration of Leisure Services (W) 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 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 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 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 adventure-some 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.**

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## MATHEMATICS (MA)

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**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. Prerequisite: Mathematics sufficient placement test score or C or better in DS 90. **Core Course.**

**Note: May be offered for Honors Credit.**

**NOTE: MA 110 is not a prerequisite for nor is it intended to be preparatory for any course listed below. Students who do not have the prerequisites for MA 110 or MA 112 should contact Developmental Studies.**

**MA 112 Precalculus Algebra 3 cr**

Study of use of variable quantities to interpret information about relationships that can be expressed in mathematical terms. Linear, polynomial, absolute value, rational, exponential and logarithmic functions with emphasis on numerical, graphical and algebraic properties and applications and use in modeling real world situations. Systems of linear equations. Credit for both MA 112 and MA 115 not allowed. Prerequisite: C or better in DS 090 or mathematics sufficient placement test score. **Core Course.**

**MA 113 Precalculus Trigonometry 3 cr**

Continuation of MA 112. Numerical, graphical and algebraic properties of polynomial, rational and trigonometric functions. Parametric equations, right angle trigonometry, inverse trigonometric

functions. Polar coordinates. Conic sections. Development and use of mathematical models to solve problems which concern real-world situations emphasized. Credit for both MA 113 and MA 115 not allowed. Prerequisite: C or better in MA 112 or sufficient mathematics placement test score. **Core Course.**

**MA 115 Precalculus Algebra and Trigonometry 4 cr**

Study of elementary functions, their graphs and applications, including polynomial, rational, algebraic, exponential, logarithmic, and trigonometric functions. This fast-paced course is designed as a review of the algebra and trigonometry needed in calculus. Prerequisite: Sufficient mathematics placement test score. **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. Prerequisite: C or better in MA 112 or sufficient mathematics placement test score. MA 120 is not a prerequisite for subsequent calculus courses. **Core Course.**

**MA 125 Calculus I 4 cr**

An introduction to calculus with an emphasis on the following concepts: Limit of a function; the derivatives of algebraic, trigonometric, exponential, and logarithmic functions; applications of the logarithmic functions; applications of the derivative to curve sketching; optimization problems including examples in the physical/natural sciences and economics; introduction of the definite integral; Fundamental Theorem of Integral Calculus. Credit for both MA 120 and MA 125 not allowed. Prerequisite: C or better in MA 113 or MA 115 or sufficient placement test score. **Core Course.**

**NOTE: MA 110, MA 112, MA 113, MA 115, MA 120, and MA 125 have strict prerequisites. The mathematics placement exam is available at <http://mps.southalabama.edu/mps/>.**

**MA 126 Calculus II 4 cr**

A continuation of MA 125. Techniques of symbolic and numerical integration; applications of the definite integral to geometry, physics, economics, and probability; indeterminate forms; improper integrals; introduction to differential equations; sequences and series; Taylor polynomials and Taylor series. Prerequisite: 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



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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. Prerequisite: 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, geometric transformation. Prerequisite: C or better in MA 201.

**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; quadratic approximations; optimization of functions of several variables; multiple integrals and their applications; parametric curves and surfaces; vector fields; line and surface integrals; vector calculus. Prerequisite: 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. Prerequisite: 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. Prerequisites: C or better in MA 113 or C or better in MA 115 or a mathematics sufficient 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: C or better in MA 237.

### **MA 320 Foundations of Mathematics (W)** 3 cr

The students will develop facility with proofs through the study of logic and proof techniques as applied to various areas of mathematics. Topics include symbolic logic, proof techniques, relations, functions, and the structure of the number system. Prerequisite: C or better in EH 102 and MA 125.

### **MA 321 Elementary Geometry** 3 cr

The students will review the major topics (from secondary school curriculum) of plane and solid geometry from the modern viewpoint; axioms, undefined terms, definitions, theorems and proofs. Prerequisite: 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. Prerequisites: 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. Prerequisites: C or better in MA 227 and MA 237.

### **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. Prerequisite: C or better in MA 334.

### **MA 354 Computer Assisted Mathematical Modeling (W) (C)** 3 cr

Formulation, development, testing and reporting of mathematical models of various real world problems. Deterministic and stochastic models, optimization, simulation. Emphasis on the careful mathematical formulations and the appropriate use of computer software, both as an aid in the solution of mathematical problems and as a tool in the process of model evaluation, simulation, reporting. A term project will be an important component of this course. The course is taught in a laboratory setting with computers as lab equipment. Prerequisites: C or better in EH 102, MA 227, and 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. Prerequisite: 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. Prerequisite: C or better in EH 102 and either senior standing or permission of instructor or department chair.

### **MA 413 Algebra I (W)** 3 cr

An introduction to group theory and ring theory. Topics include permutations and symmetries, subgroups, quotient groups, homomorphisms, as well as examples of rings, integral domains, and fields. Prerequisites: MA 237 and C or better in EH 102 and C or better in one of the following: MA 311, MA 320, MA 334.

### **MA 414 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. Prerequisite: C or better in 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. Prerequisite: C or better in MA 335.

**MA 436 Numerical Analysis** 3 cr

Selected numerical algorithms are analyzed. Topics include error analysis, machine arithmetic, roundoff, root finding using fixed point methods, interpolation, numerical integration, differential equations, eigenvalue/eigenvector problems, least squares analysis, boundary value problems. Prerequisite: C or better in MA 227, credit for or concurrent registration in 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. Prerequisite: 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. Prerequisites: 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. Prerequisites: C or better in EH 102 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. Prerequisites: 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 decryptions (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, El Garmal), 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. Prerequisite: 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. Prerequisites: 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. Prerequisite: C or better in MA 321 or MA 413 or permission of the instructor.

**MA 502 Introduction to** 3 cr

**Abstract Algebra**

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. Prerequisite: C or better in MA 501.

**MA 503 Introduction to Analysis** 3 cr

A careful look at the elements, procedures, and applications of differential and integral calculus. Prerequisites: MA 501 and one year of calculus. 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. 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 Mathematical Education. Problems selected from logic, algebra, analysis, geometry, combinatorics, number theory and probability. 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 data-based approach. Uses hands-on-activities approach and simulation of situations to teach concepts and technology to teach data analysis. Prerequisite: MA 126. This course is designed for students in the College of Education.

**MA 507 Applicable Mathematics I** 3 cr

A graduate-level introduction to topics of ordinary differential equations, and their applications in physics and engineering.

**MA 508 Applicable Mathematics II** 3 cr

A continuation of MA 507 with more emphasis on theory of partial differential equations, as well as their applications in physics and engineering problems.

**MA 511 Abstract 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, fundamental theorem of abelian groups.

**MA 512 Abstract 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, field extensions. Prerequisite: C or better in MA 511.

**MA 515 Number Theory** 3 cr

Modular arithmetic, arithmetic functions; prime numbers, 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. Prerequisite: 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, 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, applications to analysis. Prerequisite: C or better in MA 518.

**MA 521 Discrete Mathematics** 3 cr

Pigeonhole principle, basic counting techniques, binomial coefficients, inclusion-exclusion principle, recurrence relations, generating functions, systems of distinct representatives, 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, 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, Riemann-Stieltjes integral. Prerequisite: 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, an introduction to the Lebesgue integral and differential forms as time allows. Prerequisite: 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;

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Taylor series; Laurent series; calculus of residues; conformal representation; applications. Credit for both MA 537 and MA 437 is not allowed. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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. Prerequisites: MA 227 and C or better in 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. Prerequisite: 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, 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, analysis of count data. Computer assisted data analysis is used. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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 decryptions (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, El Gamal), 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. Prerequisite: 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. Prerequisites: Approval of the department chair.

### **MA 599 Thesis 1-6 cr**

Prerequisite: Approval of research prospectus by Department Graduate Committee.

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## **MARINE SCIENCES (MAS)**

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### **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 2 cr Techniques**

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 2 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. Prerequisites: Admission to Graduate School.

### **MAS 521 Marine Conservation 2 cr Biology**

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 endosymbionts. 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 these 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 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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). Prerequisite: 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. subtidal 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. Prerequisite: 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 protists 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 prerequisite, 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. Prerequisite: 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.

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### **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. Prerequisite: 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. Prerequisite: Approved Committee.

### **MAS 601 Physical Oceanography 3 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. Prerequisite: Admission to graduate program in Marine Sciences Biological Oceanography or equivalent.

### **MAS 602 Chemical Oceanography 3 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 3 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. Prerequisite: Admission to the graduate program in Marine Sciences.

### **MAS 604 Biological Oceanography 3 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: Approved prospectus.

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## **MATERNAL/CHILD NURSING (MCN)**

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### **MCN 340 Maternal/Gynecologic Health Nursing 3 cr**

Provides students the opportunity to analyze theories, concepts, research, and issues and trends in nursing of the childbearing family. Content includes internal and external environmental factors affecting the health of the childbearing family. Emphasis on the role of the professional nurse in health promotion and maintenance and wellness-illness care of the childbearing family. Prerequisites: NU 325, HSC 343, HSC 342, NU 300, NU 301. Prerequisite or Corequisite: NU 327. Corequisite: MCN 341.

### **MCN 341 Maternal/Gynecologic Health Nursing Clinical 3 cr**

Clinical practice course in nursing of the childbearing family. Focus is on the application of theories, concepts, research, and issues and trends in nursing of the childbearing family. Emphasis is on the role of the professional nurse in nursing care of the childbearing family

and on the use of the nursing process with the childbearing family. Prerequisites: NU 325, HSC 343, HSC 342, NU 300, NU 301. Prerequisite or Corequisite: NU 327. Corequisite: MCN 340.

### **MCN 345 Child Health Nursing 3 cr**

Provides students the opportunity to analyze theories, concepts, research, and issues and trends in child health nursing. Content includes internal and external environmental factors affecting the health of children. Emphasis is on the role of the professional nurse in health promotion and maintenance, illness care, and rehabilitation of children. Prerequisites: NU 325, HSC 343, HSC 342, NU 300, NU 301. Prerequisite or Corequisite: NU 327. Corequisite: MCN 346.

### **MCN 346 Child Health Nursing Clinical 3 cr**

Clinical practice course in child health nursing. Focus is on the application of theories, concepts, research, and issues and trends in child health nursing. Emphasis is on the role of the professional nurse in child health nursing and on the use of the nursing process with children and their families. Prerequisites: NU 325, HSC 343, HSC 342, NU 300, NU 301. Prerequisite or Corequisite: NU 327. Corequisite: MCN 345.

### **MCN 525 Women's Health CNS Practicum I 4 cr**

Application of advanced clinical concepts in Maternal/Child Nursing theory and other concepts are evaluated within evidence based practice models. Prerequisites: NU 545, NU 578, NU 518, NU 519. Corequisite: NU 524 or special permission of instructor.

### **MCN 526 Women's Health CNS Practicum II 4 cr**

The purpose of this precepted capstone course is to provide students an immersion experience in the CNS role with women 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. Prerequisites: NU 524, AHN 525 or MCN 527 or MCN 525. Corequisite: NU 520.

### **MCN 528 Pediatric Health CNS Practicum II 4 cr**

The purpose of this precepted capstone course is to provide students an immersion experience in the CNS role with pediatric 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. Prerequisites: NU 524, AHN 525 or MCN 527 or MCN 525. Corequisite: NU 520.

**MCN 538 Advanced Women's Health Nursing I 3 cr**

The purpose of this first didactic course is to prepare Women's Health 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. Corequisite: MCN 539

**MCN 539 Advanced Women's Health Nursing Practicum I 1 cr**

The purpose of this first practicum course is to provide opportunities for Women's Health Nurse Practitioner students to apply concepts from Advanced Women's Health 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. Corequisite: MCN 538.

**MCN 541 Health Promotion/Disease Prevention and Issues for Women's Health Nursing 2 cr**

The purpose of this didactic course is to prepare the Women's 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. Corequisites: MCN 538, MCN539.

**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. Prerequisites: MCN 538, MCN 539, MCN 541, NU 506. Prerequisites or Corequisites: NU 545, NU 578. Corequisite: 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. Prerequisites: MCN 538, MCN 539, MCN 541, NU 506. Prerequisites or Corequisites: NU 545, NU 578. Corequisite: 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. Prerequisites: MCN 542, MCN 543. Corequisite: 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. Prerequisites: MCN 542, MCN 543. Corequisite: 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. Prerequisites: MCN 544, MCN 545, NU 506. Corequisite: MCN 547. Prerequisites or Corequisites: NU 508, NU 513, NU 545, NU 578, NU 507, NU 518.

**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. Prerequisites: MCN 544, MCN 545, NU 506. Corequisite: MCN 546. Prerequisites or Corequisites: NU 508, NU 513, NU 545, NU 578, NU 507, NU 518.

**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. Corequisite: MCN 549.

**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 adults and children and to apply diagnostic reasoning. Corequisite: MCN 548.

**MCN 551 Health Promotion/Disease Prevention and Issues 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. Corequisites: MCN 548, MCN 549.

**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. Prerequisites: MCN 548, MCN 549, MCN 551, NU 506. Prerequisites or Corequisites: NU 545, NU 578. Corequisite: 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 and acute care settings. The emphasis is on diagnostic reasoning and decision making/critical thinking. Prerequisites: MCN 548, MCN 549, MCN 551, NU 506. Prerequisites or Corequisites: NU 545, NU 578. Corequisite: 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. Prerequisites: MCN 552, MCN 553. Corequisite: 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 manage-

ment of children. Emphasis is on collaboration with other health care providers in a culturally diverse environment. Prerequisites: MCN 552, MCN 553. Corequisite: 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. Prerequisites: MCN 554, MCN 555, NU 506. Corequisite: MCN 557. Prerequisites or Corequisites: NU 508, NU 513, NU 545, NU 578, NU 507, NU 518.

**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. Prerequisites: MCN 554, MCN 555, NU 506. Corequisite: MCN 556. Prerequisites or Corequisites: NU 508, NU 513, NU 545, NU 578, NU 507, NU 518.

**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. Corequisite: MCN 569.

**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. Corequisite: MCN 568.

**MCN 571 Health Promotion Disease Prevention and Issues for Neonatal Nursing** 2 cr

The purpose of this didactic course is to prepare the Neonatal Nurse Practitioner student to identify and implement appropriate health promotion and disease prevention strategies for the neonate to one year of life and their family. The focus is on the advanced practice nursing of neonates to one year of life and their 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. Corequisites: MCN 568, MCN 569.

**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. Prerequisites: MCN 568, MCN 569, MCN 571, NU 506. Prerequisites or Corequisites: NU 545, NU 578. Corequisite: 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. Prerequisites: MCN 568, MCN 569, MCN 571, NU 506. Prerequisites or Corequisites: NU 545, NU 578. Corequisite: 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. Prerequisites: MCN 572, MCN 573. Corequisite: 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. Prerequisites: MCN 572, MCN 573. Corequisite: 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. Prerequisites: MCN 574, MCN 575, NU 506. Corequisite: MCN 577. Prerequisites or Corequisites: NU 508, NU 513, NU 545, NU 578, NU 507, NU 518.

**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. Prerequisites: MCN 574, MCN 575, NU 506. Corequisite: MCN 576. Prerequisites or Corequisites: NU 508, NU 513, NU 545, NU 578, NU 507, NU 518.

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## MECHANICAL ENGINEERING (ME)

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**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. Prerequisite: 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. Prerequisite: MA 126. Corequisite: 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. Prerequisite: 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. Prerequisites: EG 284, EG 315. Fee.

**ME 316 Instrumentation and Experimental Methods (W)** 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 corequisite with ME 319 Instrumentation Laboratory. The same grade will be given in both courses. Prerequisites: EG 220, MA 238, PH 202. Corequisite: 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. Prerequisites: EG 270, EG 360, MA 238, ME 328. Fee.

**ME 319 Instrumentation Lab** 1 cr

Laboratory component of ME 316 Instrumentation. This course is a corequisite with ME 316 Instrumentation. The same grade will be given

in both courses. Prerequisites: EG 220, MA 238, PH 202. Corequisite: 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. Prerequisite: 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. Prerequisites: CIS 227, 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. Prerequisite: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: EG 231, ME 312, ME 314, ME 317. Fee.

**ME 414 Capstone Design II 2 cr**

Continuation of Capstone Design I course for mechanical engineering students. Team-oriented design projects from industry and faculty. Oral and written design presentation. Two hours of design. Prerequisite: ME 413. 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisite: 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. Prerequisites: 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisite: 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. Prerequisites: EG 360, ME 312, ME 317. 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. Prerequisites: 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. One hour design. Prerequisites: EG 360, ME 312, and 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. Prerequisites: 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. Prerequisite: ME 472. Fee.

**ME 490 Special Topics 1-3 cr**

Topics of current mechanical engineering interest. Prerequisite: 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. Prerequisite: 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



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maximum of six (6) credit hours over two semesters. Prerequisites: 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, Kelvin-Helmholtz, Gortler instability; Orr-Sommerfeld equation and TS Wave; Bifurcation. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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. Prerequisite: 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 inviscid 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. Prerequisite: ME 562. Fee.

### **ME 564 Turbulent Flow** 3 cr

Reynolds equations, statistics of turbulence, analysis of free and wall turbulence, turbulence models. Prerequisite: 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 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 gyro dynamics. 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. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: Consent of instructor. Fee.

**ME 592 Directed Independent Study** 1-3 cr

Directed study, under the guidance of a faculty advisor, of a topic in the field of Mechanical Engineering not offered in a regularly scheduled course. Prerequisite: Consent of instructor.

**ME 594 Projects in Mechanical Engineering** 1-3 cr

May be repeated for credit. Prerequisite: 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. Prerequisite: Approved prospectus. Fee.

## **METEOROLOGY (MET)**

**MET 140 Introduction to Meteorology** 3 cr

This course focuses on introducing the student to basic concepts involved in the analysis of weather phenomena on a global and local scale. Major topics include heat balance, atmospheric stability, precipitation processes, cyclonic activity, severe weather, weather analysis, and very basic weather forecasting techniques. Particular attention is devoted to the analysis of US Government weather charts and diagrams.

**Core Course.** Corequisite: MET 140L.

**MET 140L Introduction to Meteorology Lab** 1 cr

Laboratory exercises associated with MET 140. Corequisite: MET 140. Fee.

**MET 341 Climatology** 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). Prerequisite: MET 353 or GEO 353. Minimum Grade of "C" needed in course prerequisite. Fee.

**MET 342 Severe Weather** 3 cr

A study of the causes, structure, and impact of tornadoes, hurricanes, thunderstorms and other severe weather systems (identical to GEO 342). Prerequisite: MET 353 or GEO 353. Minimum Grade of "C" needed in course prerequisite.

**MET 353 General Meteorology** 3 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 (identical to GEO 353). Prerequisites: MET 140, MET 140L, and MA 112. Minimum grade of "C" needed in course prerequisites. Fee.

**MET 353L General Meteorology Lab** 1 cr

Laboratory exercises associated with MET 353. Particular attention is given to hands on weather analysis of meteorological charts.

**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. Prerequisites: MA 126 or MA 233 and PH 201 or PH 216. Minimum Grade of "C" needed in course prerequisites.

**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. Prerequisite: MET 354. Minimum Grade of "C" needed in course prerequisite.

**MET 356 Physical Meteorology** 3 cr

A detailed investigation of atmospheric aerosols, the disposition of radiant energy, the earth's radiation budget, precipitation processes, atmospheric optics and electricity. A special emphasis is placed on adiabatic processes, thermodynamic diagrams and atmospheric stability. Prerequisite: MET 355. Minimum Grade of "C" needed in course prerequisite.

**MET 357 Meteorological Instrumentation** 2 cr

Design, calibration, use, and maintenance of existing and newly developed meteorological instruments and instrumentation systems as well as remote sensing applications. Prerequisite: MET 353/GEO 353. Minimum Grade of "C" needed in course prerequisite.

**MET 358 Radar Meteorology** 3 cr

The 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. Prerequisites: MET 353/GEO 353, MET 354 and MET 357. Minimum Grade of "C" needed in course prerequisites.

**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. Prerequisites: MET 353/GEO 353. Minimum Grade of "C" needed in course prerequisite.

**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. Prerequisite: MET 353/GEO 353. Minimum Grade of "C" needed in course prerequisite.

**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. Prerequisite: MET 401. Minimum Grade of "C" needed in course prerequisite.

**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. In addition, students will gain experience with the GrADS meteorological graphics package and the MM5 numerical weather model. Prerequisites: MET 354 and MET 355. Minimum Grade of "C" needed in course prerequisites.

**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. Prerequisite: MET 354. Minimum Grade of "C" needed in course prerequisite.

**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. Prerequisites: MET 355, MET 356, or instructor permission. Minimum Grade of "C" needed in course prerequisites. 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. Prerequisite: MET 454. Minimum Grade of "C" needed in course prerequisite. Fee.

**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

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climates, the natural and human impact on the earth's energy balance, global warming, ozone hole and chaos theory. Prerequisites: MET 341/GEO 341 and MET 353/GEO 353. Minimum Grade of "C" needed in course prerequisites.

**MET 490 Special Topics** 2-4 cr  
Meteorology topics not covered in current meteorology courses.

**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. Prerequisite: 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. Prerequisite: Requires permission of the instructor.

**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. Prerequisite: 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. Prerequisite: MET 354 and MET 359. Minimum grade of "C" needed in course prerequisites.

**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. Prerequisites: MET 497 and MET 355. Minimum grade of "C" needed in course prerequisites.

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## MANAGEMENT (MGT)

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**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. Prerequisite: sophomore standing.

**MGT 305 Organizational Communication (W)** 3 cr

A study of written and oral communication in organizations. Emphasis is given to communi-

cation 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. Prerequisites: 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. Prerequisite: MGT 310.

**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. Prerequisites: 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. Prerequisite: 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. Prerequisites: junior standing, EH 102, MGT 300, MGT 305.

**MGT 345 Small Business Management** 3 cr

Management of small enterprises at the business level and the functional level. This course focuses on skills and techniques specifically used for small businesses and on how skill and techniques used by larger businesses can be modified for use by small businesses. Topics include small business strategies, family businesses, franchising, purchasing a business, asset management, and human resources management for small firms. Term projects such as feasibility studies, case studies, and small business simulations allow

students to apply the concepts and principles to small business management situations. Prerequisites: MGT 300, ACC 212.

**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. Prerequisite: MGT 300.

**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. Prerequisites: 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. Prerequisite: 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. Prerequisite: 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. Prerequisites: MGT 340, MGT 351, MGT 452, 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. Prerequisites: 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. Prerequisites: MGT 310 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. Prerequisites: 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. Prerequisite: MGT 351.

**MGT 456 Current Issues in Human Resource Management** 3 cr

A capstone course in human resource management. The seminar format covers state-of-the-art issues in human resource management which are new or not well developed in existing texts. Assignments include at least one major paper based on library research and oral presentations in class. Students work closely with the professor in the preparation of both written and oral communications. Prerequisites: MGT 351, MGT 450 and MGT 451.

**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. Prerequisites: 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. Prerequisite: MGT 300.

**MGT 465 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. Prerequisites: MGT 300, FIN 315, MKT 320.

**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. Prerequisites: senior standing, and MGT 300.

**MGT 483 Quality Analysis, Improvement, and Control** 3 cr

The course focuses on the measurement and evaluation of quality and performance, the formulation of approaches to improve quality and performance and the measurement of improvement. A variety of assessment and improvement approaches such as Kaizen, Six Sigma, and continuous improvement will be covered. Statistical analysis, process control, benchmarking, and reengineering will be used for analysis. Prerequisite: MGT 325 and MGT 390.

**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. Prerequisites: Seniors who have completed all core courses, petitioned for graduation, and are beginning the final semester.

**MGT 486 Undergraduate Comprehensive Exam** 0 cr

A corequisite 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. Prerequisite: 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. Prerequisites: 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. Prerequisites: 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 a faculty advisor. No more than three hours of internship may be counted toward a degree in the Mitchell College of Business. Prerequisites: junior or senior standing, a major in the Department of Management, a cumulative GPA of 2.5 or better, and approval of the department chair following the evaluation of a written proposal.

**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 Operations Management and Analytical Decision-Making** 3 cr

Covers the concepts, processes, and methods of managing and controlling operations in manufacturing or service settings. Examines issues such as globalization and supply chain strategy. This course also integrates the analytical tools for decision making via systems modeling; covering techniques such as linear programming, waiting line models, and computer simulation methods.

**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 562 Seminar I-Team Building, Group Dynamics, and Personality** 0 cr

The initial seminar for first year MBA students. Topics include orientation for the MBA program, team building exercises, and cases related to group dynamics and decision making. Concurrent with MGT 521 or MGT 532.

**MGT 564 Seminar II-Conflict Resolution and Negotiation** 0 cr

An overview of the primary conflict management strategies and alternative dispute resolution processes in business. Negotiating and conflict handling styles will be analyzed with emphasis on principled negotiation and "win-win" techniques. Students will participate in negotiation, mediation, and arbitration

exercises designed to simulate actual business and employment disputes. In addition to skills development, ethical aspects of negotiation and ADR will be considered. Concurrent with ECO 506 or MGT 530.

**MGT 570 Seminar III-Current Topic 0 cr**  
A discussion of current topics in business. Concurrent with ACC 501 or MKT 541.

**MGT 572 Seminar IV-Developing Your Professional Career 0 cr**  
Life after the MBA. PLanning for your career advancement and continuing professional development. Concurrent with MGT 522 or ACC 502.

**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. Prerequisite: 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. Prerequisite: Approval of department chair.

**MGT 599 Graduate Comprehensive Exam 0 cr**  
A corequisite course with MGT 515 with no credit hours which includes a graduate comprehensive business exam.

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## MICROBIOLOGY AND IMMUNOLOGY (MIC)

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**MIC 530 Medical Microbiology and Immunology 7 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 Microbial Physiology and Genetics 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. Prerequisites: 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 2 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. Prerequisites: 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 2 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. Prerequisites: 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. Prerequisite: Approved formal research proposal.

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## MARKETING (MKT)

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**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. Prerequisites: ACC 211, ECO 215.

**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. Prerequisites: 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. Prerequisites: MKT 320 and sophomore standing.

**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. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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 Implemen-

tation of marketing strategies on the Internet in order to accomplish corporate objectives. Prerequisites: MKT 340 and sophomore standing. E-Commerce majors must have had MKT 340. All other majors must have had MKT 320.

**MKT 355 Customer Relationship Management and Data Mining Technologies 3 cr**

Examination of the fundamental concepts and technologies for Customer Relationship Management and Data Mining. Description and analysis of methodologies, techniques, and tools for building and maintaining long term customer satisfaction and loyalty. Prerequisites: MKT 320, MKT 340.

**MKT 374 Buyer 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. Prerequisites : MKT 320 and sophomore standing.

**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. Perquisites: MKT 320 and sophomore standing.

**MKT 376 Industrial Marketing 3 cr**

Study of the participants, channels, and relationships that govern the behavior of industrial buyers and marketers. Prerequisites: MKT 320 and sophomore standing.

**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. Prerequisites: MKT 320 and sophomore standing.

**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. Prerequisites: MKT 320 and sophomore standing.

**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. Prerequisites: MKT 320 and sophomore standing.

**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. Prerequisites: MKT 320 and sophomore standing.

**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. Prerequisites: MKT 320 and sophomore standing.

**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. Prerequisites: BUS 255 and MKT 320 and sophomore standing.

**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. Prerequisites: MKT 320 and sophomore standing.

**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. Prerequisites: 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. Prerequisite: 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. Prerequisites: 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. Prerequisites: Graduating seniors only, MKT 320, MKT 336, MKT 374, MKT 384.

**MKT 480 Practicum in E-Commerce 3 cr**

Integration and application of technical and business concepts and issues relating to e-commerce. The course requires research, analysis, and implementation of e-commerce plans and strategies. Prerequisites: Senior standing, MKT 355.

**MKT 490 Special Topics 3 cr**

Designed to provide senior students an opportunity to study selected topics of particular interest. Prerequisite: Approval of department chair. (A student may count no more than three hours of Special Topics in the Concentration.) Prerequisite: 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. Prerequisites: 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. Grades are awarded on a satisfactory/unsatisfactory basis. Prerequisites: 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 495 Seminar in Sport and Event Marketing 3 cr**

Integration and application of concepts and issues relating to the marketing of sporting, cultural, corporate, historical, and charitable events. Emphasis on planning, promoting, and implementing special events. Prerequisites: MKT 385 and junior standing.

**MKT 496 Marketing Internship 3 cr**

The internship program is designed to give students practical experience in their field of study. Students will complete directed projects under the supervision of a faculty advisor. No more than three hours of internships may be counted toward a degree in the Mitchell College of Business. Grades are awarded on a satisfactory/unsatisfactory basis. Prerequisites: Junior or senior standing, a cumulative GPA of 2.5 or better, and approval of the department chair, declared major in the marketing department.

**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. Prerequisite: Approval of department chair.

**MKT 594 Independent Study in Marketing** 3 cr

Readings and research on selected topics. Conferences and formal research report required. Prerequisite: Approval of department chair.

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**MILITARY SCIENCE (MS)**

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**MS 101 Basic Leadership Skills I** 1 cr

An introductory course of instruction and participation in common task and leadership skills. Contracted 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 other week. No Fee.

**MS 102 Basic Leadership Skills II** 1 cr

A continuing course of instruction and participation in individual common task and leadership skills. Contracted 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 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. Contracted 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 other 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.

Contracted 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 other week. Fee.

**MS 301 Advanced Military Skills I (W)** 3 cr

Intensive instruction and practical application of principles required to lead military units. Emphasis on squad and platoon level leadership techniques. Contracted 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 302 Advanced Military Skills II** 3 cr

Intensive instruction and practical application of principles required to lead military units. Emphasis on squad and platoon level leadership techniques. Contracted 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 Leadership Skills I** 3 cr

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. Contracted 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 Skills II (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. Contracted 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. One, two and three hour courses are available. Fee.

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**MUSIC, APPLIED (MUA, MUB)**

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**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.

**GROUP A (MUA)**

<b>MUA 101 Piano (Elective)</b>	1 cr
<b>MUA 102 Piano (Elective)</b>	2 cr
<b>MUA 201 Piano (Major/Lower Division)</b>	1 cr
<b>MUA 202 Piano (Major/Lower Division)</b>	2 cr
<b>MUA 301 Piano (Major/Upper Division)</b>	1 cr
<b>MUA 302 Piano (Major/Upper Division)</b>	2 cr
<b>MUA 401 Piano (Major/Performance)</b>	1 cr
<b>MUA 402 Piano (Major/Performance)</b>	2 cr
<b>MUA 403 Piano (Major/Performance)</b>	3 cr
<b>MUA 111 Organ (Elective)</b>	1 cr
<b>MUA 112 Organ (Elective)</b>	2 cr
<b>MUA 211 Organ (Major/Lower Division)</b>	1 cr
<b>MUA 212 Organ (Major/Lower Division)</b>	2 cr
<b>MUA 311 Organ (Major/Upper Division)</b>	1 cr
<b>MUA 312 Organ (Major/Upper Division)</b>	2 cr
<b>MUA 411 Organ (Major/Performance)</b>	1 cr
<b>MUA 412 Organ (Major/Performance)</b>	2 cr
<b>MUA 413 Organ (Major/Performance)</b>	3 cr
<b>MUA 124 Group Applied Elective Voice</b>	1 cr
<b>MUA 221 Voice (Major/Lower Division)</b>	1 cr
<b>MUA 222 Voice (Major/Lower Division)</b>	2 cr
<b>MUA 321 Voice (Major/Upper Division)</b>	1 cr
<b>MUA 322 Voice (Major/Upper Division)</b>	2 cr
<b>MUA 421 Voice (Major/Performance)</b>	1 cr
<b>MUA 422 Voice (Major/Performance)</b>	2 cr
<b>MUA 423 Voice (Major/Performance)</b>	3 cr
<b>MUA 131 Violin (Elective)</b>	1 cr
<b>MUA 132 Violin (Elective)</b>	2 cr
<b>MUA 231 Violin (Major/Lower Division)</b>	1 cr
<b>MUA 232 Violin (Major/Lower Division)</b>	2 cr
<b>MUA 331 Violin (Major/Upper Division)</b>	1 cr
<b>MUA 332 Violin (Major/Upper Division)</b>	2 cr
<b>MUA 431 Violin (Major/Performance)</b>	1 cr
<b>MUA 432 Violin (Major/Performance)</b>	2 cr
<b>MUA 433 Violin (Major/Performance)</b>	3 cr
<b>MUA 141 Viola (Elective)</b>	1 cr
<b>MUA 142 Viola (Elective)</b>	2 cr
<b>MUA 241 Viola (Major/Lower Division)</b>	1 cr
<b>MUA 242 Viola (Major/Lower Division)</b>	2 cr
<b>MUA 341 Viola (Major/Upper Division)</b>	1 cr
<b>MUA 342 Viola (Major/Upper Division)</b>	2 cr
<b>MUA 441 Viola (Major/Performance)</b>	1 cr
<b>MUA 442 Viola (Major/Performance)</b>	2 cr
<b>MUA 443 Viola (Major/Performance)</b>	3 cr
<b>MUA 151 Violoncello (Elective)</b>	1 cr
<b>MUA 152 Violoncello (Elective)</b>	2 cr
<b>MUA 251 Violoncello (Major/Lower Division)</b>	1 cr
<b>MUA 252 Violoncello (Major/Lower Division)</b>	2 cr
<b>MUA 351 Violoncello (Major/Upper Division)</b>	1 cr
<b>MUA 352 Violoncello (Major/Upper Division)</b>	2 cr
<b>MUA 451 Violoncello (Major/Performance)</b>	1 cr
<b>MUA 452 Violoncello (Major/Performance)</b>	2 cr
<b>MUA 453 Violoncello (Major/Performance)</b>	3 cr
<b>MUA 161 String Bass (Elective)</b>	1 cr

MUA 162 String Bass (Elective)	2 cr	MUA 551 Violoncello	1 cr	MUB 342 Saxophone	2 cr
MUA 261 String Bass	1 cr	MUA 552 Violoncello	2 cr	(Major/Upper Division)	
(Major/Lower Division)		MUA 553 Violoncello	3 cr	MUB 441 Saxophone	1 cr
MUA 262 String Bass	2 cr	MUA 561 String Bass	1 cr	(Major/Performance)	
(Major/Lower Division)		MUA 562 String Bass	2 cr	MUB 442 Saxophone	2 cr
MUA 361 String Bass	1 cr	MUA 563 String Bass	3 cr	(Major/Performance)	
(Major/Upper Division)		MUA 581 Guitar	1 cr	MUB 443 Saxophone	3 cr
MUA 362 String Bass	2 cr	MUA 582 Guitar	2 cr	(Major/Performance)	
(Major/Upper Division)		MUA 583 Guitar	3 cr	MUB 151 Trumpet/Cornet (Elective)	1 cr
MUA 461 String Bass	1 cr	MUA 586 Percussion	1 cr	MUB 152 Trumpet/Cornet (Elective)	2 cr
(Major/Performance)		MUA 587 Percussion	2 cr	MUB 251 Trumpet/Cornet (Secondary)	1 cr
MUA 462 String Bass	2 cr	MUA 588 Percussion	3 cr	MUB 252 Trumpet/Cornet (Secondary)	2 cr
(Major/Performance)		GROUP B (MUB)		MUB 351 Trumpet/Cornet	1 cr
MUA 463 String Bass	3 cr	MUB 101 Flute (Elective)	1 cr	(Major/Upper Division)	
(Major/Performance)		MUB 102 Flute (Elective)	2 cr	MUB 352 Trumpet/Cornet	2 cr
MUA 171 Harp (Elective)	1 cr	MUB 201 Flute (Major/Lower Division)	1 cr	(Major/Upper Division)	
MUA 172 Harp (Elective)	2 cr	MUB 202 Flute (Major/Lower Division)	2 cr	MUB 451 Trumpet/Cornet	1 cr
MUA 271 Harp (Major/Lower Division)	1 cr	MUB 301 Flute (Major/Upper Division)	1 cr	(Major/Performance)	
MUA 272 Harp (Major/Lower Division)	2 cr	MUB 302 Flute (Major/Upper Division)	2 cr	MUB 452 Trumpet/Cornet	2 cr
MUA 371 Harp (Major/Upper Division)	1 cr	MUB 401 Flute (Major/Performance)	1 cr	(Major/Performance)	
MUA 372 Harp (Major/Upper Division)	2 cr	MUB 402 Flute (Major/Performance)	2 cr	MUB 453 Trumpet/Cornet	3 cr
MUA 471 Harp (Major/Performance)	1 cr	MUB 403 Flute (Major/Performance)	3 cr	(Major/Performance)	
MUA 472 Harp (Major/Performance)	2 cr	MUB 111 Oboe (Elective)	1 cr	MUB 161 French Horn (Elective)	1 cr
MUA 473 Harp (Major/Performance)	3 cr	MUB 112 Oboe (Elective)	2 cr	MUB 162 French Horn (Elective)	2 cr
MUA 181 Guitar (Elective)	1 cr	MUB 211 Oboe (Major/Lower Division)	1 cr	MUB 261 French Horn	1 cr
MUA 182 Guitar (Elective)	2 cr	MUB 212 Oboe (Major/Lower Division)	2 cr	(Major/Lower Division)	
MUA 281 Guitar	1 cr	MUB 311 Oboe (Major/Upper Division)	1 cr	MUB 262 French Horn	2 cr
(Major/Lower Division)		MUB 312 Oboe (Major/Upper Division)	2 cr	(Major/Lower Division)	
MUA 282 Guitar	2 cr	MUB 411 Oboe (Major/Performance)	1 cr	MUB 361 French Horn	1 cr
(Major/Lower Division)		MUB 412 Oboe (Major/Performance)	2 cr	(Major/Upper Division)	
MUA 381 Guitar	1 cr	MUB 413 Oboe (Major/Performance)	3 cr	MUB 362 French Horn	2 cr
(Major/Upper Division)		MUB 121 Clarinet (Elective)	1 cr	(Major/Upper Division)	
MUA 382 Guitar	2 cr	MUB 122 Clarinet (Elective)	2 cr	MUB 461 French Horn	1 cr
(Major/Upper Division)		MUB 221 Clarinet	1 cr	(Major/Performance)	
MUA 481 Guitar (Major/Performance)	1 cr	(Major/Lower Division)		MUB 462 French Horn	2 cr
MUA 482 Guitar (Major/Performance)	2 cr	MUB 222 Clarinet	2 cr	(Major/Performance)	
MUA 483 Guitar (Major/Performance)	3 cr	(Major/Lower Division)		MUB 463 French Horn	3 cr
MUA 186 Percussion (Elective)	1 cr	MUB 321 Clarinet	1 cr	(Major/Performance)	
MUA 187 Percussion (Elective)	2 cr	(Major/Upper Division)		MUB 171 Trombone (Elective)	1 cr
MUA 286 Percussion	1 cr	MUB 322 Clarinet	2 cr	MUB 172 Trombone (Elective)	2 cr
(Major/Lower Division)		(Major/Upper Division)		MUB 271 Trombone	1 cr
MUA 287 Percussion	2 cr	MUB 421 Clarinet	1 cr	(Major/Lower Division)	
(Major/Lower Division)		(Major/Performance)		MUB 272 Trombone	2 cr
MUA 386 Percussion	1 cr	MUB 422 Clarinet	2 cr	(Major/Lower Division)	
(Major/Upper Division)		(Major/Performance)		MUB 371 Trombone	1 cr
MUA 387 Percussion	2 cr	MUB 423 Clarinet	3 cr	(Major/Upper Division)	
(Major/Upper Division)		(Major/Performance)		MUB 372 Trombone	2 cr
MUA 486 Percussion	1 cr	MUB 131 Bassoon (Elective)	1 cr	(Major/Upper Division)	
(Major/Performance)		MUB 132 Bassoon (Elective)	2 cr	MUB 471 Trombone	1 cr
MUA 487 Percussion	2 cr	MUB 231 Bassoon	1 cr	(Major/Performance)	
(Major/Performance)		(Major/Lower Division)		MUB 472 Trombone	2 cr
MUA 488 Percussion	3 cr	MUB 232 Bassoon	2 cr	(Major/Performance)	
(Major/Performance)		(Major/Lower Division)		MUB 473 Trombone	3 cr
GROUP A (MUA)		MUB 331 Bassoon	1 cr	(Major/Performance)	
MUA 500 Graduate Recital	No Credit	(Major/Upper Division)		MUB 181 Baritone/Euphonium	1 cr
Graduate recital. To be taken in conjunction		MUB 332 Bassoon	2 cr	(Elective)	
with a 500-level applied music course.		(Major/Upper Division)		MUB 182 Baritone/Euphonium	2 cr
MUA 501 Piano	1 cr	MUB 431 Bassoon	1 cr	(Elective)	
MUA 502 Piano	2 cr	(Major/Performance)		MUB 281 Baritone Horn/ Euphonium	1 cr
MUA 503 Piano	3 cr	MUB 432 Bassoon	2 cr	(Major/Lower Division)	
MUA 511 Organ	1 cr	(Major/Performance)		MUB 282 Baritone Horn/Euphonium	2 cr
MUA 512 Organ	2 cr	MUB 433 Bassoon	3 cr	(Major/Lower Division)	
MUA 513 Organ	3 cr	(Major/Performance)		MUB 381 Baritone Horn/ Euphonium	1 cr
MUA 521 Voice	1 cr	MUB 141 Saxophone (Elective)	1 cr	(Major/Upper Division)	
MUA 522 Voice	2 cr	MUB 142 Saxophone (Elective)	2 cr	MUB 382 Baritone Horn/ Euphonium	2 cr
MUA 523 Voice	3 cr	MUB 241 Saxophone	1 cr	(Major/Upper Division)	
MUA 531 Violin	1 cr	(Major/Lower Division)		MUB 481 Baritone Horn/ Euphonium	1 cr
MUA 532 Violin	2 cr	MUB 242 Saxophone	2 cr	(Major/Performance)	
MUA 533 Violin	3 cr	(Major/Lower Division)		MUB 482 Baritone Horn/ Euphonium	2 cr
MUA 541 Viola	1 cr	MUB 341 Saxophone	1 cr	(Major/Performance)	
MUA 542 Viola	2 cr	(Major/Upper Division)		MUB 483 Baritone Horn/ Euphonium	3 cr
MUA 543 Viola	3 cr			(Major/Performance)	
				MUB 186 Tuba (Elective)	1 cr



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<b>MUB 187 Tuba (Elective)</b>	2 cr
<b>MUB 286 Tuba (Major/Lower Division)</b>	1 cr
<b>MUB 287 Tuba (Major/Lower Division)</b>	2 cr
<b>MUB 386 Tuba (Major/Upper Division)</b>	1 cr
<b>MUB 387 Tuba (Major/Upper Division)</b>	2 cr
<b>MUB 486 Tuba (Major/Performance)</b>	1 cr
<b>MUB 487 Tuba (Major/Performance)</b>	2 cr
<b>MUB 488 Tuba (Major/Performance)</b>	3 cr

### GROUP B (MUB)

<b>MUB 501 Flute</b>	1 cr
<b>MUB 502 Flute</b>	2 cr
<b>MUB 503 Flute</b>	3 cr
<b>MUB 511 Oboe</b>	1 cr
<b>MUB 512 Oboe</b>	2 cr
<b>MUB 513 Oboe</b>	3 cr
<b>MUB 521 Clarinet</b>	1 cr
<b>MUB 522 Clarinet</b>	2 cr
<b>MUB 523 Clarinet</b>	3 cr
<b>MUB 531 Bassoon</b>	1 cr
<b>MUB 532 Bassoon</b>	2 cr
<b>MUB 533 Bassoon</b>	3 cr
<b>MUB 541 Saxophone</b>	1 cr
<b>MUB 542 Saxophone</b>	2 cr
<b>MUB 543 Saxophone</b>	3 cr
<b>MUB 551 Trumpet/Cornet</b>	1 cr
<b>MUB 552 Trumpet/Cornet</b>	2 cr
<b>MUB 553 Trumpet/Cornet</b>	3 cr
<b>MUB 561 French Horn</b>	1 cr
<b>MUB 562 French Horn</b>	2 cr
<b>MUB 563 French Horn</b>	3 cr
<b>MUB 571 Trombone</b>	1 cr
<b>MUB 572 Trombone</b>	2 cr
<b>MUB 573 Trombone</b>	3 cr
<b>MUB 581 Baritone Horn/ Euphonium</b>	1 cr
<b>MUB 582 Baritone Horn/ Euphonium</b>	2 cr
<b>MUB 583 Baritone Horn/ Euphonium</b>	3 cr
<b>MUB 586 Tuba</b>	1 cr
<b>MUB 587 Tuba</b>	2 cr
<b>MUB 588 Tuba</b>	3 cr

### MUSIC EDUCATION, METHODS, AND MATERIALS (MUE)

**MUE 102 Elementary Class Piano** 1 cr  
Functional keyboard playing. Prerequisites: 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. Prerequisites: 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. Prerequisite: MUE 120.

**MUE 141 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 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: MUE 212 or consent of instructor. Fee.

**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 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: MUE 312 or consent of instructor. Fee.

**MUE 342 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 345 Percussion Methods Class** 1 cr  
The techniques of teaching percussion instruments and the development of some proficiency on all percussion instruments.

**MUE 346 Marching Band Techniques** 1 cr  
The techniques of organization, administration, instruction, and rehearsal of the marching band. Prerequisite: Music major.

**MUE 411 Woodwind Pedagogy** 2 cr  
A survey of the teaching techniques, instruments, accessories and pedagogical materials for woodwind instruments. Prerequisite: 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. 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. 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. Prerequisite: 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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. Prerequisite: 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 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

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**MUSIC HISTORY AND LITERATURE (MUL)**


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**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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisites: 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. Prerequisites: 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. Prerequisite: 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. Prerequisites: 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. Prerequisite: Department Chair permission.

**MUL 530 Symphonic Literature** 3 cr

A survey of the development of the symphony and related forms from its origins through the twentieth century.

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**MUSICAL ORGANIZATIONS (MUO)**


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**(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 cr 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 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 cr 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

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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 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 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 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.

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## **MUSIC STUDIO (MUS)**

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### **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. Prerequisite: MUT 213 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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 multimedia 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. Prerequisites: 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. Prerequisites: MUS 421, 422 or consent of the instructor.

### **MUS 499 Senior Honors Project in Music**

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. Prerequisite: 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. Prerequisite: MUT 213.

**MUT 362 Instrumental Conducting** 3 cr

Advanced baton technique; psychology of rehearsal; interpretative and conducting techniques for instrumental organizations. Prerequisite: 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. Prerequisite: 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, slight 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. Prerequisite: MUT 112.

**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. Prerequisite: MUT 113.

**MUT 213 Intermediate Music Theory II** 3 cr

A continuation of elementary theory. Chromatic harmony and remote modulation; sight-singing, ear-training, keyboard harmony. Must be taken in sequence. Prerequisite: MUT 212.

**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. Prerequisites: MUT 213, 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. Prerequisites: MUT 312, 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. Prerequisite: MUT 213.

**MUT 412 Orchestration** 2 cr

The techniques of scoring for the orchestra, band, and small ensembles. Prerequisite: MUT 213.

**MUT 413 Band Arranging** 2 cr

The techniques of scoring for the modern concert wind band. Offered in alternate years. Prerequisite: MUT 213.

**MUT 421 Composition I** 3 cr

Original work in music composition. To be taken in sequence. Offered by special arrangement only. Prerequisite: MUT 314.

**MUT 422 Composition II** 3 cr

Original work in musical composition. To be taken in sequence. Offered by special arrangement only. Prerequisite: 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.

**NURSING (NU)**

**NU 300 Foundations of Professional Nursing (W)** 3 cr

Foundational course on nursing concepts and theories related to health promotion and maintenance to facilitate healthy lifestyles and meet basic human needs. Exploration of professional nursing roles and strategies in promoting the health of individuals and families within a variety of acute and community settings. The emphasis is on the use of the nursing process as a systematic approach to health promotion and maintenance. Prerequisites/Corequisites: NU 325, HSC 342, HSC 343. Corequisite: NU 301.

**NU 301 Foundations of Professional Nursing Clinical** 2 cr

Application of concepts and theories related to health promotion and maintenance with individuals and families in a variety of settings to facilitate healthy lifestyles and meet basic human needs. Also provides opportunity for the development of clinical competency in the performance of selected nursing skills and procedures. Clinical practice experiences with individuals and families in a variety of acute and community settings will be provided. Prerequisite/Corequisites: NU 325, HSC 342, HSC 343. Corequisite: NU 300.

**NU 304 Research for Health Professions (W)** 3 cr

Surveys the research process through computer-assisted instruction. The focus is on

the research process, 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. Requires professional component standing.

**NU 325 Health Assessment** 4 cr

Nursing assessment of the whole person and includes physical, psychological, sociocultural, and spiritual assessment of the adult and child. Emphasis on the development of skills in obtaining a health history and performing health assessment across the lifespan. Prerequisite: Admission to professional component or special permission of instructor.

**NU 327 Pathophysiological Basis of Nursing** 3 cr

This course provides students knowledge related to physiology and alterations in physiology of individuals with health problems. The course focuses on theory and research applicable to the cardiovascular, pulmonary, genitourinary, gastrointestinal, immune, neurological, 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. Prerequisite: 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 409 Nursing Issues and Leadership** 3 cr

Continuation of the socialization process of students as professional nurses. Focuses on professionalism, leadership roles and functions, management strategies, continued professional development, and issues and trends in nursing and health care. Emphasis on the professional nurse as a leader in improving patient care and cost effectiveness of health care. Prerequisites/Corequisites: AHN 447, AHN 448 or special permission.

**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 Delegation of Nursing Practice** 3 cr

This course focuses on leadership development of the student within the context of providing professional nursing care to patients and families across the lifespan. Decision-making, delegation, and motivation competencies are emphasized. Prerequisites: AHN 447, AHN 448, NU 304. Prerequisite/Corequisite: NU 409. Corequisites: NU 460, NU 413, CMN 420.

## 244 COURSES

### NU 413 Nursing Informatics 3 cr

Provides 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 IT environment. Prerequisites: AHN 447, AHN 448, NU 304. Prerequisite/Corequisite: NU 409. Corequisites: NU 460, NU 412, CMN 420.

### 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. Prerequisites: AHN 447, AHN 448, NU 304. Prerequisite/Corequisite: NU 409. Corequisites: NU 412, NU 413, CMN 420.

### NU 490 Special Topics 1-6 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

Honor students implement their senior project prospectus under the guidance of a faculty member. 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 506 Theoretical Foundations of Advanced Nursing 3 cr

The purpose of the course is to examine theoretical foundations of advanced nursing practice. The focus is on the evolution of nursing knowledge including theoretical structures from other disciplines. Emphasis is on the analysis and application of nursing models and related theories using critical thinking strategies and clinical reasoning.

### NU 507 Health Care Policy and Economics 3 cr

The purpose of this course is to provide a foundation for participation in health policy and for understanding the economic impact of health planning. Content will focus on organization of health care systems, health care financing and economic implications and the

role of the provider in policy making. Emphasis is on the analysis of health policy from a socio-economic, ideological, political, historical, and technological perspective while integrating clinical management processes and use of available community fiscal resources.

### NU 508 Advanced Nursing Leadership, Roles and Concepts 3 cr

The purpose of this course is to develop critical thinking skills of the advanced nursing student in the analysis of work environments and health systems. Quality improvement, specifically related to outcome-based measures and adherence to guidelines, will be explored by applying scientific evidence to health outcomes. The focus will be on examining leadership within the context of organizational and health systems, focusing on relationship building, collaboration, negotiation, and working on interdisciplinary teams in a multicultural work force. Emphasis is on advanced nursing leadership and the influences of social, cultural, political, legal, ethical, spiritual and economic forces interacting with complex client systems.

### NU 513 Advanced Nursing Research 3 cr

The purpose of this course is to develop student proficiency in using research to improve health care outcomes for patients. The course focuses on strategies to retrieve, evaluate, and use evidence to plan quality health care and to initiate change to health care systems and processes. The emphasis is on problem identification, evaluation of relevant research, and critical application of evidence.

### 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 519 Advanced Nursing Assessment Practicum 1 cr

The purpose of this course is to provide a practicum experience in which the student will have the opportunity to become proficient at obtaining and recording a comprehensive health history and advanced physical assessment of individuals appropriate to their clinical specialty area. Corequisite: NU 518.

### 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. Corequisite: AHN 526 or MCN 526 or MCN 528. Prerequisites: NU 507, NU 508, NU 513, and NU 524 and AHN 525 or MCN 525 or MCN 527.

### 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. Prerequisites: NU 545, NU 578, NU 518, NU 519. Corequisite: AHN 525 or MCN 525 or MCN 527 or special permission of instructor.

### 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 533 Accelerated MSN Advanced Research in Nursing 4 cr

Bridge course for the Accelerated MSN track. Evaluation of methods, designs, issues in nursing research; methods for critiquing research, data analysis methods, ethical and legal implications. Emphasis is on the importance of research and evidence-based practice to nursing. Development of critical consumers of research and participants in the research process.

### NU 534 Accelerated MSN Advanced Nursing Roles and Leadership 4 cr

Bridge course for the Accelerated MSN track. Socialization process of students as professional nurses, leadership roles and functions, management strategies, continued professional development, and issues and

trends in nursing and health care, analysis of selected advanced nursing roles, frameworks that provide the basis for specialization and expansion of roles for advanced nursing practice.

**NU 535 Clinical Nurse Leadership 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. Corequisite: NU 536. Prerequisites: NU 506, NU 518, NU 519. Prerequisites: NU 545, NU 578 can be taken at same time.

**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. Corequisite: NU 535. Prerequisites: NU 506, NU 518, NU 519. Prerequisites: NU 545, NU 578 can be taken at 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. Corequisite: NU 538. Prerequisites: NU 535 and 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. Corequisite: NU 537. Prerequisites: NU 536. Prerequisites that can be taken with class: NU 507, NU 508, NU 513.

**NU 539 Advanced Nursing Informatics 1-3 cr**

Focuses on the components of nursing information systems. Topics include analysis of available software for managing personnel budgets, and data. Basic computer experience required. Prerequisite: Permission of Instructor.

**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 546 Education Role I 2 cr**

Analysis and synthesis of theories and concepts related to instructional design in nursing practice and education. Emphasis is on institutional purposes and goals, classroom and clinical instruction, staff development, educational technology, and nursing education research as related to instructional design. Corequisite: NU 547.

**NU 547 Education Role Practicum I 1 cr**

Supervised practicum in the synthesis of role behaviors in nursing education in the hospital and academic settings. Emphasis is on designing instruction and integration of educational technology. Corequisite: NU 546.

**NU 548 Education Role II 2 cr**

Analysis and synthesis of theories and concepts related to curriculum and evaluation in nursing practice and education. Emphasis is on institutional purposes and goals; integration of educational technology; nursing curricula; evaluation; and the evidence supporting nursing education related to curriculum and evaluation. Prerequisites: NU 546, NU 547. Corequisite: NU 549.

**NU 549 Education Role Practicum II 1 cr**

Supervised practicum in the synthesis of role behaviors in nursing education in the hospital and academic settings. Emphasis is on designing instruction and integration of educational technology. Prerequisites: NU 546, NU 547. Corequisite: NU 548.

**NU 550 Education Role III 2 cr**

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 technological advances/opportunities, the role of the nurse educator, and professional, social, political, financial, legal and other issues related to nursing education. Prerequisites: NU 548 and NU 549. Corequisite: NU 551.

**NU 551 Education Role Practicum III 1 cr**

Supervised practicum in the synthesis of role behaviors in nursing education in the hospital and academic settings. Prerequisites: NU 548, NU 549. Corequisite: NU 550.

**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 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. Corequisite: NU 566.

**NU 562 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.

**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.

**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. Prerequisites: NU 506, 562, 565, HSC 571. Corequisite: 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. Prerequisites/ Corequisites: NU 506, NU 508, NU 513, NU 507. Prerequisites: NU 561, NU 562, NU 566. Corequisite: 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. Prerequisites/ Corequisites: NU 506, NU 508, NU 513, and NU 507. Prerequisites: NU 561, NU 562, NU 566. Corequisite: 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 classifications. Prerequisite: 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.

## 246 COURSES

### **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 I 1 cr**

This is the first of three planning and development courses that assists the student to develop a plan for the doctoral synthesis project. The plan based on the student's phenomenon of interest is expected to incorporate well-built questions, search strategies and outcomes, identification of resources needed, plan for evaluation and dissemination. Prerequisites: NU 607 and NU 608.

### **NU 605 Project Planning and Development II 1 cr**

This is the second of three planning and development courses that assists the student to develop a plan for the doctoral synthesis project. The plan based on the student's phenomenon of interest is expected to incorporate well-built questions, search strategies and outcomes, identification of resources needed, plan for evaluation and dissemination. Prerequisite: NU 604. Prerequisites/Corequisites: NU 610, NU 611, and NU 612.

### **NU 606 Project Planning and Development III 1 cr**

This is the third and final planning and development course that assists the student to develop a plan for the doctoral synthesis project. The plan based on the student's phenomenon of interest is expected to incorporate well-built questions, search strategies and outcomes, identification of resources needed, plan for evaluation and dissemination. Prerequisite: NU 605. Prerequisites/Corequisites: NU 613 and NU 615.

### **NU 607 Critical Analysis of the Scientific Underpinnings of Advanced Nursing Practice 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 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 609 Biostatistics 3 cr**

This course explores biostatistical analysis as a base for evidence-based practice in nursing. It includes descriptive and inferential data analysis: basic demographic and epidemiologic statistics; measures of morbidity: rates and ratios; vital statistics; relative risk, odds ratio estimation; validity of clinical and statistical tests; survival analysis; confidence intervals; hypothesis testing; parametric and nonparametric tests; correlation, t-test, chi-square, ANOVA, MANOVA, linear regression; and multiple regression. While minor calculations (e.g., odds ratios, z-scores, and percent of variance explained) are required, the primary focus is on the correct interpretation and use of quantitative methods in advanced nursing practice. Particular emphasis is placed on probability, power, sample size, and reliability.

### **NU 610 Policy, Economics and Financial Aspects of Health Care Systems 3 cr**

This course addresses the economic and financial aspects of the health care system. The leadership role of the DNP in formulating and analyzing policies related to resource management in health care systems is emphasized. Students analyze the adequacy and impact of current policies and position statements applicable to their advanced practice role and develop a cost-benefit analysis of a particular healthcare problem. Based on the analysis, students will develop an innovative strategy for change in health policy, procedures or a health care delivery system.

### **NU 611 Methods of Translational Research 3 cr**

This course provides the methodological basis for translational research by multidisciplinary leaders in a variety of health care settings. Translational research involves locating, evaluating, refining, 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. Translational research uses applied techniques directed at building and maintaining excellence in practice. In this course students will use applied techniques with ethics and protection of

human subjects emphasized. Critique of the reliability, validity, and relevance of research designs and findings will be emphasized along with logical analysis of experimental and quasi-experimental designs including their stated, implied, and/or neglected independent, dependent, antecedent, suppressing, and constraining variables. Prerequisite: NU 608.

### **NU 612 Clinical Prevention and Population Health 3 cr**

This course focuses on global, national, regional and local health issues across the lifespan with all population groups. Health surveillance measures and determinants of health are being used to characterized geographical locations and population groups. Effective health promotion, disease and accident prevention strategies are explored. Using an evidenced-based practice approach, students develop strategic intervention strategies including effective means of communicating health information with the public. Bioethical issues related to the distribution of resources and health disparities and appropriate health education strategies (cultural adaptations and health literacy) are explored. This course assists students in identifying appropriate resources for funding of intervention programs and or research related to specific health problems with select population groups. Prerequisite: 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. Prerequisites: NU 607, NU 608 and NU 611.

**NU 616 Information Systems/Technology** 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 in Systems Change** 3 cr

In the first of two 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 issue 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. Prerequisites: NU 604, NU 605, NU 606, NU 607, NU 608, NU 609, NU 610, NU 611, NU 612, NU 613, and NU 615. Prerequisite/Corequisite: NU 616.

**NU 618 Residency in Systems Change II** 4 cr

In this second of two residency courses, the DNP student under the guidance of the faculty facilitator continues to implement, evaluate, and disseminate findings from the synthesis project. The synthesis project provides students the opportunity to assimilate and demonstrate all DNP competencies. Prerequisites: NU 616 and NU 617.

**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 Nursing 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. Prerequisites: NU 620 and NU 621. Corequisite: NU 623.

**NU 623 Nursing 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. Prerequisites: NU 620 and NU 621. Corequisite: NU 622.

**NU 690 Special Topics** 1-4 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.

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**OCCUPATIONAL THERAPY (OT)**

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**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. Prerequisites: 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.



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- 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 549 Professional Development Seminar IV** 1 cr  
Designed to facilitate students' transition from didactic and part-time fieldwork components of the curriculum to the required full-time fieldwork experience.
- 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 565 Scientific Inquiry III** 3 cr  
Completion of a scholarly project and preparation of the results for presentation in professional formats.
- 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.

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## PHYSICIAN ASSISTANT STUDIES (PA)

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### PA 510 Clinical Medicine I 8 cr

This is the first in a series of four courses in patient assessment. In this course the student will study: 1) Introduction to Clinical Medicine, 2) Introduction to Comprehensive Physical examination, 3) Introduction to patient interviewing, 4) Introduction to diagnostic equipment, 5) Role and History of PAs, 6) Blood Borne Pathogens, 7) Basic Epidemiology, 8) Basic Patient Counseling, 9) Nutrition Fundamentals, 10) Medical Research Methods and Introduction to the Medical Literature, 11) HIPPA, 12) Sexual Harassment, and 13) Professionalism.

### PA 511 Human Gross Anatomy 4 cr

This is a course in gross anatomy of human body systems utilizing human cadavers and dissections. Emphasis is placed on the relationships between structure and function. Special fee.

### PA 512 Physiology I 4 cr

This is a course in medical physiology with emphasis on the basic principles of both cellular and organ system physiology. The course emphasizes a system approach to normal and abnormal function of human body, including relevant anatomical correlation. This course emphasizes cellular, neuromuscular, cardiovascular and respiratory physiology.

### PA 520 Clinical Medicine II 8 cr

This is the second in a series of four courses in patient assessment. In this course the student will study: 1) History and Physical Exam, 2) Behavioral Medicine, 3) Dermatology, 4) Ophthalmology, 5) Rheumatology, 6) Pulmonology, 7) Otolaryngology, 8) Cardiovascular Medicine, 9) EKG and ACLS and 10) continuation of Medical Research Methods.

### PA 521 Infectious Disease 4 cr

This course is designed to provide a foundation in basic host-parasite relationships with particular emphasis on the application of these principles in health care settings. The ubiquity of microbes, vulnerability of specialized populations, and interactions between various environmental components are emphasized to stimulate awareness and interest in infectious disease. The nutritional component of infectious disease will also be emphasized.

### PA 522 Physiology II 2 cr

This course will build on the foundation laid in Physiology I. This course emphasizes renal, gastrointestinal, endocrine, metabolic, and central nervous system physiology.

### PA 523 Pathophysiology 4 cr

A systematic study of disease processes involving relationships between pathophysiological changes and clinical manifestations.

### PA 530 Clinical Medicine III 8 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 Issues in Health Care 4 cr

This course provides an introduction to a wide variety of issues pertinent to the health care practitioner in the current environment. Topics to be studied include: 1) Patient Education including uninsured Americans and healthcare reform, health literacy and health disparities, 2) Health care management including quality assurance, risk management, billing and coding, reimbursement and medical informatics, 3) Medical-legal concerns, 4) Biomedical Ethics including the concepts of confidentiality and end-of-life concerns, 5) Miscellaneous professional issues such as licensing, certification and credentialing, 6) Homeless Healthcare, 7) Migrant Healthcare, 8) Uninsured Americans, 9) Healthcare Reform, 10) Health Literacy, 11) Health Disparities, 12) Genetics, and 13) Advance Directives.

### PA 532 Pharmacology I 6 cr

This is the first of two courses that covers classification, mechanism of action, toxicity and clinical use of therapeutic agents. Side effects, dose response and management will be emphasized. Prescriptive practice law covering physician assistants will be examined.

### PA 540 Clinical Medicine IV 8 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 Interpretation of Diagnostic Data and Studies 4 cr

The course covers the indications for and interpretation of diagnostic studies relevant to the evaluation of common medical problems. Included in the course are laboratory studies of body fluids and tissues, radiographic studies, electrocardiography interpretation, pulmonary function tests, and ultrasound interpretation and various other laboratory analyses.

### PA 542 Pharmacology II 4 cr

The second of two courses that covers classification, mechanism of action, toxicity and clinical use of therapeutic agents. Side effects, dose response and management will be emphasized.

### PA 550 Internal Medicine Preceptorship 4 cr

The student is assigned to a medical setting which emphasizes the assessment and treatment of conditions common to inpatient and outpatient internal medicine problems, as well as appropriate health maintenance measures.

### PA 555 Psychiatry Preceptorship 4 cr

The student is assigned to a psychiatry setting, including inpatient and outpatient if possible. Emphasis on diagnosis, treatment and maintenance of psychiatric disorders.

### PA 560 Pediatrics Preceptorship 8 cr

The student is assigned to a pediatric setting and the experience includes both outpatient as well as inpatient practice. The student will gain

experience in normal growth and development, pediatric preventive medicine and evaluation of childhood illness. Emphasis is placed on developing communication skills essential for relating to pediatric patients and families.

### PA 570 Primary Care/ Family Practice Preceptorship 8 cr

The student is assigned to an outpatient setting which emphasizes the assessment and treatment of conditions common to primary family medicine.

### PA 580 General Surgery Rotation 4 cr

The student is assigned to a surgical team. The rotation emphasizes preoperative evaluation, assisting in the operating room, and post operative management of patients.

### PA 590 OB/GYN Rotation 4 cr

The experience includes outpatient and inpatient components of OB/GYN Practice. The student will learn the assessment and treatment of common gynecological problems, pregnancy and delivery.

### PA 591 Emergency Medicine Rotation 4 cr

The student is assigned to an Emergency Department. The student gains experience in the initial evaluation of emergency patients by performing problem specific examinations and performing minor surgical procedures. The rotation stresses the evaluation and management of the emergency patient.

### PA 592 Elective Clinical Preceptorship I 4 cr

Students will choose one of the following rotations: Expected employment practice or any other specialty approved by the faculty.

### PA 593 Elective Clinical Preceptorship II 8 cr

Students will choose one of the following rotations: Expected employment practice or any other specialty approved by the faculty.

### PA 594 Research Project Presentation 3 cr

This course is designed to teach students how to build research skills, prepare manuscripts, and advance professional development. During the third semester of pre-clinical work, the students are given a briefing regarding the research project. The project is not due until the last semester of clinical work. The student selects a topic under the direction of a faculty mentor. Once a topic is chosen, an in-depth review of the literature is conducted by the student. The project can be formatted as a case report, comprehensive review, or a research report.

### PA 595 Comprehensive Review and Exam 2 cr

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.

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## PHYSICAL EDUCATION ACTIVITY AND PROFESSIONAL PHYSICAL EDUCATION (PE)

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### 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,

## 250 COURSES

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 endurance 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 cardiorespiratory 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. Prerequisite: 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 75 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 75 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.
- 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 3 cr in Health and Physical Education**  
Elementary statistical procedures, evaluation, and interpretation, and the use of tests and other measurement devices in health and physical education. A prerequisite for student teaching.
- PE 385\* Evaluation and Treatment 3 cr of Athletic Injuries I**  
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 3 cr of Athletic Injuries II**  
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.
- 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. Prerequisite: Admission to teacher candidacy.
- PE 452\* Methods of Teaching 3 cr Physical Education (W)**  
Organizing materials and developing methods of teaching physical education in elementary, middle, and high schools. Field experience required.
- 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. Prerequisite: 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 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 placed with a person holding a valid teaching certificate in the appropriate field. Prerequisite: Permission of the department.
- 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.

## 252 COURSES

### **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. Prerequisite: 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.

**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. Prerequisite: 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. Prerequisites: 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.**

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## **PHYSICS (PH)**

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### **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.** Corequisite: 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. Corequisite: 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.** Corequisite: 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. Corequisite: PH 104.

### **PH 107 Freshman Physics Seminar** 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. Prerequisite: 21 ACT score on Mathematics or MA 112. Fee. **Core Course.** Corequisite: 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. Corequisite: 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. Prerequisites: 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.** Corequisite: 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. Corequisite: 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. Prerequisite: PH 114. Fee. **Core Course.** Corequisite: 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. Corequisite: 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. Prerequisites: 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.** Corequisite: 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. Corequisite: PH 115 (honors).

**PH 194 Directed Studies: 1 cr  
Variable Content Lab**

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. Prerequisites: MA 125, and concurrently taking MA 126 if not already taken. Fee. **Core Course.** Corequisite: 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. Corequisite: PH 201.

**PH 201 Calculus-Based Physics I (C) 4 cr  
(Honors Course)**

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. Prerequisites: 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.** Corequisite: 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. Corequisite: 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. Prerequisites: PH 201 and MA 126. Fee. **Core Course.** Corequisite: 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. Corequisite: PH 202.

**PH 202 Calculus-Based Physics II (C) 4 cr  
(Honors Course)**

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. Prerequisites: PH 201-H and MA 126, also permission of the Department Chair or good standing in the University Honors Program. Fee. **Core Course.** Corequisite: PH 202L (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.

## 254 COURSES

### 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). Prerequisite: 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. Prerequisites: 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 PH 303L concurrently and pass the lab. The PH 303L grade is a component of the PH 303 course grade. Prerequisites: MA 125 and either PH 115 or 202. Corequisite: PH 303L.

### PH 303L Modern Physics Lab

Laboratory course for the Modern Physics course. 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. Corequisite: PH 303.

### PH 346 Classical and Modern Optics 4 cr

Wave motion, reflection, refraction, dispersion, diffraction, interference phenomena, Fourier spectroscopy, lasers and other modern applications of optics. Prerequisites: 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, electro-dynamics, Faraday's law, inductance, Maxwell's correction to Ampere's law and Maxwell's equations. Prerequisites: 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. Prerequisite: 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. Prerequisites: 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 orbital motion, Rutherford scattering, conservation theorems for multi-particle systems and their applications, collisions, coupled-harmonic oscillators, and rigid body rotation about a fixed axis. Prerequisites: 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. Prerequisite: 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. Prerequisite: PH 303 (or taken concurrently). Corequisite: 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. Corequisite: 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 in Physics (C) 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. Prerequisites: MA 238, CIS 210 or CIS 227, and PH 303.

### PH 448 Elementary Quantum Mechanics I 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. Prerequisites: 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. Prerequisite: 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, Helmholtz 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. Prerequisites: 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. Prerequisite: Permission of the Physics department chair. May be taken three times for up to 9 hours.

**PH 499 Senior Thesis** 3 cr  
(Honors Course)

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. Prerequisite: 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.

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**PHARMACOLOGY (PHA)**

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**PHA 540 Medical Pharmacology** 7 cr

This course is designed to provide the student with a basic understanding of the actions of drugs and their clinical uses. Basic principles, including dose-response relationships and receptor theory, are emphasized. Current concepts of drug effects, mechanisms, and sites of action are explored in detail with respect to major classes of drugs. Important considerations are also given to drug interactions and the toxicology of therapeutic agents, chemicals in the environment, and other biologically active substances.

**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 548 Physiological Pharmacology** 6 cr

This course covers both cellular and organ system physiology. It is designed to prepare graduate students for Medical Pharmacology (PHA 540), for research in pharmacology, and includes reading and discussion of articles from the literature.

**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. Prerequisites: 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. Prerequisites: 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. Prerequisite: Approved formal research proposal.

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**PHILOSOPHY (PHL)**

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**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. 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. Fulfills 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. Fulfills the General Education Requirement.

**PHL 231 Social Ethics (W)** 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. Fulfills 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 and Medieval (C)** 3 cr

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 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. Prerequisites: 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. Prerequisites: 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



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the reading and discussing of the primary works of such thinkers as Machiavelli, Hobbes, Locke, and Rousseau. Prerequisites: 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 3 cr 19th Century (W)**

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. Prerequisites: 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 the 3 cr Social and Natural Sciences**

Studies such topics as method and explanation in the sciences; realist and anti-realist views about scientific theories; scientific change; and society, science, and values. Attention will be given to the similarities and differences between the social and natural sciences.

### **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 political/social life.

### **PHL 345 Anglo-American 3 cr Philosophy Since Kant**

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 3 cr Philosophy and Literary Theory**

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 3 cr Philosophy and Literary Theory**

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 prerequisite for 400-level courses.**

### **PHL 421\* Literary Criticism 3 cr to 1900 (W)**

Classical, Neoclassical, Romantic, and Victorian literary theory. Prerequisites: EH 101 and 102. Identical with EH 421. Credit cannot be received for both PHL 421 and EH 421.

### **PHL 422\* Literary Criticism 3 cr Since 1900 (W)**

Modern and contemporary literary theory. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: Junior or senior standing and approval of directing professor and department chair. Prerequisites: 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. Prerequisites: 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.

## PHYSIOLOGY (PHS)

**PHS 550 Medical Physiology 8 cr**

This course includes lectures and laboratories which introduce the student to the basic functions of the heart, circulation, lung, and kidney, as well as the endocrine, nervous, and gastrointestinal systems. Fundamental mechanisms are stressed with the intent of providing the student with the basic knowledge of organ function necessary for the understanding and treatment of disease. The overall integrated response of the body to various stresses is discussed in detail.

**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. Prerequisite: Medical Physiology (PHS 550).

**PHS 654 Transport Across Physiological Barriers 2 cr**

This course is designed to present a detailed analysis of physiological membranes and the physical principles governing the movement of solute and water across these barriers. Prerequisite: Medical Physiology (PHS 550).

**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. Prerequisite: 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 US 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. Prerequisite: PSC 130.

**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.

**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.

**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.

**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. Prerequisite: EH 102.

**PSC 330 Judicial Process 3 cr**

The study of the American judicial process at the federal and state court levels. (Identical to CJ 330).

**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). Prerequisite: EH 102.

**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.

**PSC 347 Public Opinion and Political Participation 3 cr**

The formation, composition, distribution, and measurement of public opinions and its effect upon public policy.

**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.

**PSC 363 Politics of Latin America 3 cr**

Comparative study of the political institutions and policies of the Latin American countries.

**PSC 364 Politics of Africa (W) 3 cr**

Comparative study of the political institutions and policies of the countries of Sub-Sahara Africa. Prerequisite: EH 102.

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### **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. Prerequisite: EH 102.

### **PSC 368 Politics of South Asia (W) 3 cr**

Comparative study of the political institutions and policies of the South Asian countries. Prerequisite: EH 102.

### **PSC 372 American Foreign Policy 3 cr**

The traditional features, the formulation, the instruments, and the general trends of American diplomacy.

### **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 6 credit hours may be applied to the Political Science major.

### **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). Prerequisite: EH 102.

### **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. Prerequisite: EH 102.

### **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. Prerequisite: EH 102.

### **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.

### **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.

### **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. Prerequisite: EH 102.

### **PSC 450 Advanced Studies in Comparative Politics 3 cr**

Advanced study in the area of comparative politics. May be repeated when subject matter varies. Prerequisite: PSC 250.

### **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. Prerequisite: junior or senior standing.

### **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. Prerequisite: PSC 270.

### **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).

### **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).

### **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.

### **PSC 484 Political Corruption 3 cr**

Study of the causes and consequences of political corruption from a comparative and national perspective. Special attention is given to corruption in the area of criminal justice. (Identical to CJ 484.)

### **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 6 credit hours may be applied to the Political Science major.

### **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. Prerequisites: 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 once. The maximum of 6

credit hours may be applied to the Political Science major. Student must have senior standing and prior approval to sign up for the course.

### **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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisite: USA Honors Program.

(NOTE: PSC 130, Introduction to U.S. Government, or its equivalent and permission of graduate director or department chair, are prerequisites 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 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 584 Political Corruption** 3 cr

Study of the causes, consequences of political corruption is given from a comparative and national perspective. Special attention is given to corruption in the area of criminal justice.

**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 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. Prerequisite: 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. Prerequisite: permission of the professor.

**PSC 599 Thesis** 3-6 cr

**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.**

**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 topics. Prerequisite: Special permission.

**PSY 220 Research Design and Analysis I** 3 cr

Research methods in psychology with an emphasis on the experimental method. Prerequisite: PSY 120 or PSY 121.

**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. Prerequisite: PSY 120 or PSY 121.

**PSY 310 Biological Psychology I** 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. Prerequisite: PSY 120 or PSY 121.

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- 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). Prerequisites: PSY 120 or PSY 121, and PSY 220 and ST 210, and EH 102 or EH 105. Fee.
- PSY 340 Abnormal Psychology** 3 cr  
Nature and development of deviant behavior. Prerequisite: PSY 120 or PSY 121.
- PSY 350 Child and Adolescent Development** 3 cr  
The developmental and psychosocial aspects of childhood and adolescence. Prerequisites: PSY 120 or PSY 121.
- PSY 356 Adult Development and Aging** 3 cr  
The developmental and psychosocial aspects of adulthood and late life. Prerequisite: 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. Prerequisite: 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. Prerequisite: PSY 120 or PSY 121 and instructor approval.
- PSY 410 Biological Psychology II** 3 cr  
A follow-up course of PSY 310, this course will survey research and theory in selected topics of neuroscience as it applies to the understanding of behavior. Focus will be on in-depth coverage of neuron function, cortical function, and higher processes such as cognition, attention, and consciousness. Prerequisites: PSY 120 or PSY 121, and PSY 310 or permission of instructor.
- PSY 412 History and Systems of Psychology (W)** 3 cr  
The historical foundations of modern psychology and the development of major theories in psychology. Prerequisites: 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. Prerequisites: PSY 120 or PSY 121 and PSY 220.
- PSY 417 Applied Behavior Analysis I: Introduction** 3 cr  
An introduction to the Principles of Behavior intended as a prerequisite 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. Prerequisites: PSY 120 or PSY 121 and PSY 220 or Education Teacher candidacy.
- 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. Prerequisites: 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. Prerequisites: PSY 417.
- PSY 420 Psychology of Learning** 3 cr  
Theories, experimental findings, and methods of investigation in learning. Prerequisites: 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: PSY 120 or PSY 121.
- PSY 460 Industrial Psychology** 3 cr  
Application of psychological principles and techniques to business, industry, and government. Prerequisite: PSY 120 or PSY 121.
- PSY 465 Introduction to Measurements and Tests** 3 cr  
Theories and principles of psychological testing. Prerequisites: PSY 120 or PSY 121 and ST 210.
- PSY 470 Mental Retardation** 3 cr  
The study of theories and research in mental retardation and related areas. Prerequisite: 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. Prerequisites: PSY 120 or PSY 121 and PSY 220.
- PSY 480 Health Psychology (W)** 3 cr  
Current theories, research and applications in health psychology. Prerequisites: 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. Prerequisite: PSY 120 or PSY 121.
- PSY 490 Special Topics** 1-3 cr  
Selected topics in psychology. May be repeated for credit when course varies. Prerequisite: 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. Prerequisites: PSY 120 or PSY 121, PSY 220, and permission of department chair.
- PSY 494 Directed Studies** 1-3 cr  
Directed study and research. Prerequisite: 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. Prerequisites: 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. Prerequisites and corequisites for specific courses are listed by each course. A grade of "B" is required in a prerequisite 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. Corequisite: 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. Corequisite: 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. Prerequisite: PSY 502. Corequisite: PSY 500. Fee.

- PSY 506 Professional Ethics and Standards** 3 cr  
An introduction to professional and ethical issues as they pertain to psychology. Focus is on the development of an ethical and professional awareness in the practice of psychology, including teaching and research.
- PSY 510 Advanced Biological Psychology** 3 cr  
A survey of recent research and theory in neuroscience as it applies to the understanding of both normal and pathological behavior. (Dual listed.)
- PSY 514 Learning** 3 cr  
A survey of research and theory in learning. (Dual listed.)
- PSY 516 Cognition** 3 cr  
A survey of research and theory in cognitive psychology. (Dual listed.)
- PSY 520 Personality Research and Theory** 3 cr  
A critical analysis and evaluation of major theories and current research trends in personality. (Dual listed.)
- PSY 522 Social Psychology** 3 cr  
An analysis of the current major theories, research topics, and methodology in social psychology. (Dual listed.)
- PSY 524 Developmental Psychology** 3 cr  
A review of theory and research in life-span developmental psychology. Special consideration will be given to cognitive development and social-emotional development.
- PSY 528 Perception** 3 cr  
A critical analysis of the major theories and research trends in sensation and perception. Dual listed: graduate credit will require an additional project specified by the instructor. Credit for both PSY 428 and PSY 528 will not be allowed. Fee.
- PSY 530 Introduction to Applied Psychology** 3 cr  
Theories, principles and techniques of interviewing, behavioral observation and classification of psychological disorders.
- PSY 532 Research and Theory in Psychopathology** 3 cr  
Current research and theoretical aspects of psychopathology in children and adults.
- PSY 540 Theories of Psychological Assessment** 3 cr  
Theories and method of test construction and principles of measurement and evaluation in the behavioral sciences.
- PSY 542 Intelligence Testing** 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. Prerequisites: PSY 530 and PSY 540.
- PSY 544 Personality 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. Prerequisites: PSY 540 and PSY 542.
- PSY 550 Theories of Counseling and Psychotherapy** 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: PSY 532 and PSY 550.
- PSY 558 External Practicum** 3-5 cr  
Supervised placement in an applied setting. Prerequisites: PSY 552 and/or PSY 554.
- PSY 570 Mental Retardation** 3 cr  
A study of theories and research in mental retardation and related areas. (Dual listed.)
- PSY 572 Child Psychopathology** 3 cr  
The description and etiology of deviant behavior patterns in children and adolescents. Prerequisite: PSY 532.
- PSY 575 Comparative and Evolutionary Psychology** 3 cr  
A critical analysis of the main theories and research trends in comparative and evolutionary psychology. (Dual listed.)
- PSY 590 Special Topics in Psychology** 3 cr  
Selected topics in psychology. May be repeated for credit when course content varies.
- 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. Prerequisite: Approval of research prospectus including IRB or Animal Use and Care Committee approval if applicable.
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- PHYSICAL THERAPY (PT)**
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- PT 201 Introduction to Physical Therapy** 1 cr  
An introduction to the physical therapy profession and the scope of physical therapy practice. Information on physical therapy admissions, the Doctor of Physical Therapy course curriculum, clinical practice settings, and the physical therapy department will be included.
- 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. Prerequisites: 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 with emphasis on the skeletal and arthroal, muscular, nervous and circulatory systems for upper and lower extremities and an introduction to diagnostic imaging of these regions. Includes laboratory study. Special fee.
- PT 601 Human Anatomy II** 4 cr  
A continuation of PT 600 including emphasis on the skeletal, muscular, nervous and circulatory systems of the head, neck, trunk and pelvis. Includes laboratory study and introduction to diagnostic imaging of these areas. Laboratory study will include the complete dissection of the human body. Prerequisite: PT 600. Special Fee.
- 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.
- 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. Prerequisite: PT 600. 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. Prerequisite: PT 600.

## 262 COURSES

### **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. Prerequisites: PT 673 and PT 681.

### **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. Prerequisite: PT 607.

### **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. Prerequisite: 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. Prerequisite: 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. Prerequisite: PT 611. Special fee.

### **PT 613 Critical Analysis of Research Literature 2 cr**

An in-depth analysis of research from recently published studies undertaken in topics related to physical therapy. Prerequisites: PT 610 and PT 674.

### **PT 614 Measurement in PT 1 cr**

A course exploring theoretical aspects of measurement and the role of measurement in physical therapy. Prerequisite: 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. Corequisite: PT 600.

### **PT 621 Introductory PT Skills 3 cr**

A course pertaining to basic skills of physical therapy practice including introduction to examination techniques, positioning and draping, transfer training and ambulation with assistive devices. Includes laboratory study. Special fee.

### **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. Prerequisites: PT 620, 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. Prerequisite: 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. Prerequisite: PT 607.

### **PT 628 Mobility, Orthotics and Prosthetics 3 cr**

The study of human functional mobility, including both normal and pathological aspects of locomotion. The course will also address related topics including prosthetics and orthotics. Prerequisite: PT 620.

### **PT 631 PT in Musculoskeletal Disorders I 4 cr**

An introduction to musculoskeletal disorders, including the 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 with a strong emphasis on applied kinesiology. Includes laboratory study. Prerequisites: PT 600 and PT 620.

### **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. Prerequisite: 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. Prerequisite: PT 632.

### **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, the ribs, and temporomandibular joint (TMJ). Includes laboratory study. Prerequisite: 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. Prerequisite: PT 634.

### **PT 640 Neuromuscular PT Examination 3 cr**

A study of the principles and concepts of normal human movement and physical therapy examination in patients with diseases of the neuromuscular systems. Includes laboratory study. Prerequisites: PT 602 and PT 603.

### **PT 641 Neuromuscular PT Evaluation 3 cr**

This course provides opportunities for clinical decision-making and establishing a plan of care based on examination data including emphasis on prognosis for a wide variety of diseases of the neuromuscular systems. Review of medical management, pharmacologic treatment, radiographic imaging and other diagnostic testing related to neuromuscular disorders. Includes laboratory study. Prerequisite: 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. Prerequisite: 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. Prerequisites: PT 600, PT 601 and 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. Prerequisites: PT 600, PT 601, PT 604, PT 607 and PT 622.

### **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. Disorders of each system including multi-system co-morbidities will be included.

### **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. Prerequisite: PT 671.

**PT 673 Clinical Case Studies III 1 cr**

A continuation of PT 672 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. Prerequisite: 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. Prerequisites: PT 627, PT 635 and PT 642.

**PT 675 Comprehensive Capstone 1 cr**

Occurring in the final weeks of the curriculum, 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. Prerequisites: 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. Prerequisite: PT 680.

**PT 682 PT Internship I 7 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. Prerequisites: PT 600, PT 601, PT 631 and PT 632.

**PT 683 PT Internship II 9 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. Prerequisites: PT 635, PT 642, PT 650 and PT 660.

**PT 684 PT Internship III 10 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. Prerequisite: 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. Prerequisites: PT 680 and PT 681.

**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.

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## RADIOLOGIC SCIENCES (RAD)

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**Enrollment in 100, 200 and 300 level courses requires admission to the professional component of the certificate program. Enrollment in 400 level courses requires admission to the Radiologic Sciences Degree Program.**

### CERTIFICATE PROGRAM

**RAD 101 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 104 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 107 Clinical Education I 1 cr**

Hospital-based laboratory allowing the student additional clinical experience in RAD 101 and RAD 104.

**RAD 108 Clinical Education II 1 cr**

Hospital-based laboratory allowing the student to apply those positioning techniques within a clinical setting as presented in RAD 131.

**RAD 109 Clinical Education III 4 cr**

Hospital-based laboratory experience allowing the student increased responsibility in those areas covered in RAD 131 and RAD 215, as well as bedside radiography.

**RAD 131 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 201 Radiography of the Osseous System II 6 cr**

A continuation of RAD 131 to include the axial skeleton, sternum, sternoclavicular joints

and introductory topics relating to special radiographic procedures. Special fee.

**RAD 204 Clinical Education IV 4 cr**

Hospital-based laboratory allowing the student to obtain clinical experience in those areas presented in RAD 201 and RAD 215.

**RAD 215 Radiographic Contrast Media 4 cr**

A detailed study of contrast media, preparation and administration, radiographic positions, technique, and anatomy and physiology of the organs studied.

**RAD 218 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 265 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 305 Clinical Education V 4 cr**

Hospital-based laboratory allowing the student to gain additional clinical experience in RAD 201 and RAD 215.

**RAD 306 Clinical Education VI 5 cr**

Hospital-based laboratory allowing the student to gain increased clinical experience in RAD 324 as well as in general radiographic procedures.

**RAD 311 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 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 2 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 337 Image Analysis 5 cr**

Student radiographs taken during the clinical periods will be viewed and critiqued within the classroom.

**RAD 394 Directed Independent Study in Radiography - (W) 2 cr**

A comprehensive Registry Review to include written assignments and a presentation.

### DEGREE PROGRAM

**RAD 401 Vascular Radiography I 5 cr**

Advanced practice in, and in-depth study of, the principles of vascular radiography.



## 264 COURSES

- RAD 402 Vascular Radiography II - (W)** 5 cr  
Continuation of RAD 401 with increased focus on digital radiography, peripheral and interventional radiography.
- RAD 405 Computerized Tomography I** 5 cr  
Advanced practice in, and in-depth study of, computerized tomography.
- RAD 406 Computerized Tomography II - (W)** 5 cr  
Continuation of RAD 405 with increased emphasis on 3-dimensional imaging reconstruction, biopsies and advanced CT techniques.
- RAD 409 Magnetic Resonance Imaging I** 5 cr  
An in-depth study of the principles and clinical applications of MRI.
- RAD 410 Magnetic Resonance Imaging II - (W)** 5 cr  
Continuation of RAD 409 with additional emphasis on instrumentation, abdominal and extremity joint procedures, and MRI angiography.
- RAD 413 Mammography I** 5 cr  
Advanced practice and in-depth study of breast imaging techniques.
- RAD 414 Mammography II - (W)** 5 cr  
Continuation of RAD 413 to include needle biopsy and needle localization procedures, and emphasis on quality assurance and image processing.
- RAD 417 Ultrasound Anatomy and Scanning Techniques: Abdomen** 3 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 419 Ultrasound Anatomy and Scanning Techniques: Superficial Structures and Pediatrics** 3 cr  
This course is a continuation of RAD 418 and is designed to provide the student with anatomy, pathology and scanning techniques of superficial structures and pediatrics. 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 Image Quality Control** 3 cr  
A course designed to provide advanced practice and study of the clinical applications of image quality control. Special fee.
- RAD 432 Radiology Management Practicum** 3 cr  
A course designed to provide on-site rotations with radiology administrative directors.
- RAD 433 Radiology Education Practicum** 3 cr  
A course designed to provide students with experience in writing lesson plans, syllabi development, and laboratory and classroom instructional experience.
- RAD 440 Radiology Department Management** 3 cr  
A course designed to provide instruction in budget preparation, personnel considerations, equipment purchasing and related maintenance, departmental design, and other duties and responsibilities of radiology administrators.
- RAD 441 Clinical Education I** 3 cr  
Clinical experience in patient positioning, construction of immobilization and treatment devices, patient care management, simulation, documentation, delivery of radiation treatments, and radiation protection.
- RAD 442 Clinical Education II** 4 cr  
Clinical experience in patient positioning, construction of immobilization and treatment devices, patient care management, simulation, documentation, delivery of radiation treatments, dosimetry and treatment planning, and radiation protection.
- RAD 443 Clinical Education III** 5 cr  
Clinical experience in patient positioning, construction of immobilization and treatment devices, patient care management, simulation, documentation, delivery of radiation treatments, quality control activities, machine warm-up, dosimetry and treatment planning, and radiation protection.
- RAD 444 Clinical Education IV** 6 cr  
Clinical experience in patient positioning, construction of immobilization and treatment devices, patient care management, simulation, documentation, delivery of radiation treatments, quality control activities, machine warm-up, dosimetry and treatment planning, and radiation protection.
- 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, legal, and quality assurance 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** 2 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. Site-specific topics will include lung, brain, breast, pelvis, head and neck. Palliative treatment techniques will also be examined. Time will be dedicated to demonstration of techniques.
- RAD 453 Principles and Practice of Radiation Oncology II** 3 cr  
A continuation of course one. Site-specific topics will include those not covered during first course, pediatric cancers, and special procedures in Radiation Oncology. Time will be dedicated to demonstration of techniques.
- RAD 455 Clinical Dosimetry I** 3 cr  
Concepts of clinical dosimetry and treatment planning include dose calculations and computer planning techniques. Tumor localization, dose calculations, beam and isodose characteristics, and single- and multiple-beam treatment planning will be discussed.
- RAD 456 Clinical Dosimetry II** 3 cr  
Advance concepts of clinical dosimetry and treatment planning including dose calculations and computer planning techniques. Students will further develop tumor localization, dose calculation, complex computer treatment planning, and clinical dosimetry skills.
- RAD 458 Cancer Management in Radiation Oncology (W)** 4 cr  
An in-depth study of the principles of clinical radiation oncology to include etiology, diagnosis, pathology, staging, spread patterns, treatment options, adjuvant therapies, side effects, and outcomes by site or disease category. Students are required to report on current literature throughout the course.

**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. Prerequisite: Permission of the department chair and completion of an approved project prospectus.

**COLLEGE READING (RDG)****RDG 151 College Reading 1 cr**

This course gives students the opportunity to develop and use reading strategies necessary for college success. This is a one credit hour course for those not needing a more intensive reading course.

**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 3 cr and Study Skills**

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. Prerequisite: EEC 290. Corequisites: EEC 332, EEC 346, and RED 333. This course has a field experience.

**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. Prerequisites: RED 330, and RED 333; and EEC 290. Corequisites: 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. Prerequisite: EEC 290. Corequisites: RED 330; EEC 332 and EEC 346. This course has a field experience.

**RED 334 Literature for Young Children 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\* Reading Instruction in Early Childhood Education 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. Prerequisite: RED 330.

**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. Prerequisites: SED 340 or SED 341. Corequisites: 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 methods, materials, assessment, and issues in reading education.

**RED 533 Diagnosis and Correction of Reading Disabilities 3 cr**

Includes an intensive study of the diagnosis of reading disabilities: a survey of formal and informal assessments; case study analysis; and development of plans of instruction. Prerequisite: 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. Prerequisite: RED 533.

**RED 541 Literacy in the Content Areas 3 cr**

Methods and techniques of teaching reading and study skills in the content areas. Emphasis is placed on assisting teachers in all subject matter areas and in setting up developmental reading programs for all students.

**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 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. Prerequisites: 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 accepted toward a degree program. Prerequisite: 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.

**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

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communication, and ways of applying these findings in classroom and clinical practice.

### **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.

### **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.

### **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 struggling 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 an 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. Prerequisite: Permission of the department chair.

### **RED 699 Research Project** 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. Prerequisite: Permission of the department chair.

**\*Only for students admitted to teacher candidacy.**

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## **RELIGION (REL)**

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### **REL 290 Special Topics** 3 cr

Different themes and issues of significance in religion will be studied 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. Prerequisites: 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 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 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 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 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. Prerequisites: 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. Prerequisites: 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.

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## **SECONDARY EDUCATION (SED)**

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### **SED 340\* Fundamentals of Teaching (W)** 3 cr

Theories and practices of planning for instruction. Conducted as a system for individually guided mastery. Prerequisites: 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. Prerequisites: 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. Prerequisite: SED 340. Corequisites: 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. Prerequisites: Junior standing and admission to candidacy.

### **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. Prerequisites: Admission to candidacy; SED 340 or SED 555 and SED 559. Corequisites: 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. Prerequisites: Admission to candidacy, completion of two-thirds of teaching field, and SED 340 or SED 555 and SED 559. Corequisites: 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. Prerequisites: Admission to candidacy, completion of two-thirds of teaching field, and SED 340 or SED 555. Corequisite: 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. Prerequisites: Admission to candidacy, completion of two-thirds of teaching field and SED 340 or SED 555 and SED 559. Corequisites: 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. Prerequisites: Admission to candidacy, completion of SED 340 or SED 555 and SED 559. Corequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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 placed with a person holding a valid teaching certificate in the appropriate field. Prerequisites: 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. Prerequisite: Permission of department. No more than two directed studies courses can be accepted for a Bachelor's Degree and Class B Certificate. Prerequisite: 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. Prerequisites: 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 Guiding Learning in Secondary Schools 3 cr**

Study of methods and techniques of teaching in the secondary school. Assists the students in organizing materials and developing strategies for teaching in his/her discipline area in secondary schools. Includes a field component in middle and secondary classrooms. Prerequisites: Candidacy, two (2) courses from EDF 501, EPY 455, EPY 502, SPE 400; and completion of SED 555 and SED 559.

**SED 555 Curriculum and Teaching in the Secondary School 3 cr**

Theories and practices of planning for instruction. Conducted as a system for individually guided mastery. Prerequisites: Two (2) courses from EDF 501, EPY 502, SPE 500.

**SED 557 Teaching Basic Writing Skills 3 cr**

Background in theories of the writing process and techniques to help students develop writing skills. The main emphasis will be on teaching the process of writing: evaluation of writing and the issue of non-standard English will also be considered.

**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. Prerequisite: Permission of department chair; taken near completion of course work.

**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 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. Not more than six semester hours may be applied toward a degree program.

**SED 593 Intern in Sec Educ Forgn Lang** 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 program. This is an end of program experience with advisor approval.

**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. Not more than three semester hours of any department 594 courses can be accepted toward a degree program. Prerequisite: Permission of the department chair.

**SED 595 Intern in Sec Educ Lang Arts** 3, 6, 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. This is an end of program experience with advisor approval.

**SED 596 Intern in Sec Educ Soc 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 program. This is an end of program experience with advisor approval.

**SED 597 Intern in Sec Educ 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 program. This is an end of program experience with advisor approval.

**SED 598 Intern in Sec Educ 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 program. This is an end of program experience with advisor approval.

**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. Prerequisite: Permission of the department chair.

**\*Only for students admitted to teacher candidacy.**

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**SPEECH AND HEARING SCIENCES (SHS)**

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**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 291 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 314 Fundamentals of Speech and Hearing Science** 3 cr

This course will address the anatomy and physiology of the speech and hearing mechanisms, the physical properties of sound, quantification of sound, sound generation and sound transmission. Prerequisite: SHS 341. **Taught Spring 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. Prerequisite: 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 291. **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. Prerequisites: SHS 314, 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. Prerequisite: SHS 331. **Taught Fall Semester.**

**SHS 441 Introduction to Articulation and Phonological Disorders** 3 cr

Study of the dynamics of disordered speech production. Techniques for the analysis and treatment of articulation and phonological disorders. Prerequisites: SHS 331 and SHS 341. **Taught Spring Semester.**

**SHS 452 Introduction to Voice and Fluency Disorders** 3 cr

A beginning course in the study of normal voice production, a survey of typical voice disorders, and issues relating to stuttering and its related disorders. Prerequisites: SHS 314 and SHS 331. **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. Prerequisite: SHS 314. **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. Prerequisite: 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. Prerequisites: SHS 331 and SHS 341. **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. Prerequisite: Permission of department chair.

**SHS 494 Directed Independent Study** 1-3 cr

Independent study under the direction of a faculty member. Prerequisite: Permission of department chair.

**SHS 499 Senior Honors Project 3-6 cr (H, W)**

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. Prerequisites: Permission of the department chair and completion of an approved project prospectus.

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**SPEECH-LANGUAGE PATHOLOGY (SLP)**


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**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 3 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 Advanced Fluency Disorders 3 cr**

Study of theories, research, and contemporary treatment procedures in the area of dysfluency.

**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 Acquired Disorders of Language and Cognition 3 cr**

Review of neuropsychology of communication; nature of acquired pathologies affecting central processes of language and cognition; methods of assessment and rehabilitation of acquired cognitive and linguistic disorders in children and adults.

**SLP 567 Medical Speech Language Pathology 2 cr**

Medical aspects of speech-language pathology involving activities normally undertaken with patients in medical settings.

**SLP 568 Dysphagia 2 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. Prerequisite: 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. Prerequisite: Permission of graduate advisor.

**SLP 594 Directed Study 1-3 cr**

Independent study under the direction of a graduate faculty member. May be repeated. Prerequisite: 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. Prerequisite: Permission of graduate advisor. Special fee.

**SLP 598 Clinical Externship 8 cr**

Supervised clinical experience in a professional service facility. Prerequisite: 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. Prerequisite: Permission of graduate advisor.

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**SPECIAL EDUCATION (SPE)**


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**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 in-field 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 teams 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. Corequisite: 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.

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- 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. Corequisites: 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. Prerequisites: 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 through 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 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 employed for awarding appropriate academic credit for selected, approved off-campus experiences conducted by the university, such as workshops, institutes, and conferences. Credit is dependent on length and composition of activity. May be repeated for credit. Total credit cannot exceed six 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 Seminar** 3 cr

A seminar which enables students to discuss controversial issues related to the role and function of the collaborative teacher. Students lead and respond to discussions on topics which include teaming, inclusion, and collaboration.

**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, hypothesis testing, design of experiments and analysis of variance (ANOVA), linear regression and correlation. Prerequisite: High School level algebra is recommended. Computer Lab fee.

**NOTE: ST 210 is intended for students in all disciplines except Engineering and Computer Science.**

**NOTE: May be offered for Honors Credit.**



**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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: ST 210 or ST 315 or ST 320. Computer Lab fee.

**ST 350 Applied Time Series Analysis 3 cr**

Fundamentals concepts; classical regression 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, applications. Prerequisite: 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, non-parametric regression and other measures of association, computer intensive statistical methods. Prerequisite: 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, cusum 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. Prerequisite: 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, computing techniques. Prerequisite: 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, weighted least squares. Prerequisite: 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, MANOVA. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: 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. 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. Prerequisite: 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. Prerequisite: ST 210 or ST 315 or permission of instructor).

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**SOCIAL WORK (SW)**


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**SW 200 Introduction to Social Work 3 cr**

Introduction to the profession of social work. Topics include historical development, nature of social work, professional associations, 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. Prerequisites: SY 109 and BLY 102.

**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.

**SY 214 Field Experience 2 cr**

Service learning experience in social work. Forty hours agency-based experience is required. Students must attend two hour bi-weekly seminars. Prerequisites: SW 200 and SY 112.

**SW 301 Social Welfare Policy 3 cr**

Social policy in relation to Social Work Practice. Course addresses social policy analysis, social advocacy, diversity and social and economic justice. Prerequisite: SW 302.

**SW 302 Human Behavior/Social Environment II 3 cr**

The Person-in-Environment model of human behavior. Course examines task group organization, and community systems in the social context. Prerequisites: SY 109 and BLY 102.

**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. Prerequisite: SW 302.

**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.

**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. Prerequisite: 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 and social work values and ethics. Prerequisites: SW 201 and SW 302 and SW 301.

**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 and social work values and ethics. Prerequisites: SW 201 and SW 302 and SW 301.

**SW 412 Field Instruction 12 cr**

Field Instruction in social work. Four hundred thirty-six hours of supervised experience in social work setting. Prerequisites: SW 401 and SW 402 and SY 382. SW 414 must be taken concurrently.

**SW 414 Senior Seminar 3 cr**

This is the capstone senior seminar course. Class discussion and assignments are designed to facilitate integration between field instruction experience and curriculum content. Prerequisites: SW 401 and SW 402 and SY 382. SW 412 must be taken concurrently.

**SW 490 Special Topics: 3 cr**

Advanced topics in social work. May be repeated twice for elective content when topic varies.

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**SOCIOLOGY (SY)**


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**NOTE: SY 109 is a prerequisite for all other sociology courses described below. Prerequisites 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. **Core Course.**

**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.

**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 techniques of the social-work profession.

**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.

**SY 241 Criminology 3 cr**

The nature and causation of criminal behavior. Evaluation of theories and research.

**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.

**SY 290 Special Topics 3 cr**

Selected topics in sociology. May be taken for a maximum of nine hours credit when subject matter varies.

**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.

**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. Prerequisites: SY 109, 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.

**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.

**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.

**SY 360 Sociology of Work and Occupations 3 cr**

Examines work, occupations and careers in

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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, nonstandard and contingent work, work and the family, work and economic inequality, job satisfaction and organizational commitment.

**SY 372 Social Gerontology (W) 3 cr**  
Sociological aspects of aging in contemporary American society. Within its parameters are the related problems of economics, health, and social contact.

**SY 376 Modern Sociological Theory 3 cr**  
The major schools of sociological theory after 1920, as well as recent challenges to these schools.

**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.

**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.

**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. Prerequisite: Permission of department chair.

**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.

**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.

**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. Prerequisites are SY 102, 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.

**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. Prerequisites: 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. Will 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.

**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.

**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.

**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.

**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.

**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.

**SY 435 African-American Health and Aging 3 cr**  
This course is designed to give students an overview of important health and aging issues among African-Americans. This course will include scientific data related to health and disease among African-Americans and discussion of contemporary views on an array of health conditions affecting this population. The latter half of this course will focus on research dealing with health, economic, and social status of the African-American elderly.

**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.

**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.

**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.

**SY 455 Sociological Social Psychology 3 cr**  
This course uses the classic texts of sociological social psychology (Simmel, Mead, Berger and Luckman, Goffman) long 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.

**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.

**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.

**SY 460 Social Organization (W) 3 cr**  
This course provides the student with a comprehensive behavioral science approach to understanding modern social organizational trends.

**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.

**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 medical and social services, with government bureaucracies, the legal system, corporations and businesses and religious organizations.

- 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.
- SY 490 Special Topics** 1-3 cr  
A sociological examination of advanced topics. This course may be taken for a maximum of nine hours credit when the subject matter varies. Prerequisite: Upper division status.
- 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. Class restricted to upper division 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. Prerequisites: Upper division status and chair's permission.
- 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. Prerequisites: 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 the student to graduate study in sociology by providing information on degrees, career opportunities, and professional activities in the discipline.
- 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.
- SY 512 Applied Sociology** 3 cr  
A survey of the specialties and techniques of professional sociologists including the kinds of social problems studied and how these problems are addressed. Prerequisites: 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 societies.
- 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.
- 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 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. Prerequisites: Pass on comprehensive exam and approved research proposal required.
- SY 596 Internship: Sociology** 3-9 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.
- SY 599 Thesis** 1-6 cr  
May be taken for a total of six hours' credit. Prerequisite: Pass on comprehensive examination required.

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## FACULTY

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**(The date in parentheses is the year of initial appointment. Graduate specifies Graduate Faculty.)**

- ABERCROMBIE, DIANE**, Assistant Professor of Physician Assistant Studies. B.S., M.A., University of Alabama-Birmingham; MMSc., Emory University (1997) (Graduate)
- ADAMS, ELIZABETH M.**, Assistant Professor of Speech Pathology and Audiology. B.S., Springhill College; Ph.D., University of South Alabama (2006) (Graduate)
- AGAH, AZIN**, Assistant Professor of Biomedical Sciences. B.S., Purdue University; Ph.D., Kansas State University (2006)
- ALAM, MOHAMMAD S.**, Professor of Electrical and Computer Engineering-Chair. B.S., Bangladesh University of Engineering and Technology; M.S., Wayne State University; Ph.D. University of Dayton (2001) (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**, Assistant Professor of Cell Biology and Neuroscience. B.S., Kiev State University; Ph.D., Institute of Molecular Biology (1997) (Graduate)
- ALFORD, BRUCE**, Assistant Professor of English. B.A., Southeastern Louisiana University; M.F.A., University of Alabama (2002) (Graduate)
- AL-MEDHI, ABU BAKR.**, Assistant Professor of Pharmacology. M.D., Ph.D., Crimea Medical Institute, Simferopol, Crimea, Ukraine (2002) (Graduate)
- ALIABADI, ZARRINTAJ**, Professor of Physician Assistant Studies-Chair. Pharm.D., University of Tehran; M.H.S., University of South Alabama; Ph.D., West Virginia University/Marshall University (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)
- ALSHARIF, SALIM A.**, Assistant Professor of Electrical and Computer Engineering. B.S., M.S., Ph.D., Florida Institute of Technology (2003) (Graduate)
- AMARE, NICOLE E.**, Assistant Professor of English. B.A., University of Wisconsin, M.A., Kansas State University; M.A., Ph.D., University of Alabama (2001) (Graduate)
- AMBERGER, MELANIE D.**, Instructor in Maternal Child Health Nursing. B.S., Birmingham-Southern College; B.S.N., M.S.N., University of South Alabama (2007)
- ANASTASIO, RANDALL J.**, Instructor in Health, Physical Education, and Leisure Studies. B.S., M.S., University of Southern Mississippi (2007)
- ARONSON, NATHAN N., JR.**, Professor Emeritus of Biochemistry and Molecular Biology-Chair. B.A., Rice University; Ph.D., Duke University (1992) (Graduate)
- ARONSON, RICHARD B.**, Professor of Marine Sciences. Ph.D., Harvard University (1994) (Graduate)
- AUCOIN, JAMES L.**, Professor of Communication. B.A., University of Missouri-Kansas City; M.A., University of Colorado; Ph.D., University of Missouri (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.**, Associate 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.**, Clinical Assistant Professor of Adult Health Nursing. B.S.N., M.S.N., Ohio State University (1990) (Graduate)
- BACON, JR., CALVIN M.**, Assistant Professor of Management. B.S., University of Tennessee; M.B.A., University of Alabama; Ph.D., University of Georgia (2005)
- BAGGETT, PAIGE, V.**, Assistant Professor of Leadership and Teacher Education. B.S., M.Ed., Ph.D., University of South Alabama (2001) (Graduate)
- 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)
- BARIK, SAILEN**, Professor of Biochemistry and Molecular Biology. B.S., Mission Residential College; M.S., University of Calcutta; Ph.D., Bose Institute (1994) (Graduate)
- BARLETTA, ROBERT E.**, Assistant Professor of Chemistry; Joint appointment-Assistant Professor of Marine Sciences. B.S., M.A., University of Rhode Island; Ph.D., Brown University (2006) (Graduate)
- BARNARD, JOSHUA B.**, Assistant Professor of Mathematics and Statistics. B.S., M.S., University of Alabama; Ph.D., University of California (2007) (Graduate)
- BARRINGTON, ROBERT**, Assistant Professor of Microbiology/Immunology. B.S., Oregon State University; Ph.D., Loyola University Chicago (2008)
- BARROW, ROBERT V.**, Professor Emeritus of Political Science and Criminal Justice (1966-1998)
- BARSOUM, ADEL L.**, Assistant Professor of Microbiology and Immunology. B.S., Ain-Shams University; Ph.D., Christian Albrechts University (1989)
- BARTER, ALEXANDRA S.**, 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)
- BAXTER, ABIGAIL**, Associate 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)
- BELLE, MSG. MICHAEL H.**, Assistant Professor of Military Science (2008)
- BENKO, DAVID**, Assistant Professor of Mathematics and Statistics. B.S., M.S., Ph.D., University of Szeged; Ph.D., University of South Florida (2008)
- BERTOLLA, STACEE B.**, Instructor in Maternal/Child Health Nursing. B.S.N., M.S.N., University of South Alabama (2005) (Graduate)
- BEVERLY, BRENDA L.**, Associate Professor of Speech Pathology and Audiology. B.S.Ed., M.S., Bloomsburg University; Ph.D., University of Tennessee, Knoxville (1998) (Graduate)
- BHATNAGER, Y. MOHAN**, Associate Professor of Cell Biology and Neuroscience. B.Sc., M.Sc., University of Lucknow; Ph.D., Boston College (1979) (Graduate)
- BIHAN, SUZANNE M.**, Instructor in Community Mental Health Nursing. B.S., M.S., University of Michigan (2007)
- BISHOP, J. SAMUEL, JR.**, Instructor in Marketing. B.S., Samford University; M.A., University of New Orleans; M.B.A., University of Alabama-Birmingham (2001)
- BLACK, MICHAEL**, Instructor in Computer and Information Sciences. B.S., M.S., University of South Alabama (2002)
- BLACKWELL, KEITH G.**, Associate Professor of Meteorology, Adjunct Associate Professor of Marine Sciences. B.S., University of Wisconsin; M.A., Ph.D., Texas A&M University (1996) (Graduate)
- BLAKELY, CURTIS R.**, Assistant Professor of Political Science/Criminal Justice. B.S., M.S., University of Nebraska; Ed.S., Central Missouri State University; Ph.D., Southern Illinois University (2003) (Graduate)
- BLANKENSHIP, JEFFREY M.**, Assistant Professor of Political Science and Criminal Justice. B.A., University of Alabama at Huntsville; J.D., University of Alabama School of Law; M.P.A., University of Alabama at Birmingham; Ph.D., Auburn University (2007) (Graduate)
- BOBO, JAMES R.**, Professor Emeritus of Economics (1978-1990)
- BOETTCHER, ANNE A.**, Associate Professor of Biological Sciences. B.S., Bowdoin College;

- M.S., Ph.D., University of Delaware (1998) (Graduate)
- BOHNET, ANDRA C.**, Professor of Music. B.M., University of the Pacific; M.M., University of Southern California; Ph.D., Texas Tech University (1991) (Graduate)
- BOLEMAN, MICHAEL W.**, Senior Instructor in Physics. B.S., West Georgia College; M.S., University of Kentucky (1998)
- BOSARGE, J. KEITH**, Associate Professor Emeritus of Electrical Engineering (1967-86)
- BOWERS, DAVID A., JR.**, Associate Professor of Political Science. B.A., Rice University; M.A., Cornell University; Ph.D., University of Texas-Austin (1995) (Graduate)
- BOYLES, JAMES**, Professor Emeritus of Biology (1964-91)
- BRADFORD, SHELLEY H.**, Assistant Professor of Health, Physical Education and Leisure Studies. B.S., M.Ed., University of South Alabama; Ed.D., University of West Florida (2008)
- BRANDON, BETTY**, Professor Emeritus of History (1969-2006)
- BRAZY, MARTHA JANE**, Associate Professor of History. B.A., M.A., University of Wisconsin; Ph.D., Duke University (1999) (Graduate)
- BRETT, PAUL**, Assistant Professor of Microbiology/Immunology. B.Sc., University of Victoria; Ph.D., University of Calgary (2008)
- BREWER, PATRICIA A.**, Instructor in Clinical Radiologic Sciences. B.S., College of St. Francis; M.P.A., University of South Alabama (2004)
- BRICK, STEPHEN G.**, Associate Professor of Mathematics. B.A., M.A., Ph.D., University of California-Berkeley (1993) (Graduate)
- BRITT, KRISTY M.**, Instructor in Foreign Languages and Literature. B.A., University of South Alabama; M.A., University of California, Santa Barbara (2003)
- BRITTON, REBECCA F.**, Associate Professor of Dramatic Arts. B.A., Sanford University; M.F.A., University of Tennessee-Knoxville (1998)
- BROACH, MARY ELLEN**, Associate Professor of Health, Physical Education, and Leisure Studies. B.S., M.S., University of South Alabama; Ph.D., University of Georgia (2002) (Graduate)
- BROOME, BARBARA ANN**, Professor of Community Health Nursing-Chair-Associate Dean. B.S.N., M.S.N., Kent State University; Ph.D., University of Pittsburgh (1999) (Graduate)
- BROWN, CHARLES H.**, Professor of Psychology; Adjunct Associate Professor of Speech Pathology and Audiology. B.A. Western Michigan University; M.A., Ph.D., Michigan State University (1987) (Graduate)
- BROWN, HENRIETTA W.**, Clinical Assistant Professor in Community/Mental Health Nursing. B.S.N., M.S.N., D.N.P., University of South Alabama (2005)
- BROWN, ISABEL**, Associate Professor of Foreign Languages and Literatures-Spanish-Chair. B.A., University of South Alabama; M.A., Ph.D., Emory University (1988) (Graduate)
- BRU, STEPHEN A.**, Senior Instructor in Developmental Studies. B.S., Louisiana State University; M.B.A., University of Southern Mississippi; M.Ed., University of South Alabama (2000)
- BRYAN, VALERIE L.**, Assistant Professor of Sociology, Anthropology, and Social Work. B.A., M.S.W., Ph.D., University of Kentucky (2007)
- BUNNELL, EDGAR M.**, Professor Emeritus of Continuing Education and Special Programs (1975-92)
- BURNS, DAVID W.**, Senior Instructor in Emergency Medical Services-Chair Emergency Medical Training; Director, CERT. B.S., University of South Alabama; M.P.H., University of Alabama-Birmingham (1993)
- BURNS, KARA K.**, Instructor in Visual Arts. B.A., University of Arizona; M.A., University of Oregon (2007)
- BURNS, TODD F.**, Instructor in Dramatic Arts. B.A., Winthrop University; M.F.A., Western Illinois University (2008)
- BURTICK, MARY**, Assistant Professor of Microbiology/Immunology. B.Sc., University of British Columbia; Ph.D., University of Calgary (2008)
- BUSH, JERRY A.**, Professor of Music. B.M., University of Alabama; M.M., Florida State University; D.A., University of Mississippi (1971)
- BUSH, NADIA K.**, Assistant Professor of Communication. B.A., M.A., University of South Alabama; Ph.D., The University of Southern Mississippi (2007)
- BYDALEK, KATHERINE A.**, Assistant Professor of Community/Mental Health Nursing. B.S., University of St. Francis; M.S.N., University of South Alabama; Ph.D., Touro University International (2005) (Graduate)
- BYRD, KELLY O.**, Senior Instructor in Leadership and Teacher Education. B.S., Florida State University; M.A., University of Florida (2004)
- BYRNE, MARIA A.**, Assistant Professor of Mathematics and Statistics. B.S., Ph.D., University of Notre Dame duLac (2008) (Graduate)
- BYRNE, PETER C.**, Associate Professor of Electrical and Computer Engineering. B.E., University College-Dublin; M.Sc., University of Birmingham-England; Ph.D., University College-Dublin (1987) (Graduate)
- CALDWELL, JAMES F.**, Professor Emeritus of Education (1964-84)
- CAMPBELL, DENNIS J.**, Associate Professor of Special Education. B.A., M.S., Ph.D., Auburn University (2005) (Graduate)
- CARLISLE, ERIN P.**, Instructor in Maternal/Child Health Nursing. B.S.N., University of Texas College of Nursing and Allied Health; M.S.N., University of Texas Health Science Center at San Antonio (2005)
- CARLISS, RICHARD D.**, Assistant Professor of Clinical Laboratory Sciences. B.A., University of New Mexico; M.S., University of Miami; Ph.D., Northwestern University (2004)
- CARMICHAEL, RUTH H.**, Assistant Professor of Marine Sciences. B.A., University of Chicago; M.A., Ph.D., Boston University (2007) (Graduate)
- CARPENTER, MICHAEL D.**, Assistant Professor of Speech Pathology and Audiology. B.A., North Carolina State University; M.S., Ph.D., East Carolina University (2004) (Graduate)
- CARR, NICOLE T.**, Assistant Professor of Sociology. B.A., M.A., College of William and Mary; Ph.D., Louisiana State University (1998) (Graduate)
- CARR, PHILIP J.**, Associate Professor of Anthropology. B.A., University of Louisville; M.A., Ph.D., University of Tennessee (1999) (Graduate)
- CARTER, J. SCOTT**, Professor of Mathematics-Chair. B.S., University of Georgia; Ph.D., Yale University (1989) (Graduate)
- CAULEY, LANIER S.**, Associate Professor of Mechanical Engineering. B.S., M.S., Virginia Polytechnic Institute; Ph.D., Clemson University; PE (AL) (1980)
- CEBRIAN, JUST**, Associate Professor of Marine Sciences-MESC. B.S., University of Barcelona; M.S., Universite de Perpignon; Ph.D., Polytechnic University of Catalonia (2000) (Graduate)
- CESARINI, J. PATRICK**, Assistant Professor of English. B.A., Amherst College; Ph.D., Rutgers University (2003) (Graduate)
- CHANG, DAVID W.**, Professor of Cardio-respiratory Care. B.A., University of Northern Iowa; M.Ed., Columbus State University; Ed.D., Nova Southeastern University (2007)
- CHANG, SEMOON**, Professor of Economics; Director, Center for Business and Economic Research. B.A., Seoul National University-Korea; M.A., Southern Illinois University; Ph.D., Florida State University (1972) (Graduate)
- CHAPMAN, DEBRA L.**, Senior Instructor in Computer and Information Sciences. B.S., University of Southern Mississippi; M.S., University of South Alabama (1999)
- CHILTON, LYNN L.**, Professor of Adult Health Nursing. B.S.N., Marquette University; M.S.N., Mississippi University for Women; D.S.N., University of Alabama-Birmingham (2003) (Graduate)
- CHILTON, THOMAS L.**, Professor of Health, Physical Education and Leisure Studies; Associate Dean, College of Education. B.S., Tennessee Polytechnic Institute; M.A., Tennessee Technological University; Ed.D., University of Tennessee (1972)
- CHINKERS, MICHAEL**, Associate Professor of Pharmacology. B.S., Penn State University; Ph.D., Vanderbilt University (1998) (Graduate)
- CHOW, ALAN F.**, Instructor in Management. B.S., M.S., Louisiana State University (2005)
- CHRISTENSEN, LARRY B.**, Professor of Psychology-Chair. B.S., M.S., Ph.D., University of Southern Mississippi (1994) (Graduate)
- CINKOVICH, ANNA M.**, Instructor in Biological Sciences. B.S., Southwest Baptist University; M.S., University of West Florida; A.B.D., University of South Alabama (2005)

## 278 FACULTY

- CIOFFI, EUGENE A.**, Associate Professor of Chemistry. B.A., M.S., Youngstown State University; Ph.D., University of Connecticut (1998) (Graduate)
- CLANTON, CLISTA**, Assistant Librarian. B.A., University of Alabama-Huntsville; M.S.L.S., University of North Carolina-Chapel Hill (2002)
- CLARK, ANGELA M.**, Instructor in Computer and Information Sciences. B.S., M.S., University of South Alabama (2002)
- CLARK, E. JEAN**, Associate Professor of Professional Studies. B.A., Radford College; M.S., Indiana University; Ph.D., Florida State University (1993) (Graduate)
- CLARK, MURLENE W.**, Associate Professor of Geology. A.A., Pensacola Junior College; B.S., M.S., Ph.D., Florida State University (1984) (Graduate)
- CLARK, R. KENT**, Professor of Physics. B.S., University of Alabama; M.S., Ph.D., Florida State University (1986) (Graduate)
- CLEVERDON, JOHN H.**, Professor Emeritus of Art and Art History (1964-1998)
- COGGIN, JOSEPH H., JR.**, Professor Emeritus of Microbiology and Immunology. B.S., Vanderbilt University; M.A., University of Tennessee; Ph.D., University of Chicago (1977)
- COHEN, MICHAEL V.**, Professor of Medicine and Physiology. AB, Harvard University; MD, Harvard Medical School (1991) (Graduate)
- COKER, JOHN C.**, Associate Professor of Philosophy-Chair. B.A., University of Iowa; J.D., Ph.D., University of Illinois (1986) (Graduate)
- COLEMAN, ROBERT L.**, Associate Professor of English-Interim Chair; Director, USA Honors Program. B.S., M.A., Virginia Commonwealth University; Ph.D., Rutgers University (1999) (Graduate)
- CONLON, JAMES E.**, Professor Emeritus of Art and Art History (1965-1997)
- CONNORS, JAMES J., JR.**, Assistant Professor of Earth Sciences. B.S., University of South Alabama; M.S., University of Alabama; Ph.D., University of South Alabama (2005)
- CONNORS, MARY A.**, Instructor in Earth Sciences. B.S., M.S., University of Alabama (2008)
- COOPER, CATHERINE M.**, Senior Instructor in Clinical Radiologic Sciences. B.S., M.S., University of South Alabama (2000)
- COVEY, PAT C.**, Professor Emeritus of Biomedical Sciences and Senior Vice President for Academic Affairs (1975-2008)
- COYM, JASON W.**, Assistant Professor of Chemistry. B.S., The University of Texas at Austin; Ph.D., Florida State University (2005)
- CRISTINA, CHAD M.**, Assistant Professor of Civil Engineering. B.S., M.S., Ph.D., Louisiana State University (2005) (Graduate)
- CRONIS, TERRY G.**, Professor Emeritus of Special Education (1974-2005)
- CRUMB, CYNTHIA A.**, Senior Instructor in Mathematics. B.A., Oklahoma State University; M.A., University of Texas-Arlington (1992)
- CULP, MARY BETH**, Professor Emeritus of Leadership and Teacher Education (1969-1999)
- CURRY, LYNDAL**, Instructor in Emergency Medical Services. B.A., Auburn University; University of South Alabama Paramedic Certificate (1999); M.A., University of Alabama
- DAGENAIS, PAUL A.**, Professor of Speech Pathology and Audiology. B.S., University of Ottawa; M.A., Northern Michigan University; Ph.D., University of Tennessee (1990) (Graduate)
- DAIGLE, ROY J.**, Professor of Computer and Information Sciences; ISC Coordinator and Director of CIS Graduate Studies. B.S., Nicholls State University; M.S., University of Southwest Louisiana; Ph.D., University of Georgia (1981) (Graduate)
- DALEY, MICHAEL R.**, Professor of Social Work and Director of Social Work Program. B.A., Rice University; M.S.W., University of Houston; Ph.D., University of Wisconsin, Madison (2004) (Graduate)
- DALEY, VICKEY L.**, Instructor in English. B.S., East Texas State University; M.A., Stephen F. Austin State University (2008)
- DANIELS, SHERRY C.**, Professor Emeritus of Nursing (1981 - 2005)
- DARDEAU, GENEVIEVE M.**, Instructor in Communication. B.A., Auburn University; M.A., Florida State University (2000)
- DAUGHENBAUGH, LYNDIA R.**, Associate Professor of Leadership and Teacher Education. B.A., University of South Florida; M.A., Lincoln Memorial University; Ed.D., University of Tennessee-Knoxville (1996) (Graduate)
- DAUGHERTY, JOHN FRANKLIN**, Senior Instructor in English As A Second Language-ESL Coordinator. B.A., Duke University; M.A., Tulane University; M.A., Yale University; M.A., University of Southern Mississippi (1996)
- DAVIDSON-SHIVERS, GAYLE V.**, Professor of Professional Studies. B.S., Oregon State College of Education; M.A., Ph.D., University of Minnesota (1992) (Graduate)
- DAVIS, DEBRA C.**, Professor of Adult Health Nursing; Dean, College of Nursing. B.S.N., M.S.N., D.S.N., University of Alabama-Birmingham (1990) (Graduate)
- DAVIS, DEBRA O.**, Instructor of Adult Health Nursing. B.S.N., M.S.N., University of South Alabama (2008)
- DAVIS, JAMES H., JR.**, Professor of Chemistry. AB, University of North Alabama; Ph.D., Vanderbilt University (1995)
- DAVIS, PATRICIA M.**, Senior Instructor in Chemistry. B.A., Rosemont College; M.S., Brandeis University (1998)
- DAVIS, WILLIAM B.**, Professor of Biomedical Sciences-Chair. B.A., University of Mississippi; Ph.D., University of Mississippi-Jackson (1974)
- DEARMAN, CATHERINE N.**, Professor of Maternal Child Nursing, Associate Dean for Research and Development. B.S.N., Mississippi University for Women; M.S.N., University of Alabama-Birmingham; Ph.D., University of Mississippi (2000) (Graduate)
- DEARMON, VALORIE C.**, Instructor in Adult Health Nursing. B.S.N., University of South Alabama; M.S.N., University of Alabama in Birmingham (2006)
- DELANEY, CYNTHIA LEIGH**, Senior Instructor in Biological Sciences. B.S., University of West Florida; M.S., University of South Alabama (1999)
- DELMAS, PEGGY M.**, Instructor in Leadership and Teacher Education. B.A., University of West Florida; M.A., University of Alabama; Ph.D., University of Alabama at Birmingham (2006) (Graduate)
- DEMPSEY, JOHN V.**, Professor of Professional Studies. B.S., Florida A & M University; M.S., Ph.D., Florida State University (1989) (Graduate)
- DENMARK, CYNTHIA W.**, Instructor in Adult Health Nursing. B.S.N., M.S.N., William Carey College (2005)
- DEVORE, DONALD E.**, Associate Professor of History. B.A., Southern University at New Orleans; M.A., University of New Orleans; Ph.D., Louisiana State University (2006) (Graduate)
- DHAWAN, JAGDISH C.**, Professor of Chemical and Biomolecular Engineering. B.S.Ch.E., M.S.Ch.E., Technological Institute, Kanpur; Ph.D., University of Mississippi (1983) (Graduate)
- DICKENS, ROSS N.**, Professor of Finance-Chair. B.S., Presbyterian College; MBA, University of North Carolina; Ph.D., University of Tennessee (1998) (Graduate)
- DILSAVER, LARY M.**, Professor of Geography. B.A., M.A., California State University-Hayward; Ph.D., Louisiana State University (1982) (Graduate)
- DODGE, HAROLD W.**, Associate Professor of Leadership and Teacher Education-Interim Chair. B.S., Old Dominion University; Ed.D., Virginia Tech (2008) (Graduate)
- DONG, ERWEI**, Assistant Professor of Health, Physical Education and Leisure Studies. B.A., Liaoning Normal University; M.A., Tokyo Gakugei University; Ph.D., Pennsylvania State University (2008)
- DONOVAN, FRANCIS M., JR.**, Professor of Mechanical Engineering. B.S., Mississippi State University; M.S., Virginia Polytechnic Institute; Ph.D., Purdue University; PE: (AL, FL, MS) (1983) (Graduate)
- DOOLITTLE, NORMA O.**, Professor Emeritus of Nursing (1982 - 2005)
- DORAN, MICHAEL V.**, Professor of Computer and Information Sciences; CSC Coordinator. B.S.C.S., M.E., Ph.D., Tulane University (1989) (Graduate)
- DOUGHERTY, FRANCES CARROLL**, Assistant Professor of Mechanical Engineering. B.S., Purdue University; M.S., Ph.D., Stanford University (1998) (Graduate)
- DOUGLAS, GEORGE W.**, Professor Emeritus of Mechanical Engineering (1980-1995)
- DOUGLASS, SCOTT L.**, Professor of Civil Engineering. B.S., Virginia Polytechnic Institute; M.S., Mississippi State University; Ph.D., Drexel University; PE, (NJ) (1989) (Graduate)

- DOWNEY, JAMES M.**, Professor of Physiology. B.S., Manchester College; M.S., Ph.D., University of Illinois (1975) (Graduate)
- DURANT, DAVID Z.**, Assistant Professor of Music. B.M., M.M., University of Florida; D.M.A., University of Alabama (2003)
- DURICK, DEBRA ANN**, Assistant Professor of Clinical Radiologic Sciences. B.S., University of Alabama-Birmingham; M.P.A., University of South Alabama (1992)
- EL-SABA, AED M.**, Associate Professor of Electrical and Computer Engineering. B.S., Louisiana Tech University; M.S., University of New Orleans; Ph.D., University of Alabama in Huntsville (1999) (Graduate)
- EL-SHARKH, MOHAMED Y.**, Assistant Professor of Electrical and Computer Engineering. B.S., M.S., Ain Shams University; Ph.D., University of Alabama (2008) (Graduate)
- ELLIS, DAVID N.**, Professor of Special Education. B.S., M.A., University of Alabama; Ph.D., Vanderbilt University (1991) (Graduate)
- ENGBRETSON, MARY**, Senior Librarian. B.A., Luther College; M.A., University of Denver; M.B.A., Arizona State University (1985)
- ENGIN, ALI E.**, Professor of Mechanical Engineering. B.S., Michigan State University; M.S., Ph.D., University of Michigan (1995) (Graduate)
- ENTESSAR, NADER**, Professor of Political Science/Criminal Justice - Chair. B.A., University of California - Los Angeles; M.A., University of Missouri-St. Louis; Ph.D., St. Louis University (2006) (Graduate)
- EPLEY, DONALD R.**, Distinguished Professor of Real Estate and Professor of Marketing. B.A., M.A., Wichita State University; Ph.D., University of Missouri-Columbia (2005)
- ERWIN, CHARLES O.**, Instructor in Emergency Medical Services. CERT, B.A., University of South Alabama (2007)
- ESTES, REBECCA I.**, Associate Professor of Occupational Therapy-Chair. A.A., Kansas University; B.S., M.A., M.O.T., Texas Woman's University; Ph.D., University of Texas at Dallas (2007) (Graduate)
- ESTIS, JULIE M.**, Assistant Professor of Speech Pathology and Audiology. B.S., M.S., Ph.D., University of South Alabama (2004) (Graduate)
- EVANS, DAVID L.**, Instructor of Speech Pathology and Audiology. B.A., University of Colorado; M.A., University of Maine (2008)
- EVANS, KELLI J.**, Assistant Professor of Speech Pathology and Audiology. B.A., M.A., University of Maine; Ph.D., University of Nebraska (2008)
- EVANS, W. BRYCE**, Professor Emeritus of Speech Pathology and Audiology (1967-1999)
- FAGAN, KAREN**, Associate Professor of Internal Medicine. B.A., M.D., University of California-San Diego (2008) (Graduate)
- FANTONI, CHRISTIAN F.**, Assistant Professor of Foreign Languages and Literatures. B.A., M.A., University of Nice, France; M.A., University of Toronto; Ph.D., University of Paris III, Sorbonne Nouvelle, France (2004)
- FARMER, JOSEPH E.**, Clinical Assistant Professor of Community Mental Health Nursing. B.S.B.A., University of Arizona; B.S.N., University of Mississippi; M.S.N., University of Southern Mississippi (2004) (Graduate)
- FARMER, SONNA C.**, Instructor in Mathematics and Statistics. B.S., M.S., Mississippi State University (2004)
- FAUGHT, DAVID A.**, Assistant Professor of Foreign Languages and Literatures. B.A., Angelo State University; M.A., Brigham Young University; Ph.D. University of California, Irvine (2006)
- FAUST, ROBERT E.**, Instructor in History. B.S., Manchester College; M.A., Ball State University; Ph.D., University of Missouri-Columbia (2003)
- FEARN, MIRIAM L.**, Associate Professor of Earth Sciences-Chair. B.S., University of South Alabama; Ph.D., Louisiana State University (1996) (Graduate)
- FEINSTEIN, DAVID L.**, Professor of Computer and Information Sciences. B.S., Brown University; M.S., Ph.D., Stanford University (1980) (Graduate)
- FELDMAN, PHILLIP**, Professor of Leadership and Teacher Education; Associate Dean, College of Education. B.A., University of Mississippi; M.Ed., Ed.D., Memphis State University (1978) (Graduate)
- FELDVOSS, JORG**, Associate Professor of Mathematics and Statistics. M.A., Ph.D., University of Hamburg (2003) (Graduate)
- FELL, DENNIS W.**, Associate Professor of Physical Therapy-Chair; Associate Professor of Biomedical Sciences. B.S., B.S.P.T., MD, University of South Alabama (1992) (Graduate)
- FICICI, EMEL**, Laboratory Instructor in Physics. B.S., Bogazici University; M.S., Middle East Technical University (2007)
- FIELDS, PHILIP A.**, Associate Professor of Cell Biology and Neuroscience. B.S., University of Florida; M.S., Ph.D., Texas A & M University (1980) (Graduate)
- FINLEY, VERA L.**, Senior Librarian. B.A., Fisk University; M.S.L.S., Atlanta University (1985)
- FINNEY, R. ZACHARY**, Assistant Professor of Marketing. B.S., Auburn University; M.B.A., University of Mississippi; Ph.D., University of Alabama (2005) (Graduate)
- FISHER, ALMA**, Instructor Emeritus in Music (1965)
- FISHER, SAMUEL H., III**, Associate Professor of Political Science. B.A., Trinity University; M.A., Ph.D., University of Alabama (1989) (Graduate)
- FISHMAN, ETHAN M.**, Professor of Political Science. B.A., Harpur College; M.A., SUNY-Binghamton; Ph.D., Duke University (1980) (Graduate)
- FODRIE, FREDRICK J.**, Research Associate Professor of Marine Sciences. B.A., University of North Carolina at Chapel Hill; Ph.D., University of California-San Diego (2008)
- FOGGER, SUSANNE E.**, Clinical Assistant Professor of Community-Mental Health Nursing. B.S., Wayland Baptist University; M.S.N., D.N.P., University of South Alabama (2003) (Graduate)
- FOOTE, DIANE M.**, Instructor of Emergency Medical Services. B.S., University of South Alabama; B.S.N., M.S.N., Springhill College (2007)
- FORBES, DAVID**, Professor of Chemistry. B.S., University of Florida; Ph.D. University of Illinois (1998) (Graduate)
- FORBUS, PHILIP R.**, Associate Professor of Economics. B.A., M.A., Ph.D., University of Arkansas (1978) (Graduate)
- FORNARO, ROBERT J.**, Professor Emeritus of International Studies (1975-2007)
- FOSTER, JOHN W.**, Professor of Microbiology and Immunology. B.S., Philadelphia College of Pharmacy and Science; M.S., Ph.D., Hahnemann University (1979) (Graduate)
- FOSTER, JOSHUA D.**, Assistant Professor of Psychology. B.S., Old Dominion University; M.A., Towson University; Ph.D., The University of Georgia (2005) (Graduate)
- FOUTY, BRIAN**, Associate Professor of Internal Medicine. B.S., Stanford University; M.D., University of Washington (2004)
- FREED, CHRISTOPHER R.**, Assistant Professor of Sociology. B.A., Union College; M.A., Queens College; M.Phil., Ph.D., City University of New York (2008) (Graduate)
- FREEMAN, JOHN A.**, Professor of Biology-Chair. B.S., Florida State University; M.S., University of New Orleans; Ph.D., Duke University (1980) (Graduate)
- FREGEAU, LAUREEN A.**, Associate Professor of Professional Studies. B.S., Stonehill College; M.A., University of Massachusetts at Boston; Ph.D., Pennsylvania State University (1994) (Graduate)
- FRESNE, JEANNETTE**, Assistant Professor of Music. B.MUS., University of Texas at Austin; M.M., Southwest Texas State University; Ph.D., Arizona State University (2002)
- FRUH, SHARON M.**, Assistant Professor of Community/Mental Health Nursing. B.A., Bethany College; M.S., Rush University; Ph.D., University of Illinois (2001) (Graduate)
- GAILLARD, NANCY B.**, Instructor in Leadership and Teacher Education. B.A., M.A., University of North Carolina-Charlotte (2008)
- GALAKTIONOVA, ELENA**, Assistant Professor of Mathematics and Statistics. M.S., Belorussian University, Minsk; M.S., Ph.D., University of Massachusetts-Amherst (2002)
- GAMBLE, JOHN E.**, Professor of Management; Associate Dean and Director of Graduate Studies of the Mitchell College of Business. B.S., M.S., Ph.D., University of Alabama (1996) (Graduate)
- GAPUD, ALBERT A.**, Assistant Professor of Physics. B.S., Ph.D., University of Kansas (2005)
- GARD, ANTHONY L.**, Professor of Cell Biology and Neuroscience. B.S., Ph.D., University of Iowa (1990) (Graduate)



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- GARMON, DAVID F.**, Senior Instructor in Emergency Medical Services Education. B.S., M.A., University of Alabama at Birmingham (1998)
- GARTMAN, W. DAVID**, Professor of Sociology. B.A., University of Houston; M.A., University of California-San Diego; Ph.D., University of California-San Diego (1980) (Graduate)
- GEBB, SARAH A.**, Assistant Professor of Cell Biology and Neuroscience. B.A., Transylvania University; Ph.D. University of Kentucky (2006) (Graduate)
- GERTHOFFER, WILLIAM**, Professor and Chair of Biochemistry and Molecular Biology. B.S., Waynesburg College; Ph.D., West Virginia University (2007) (Graduate)
- GIBBS, C. DIANE**, Assistant Professor in Art and Art History. B.F.A., Auburn University; M.F.A., Virginia Commonwealth University (2003)
- GILES, REBECCA M.**, Professor of Leadership and Teacher Education. B.S., Southwest Texas State University; M.Ed., University of Texas at Austin; Ph.D., University of Southern Mississippi (1998) (Graduate)
- GILLESPIE, MARK N.**, Professor of Pharmacology-Chair. B.G.S., Ph.D., University of Kentucky (1994) (Graduate)
- GILLESPIE, TREENA L.**, Assistant Professor of Management. B.A., M.S., Clemson University; Ph.D., DePaul University (2007) (Graduate)
- GILLEY, WILLIAM F.**, Professor Emeritus of Health, Physical Education and Leisure Studies (1970-2007)
- GILLIGAN, MARIE AARON**, Clinical Assistant Professor of Adult Health Nursing. B.S.N., M.S.N., University of South Alabama (2002)
- GILLIS, WILLIAM E.**, Assistant Professor of Management. B.S., United States Air Force Academy; M.B.A., University of West Florida; Ph.D., Florida State University (2007) (Graduate)
- GLOVER, JOSEPH L.**, Assistant Professor of Communications. B.A., University of Miami; M.A.MC, Ph.D., University of Florida (2005)
- GODANG, ROMULUS**, Assistant Professor of Physics. B.S., University of North Sumatra, Indonesia; M.S., Ph.D., Virginia Tech (2007)
- GODFREY, ALICE J.**, Assistant Professor of Community/Mental Health Nursing. B.S.N., Emory University; M.P.H., University of North Carolina (1977) (Graduate)
- GORDON, MICHAEL S.**, Assistant Professor of Psychology. A.B., University of California-Davis; Ph.D., University of California-Riverside (2005) (Graduate)
- GRAHAM, WILLIAM M.**, Associate Professor of Marine Sciences. B.S., University of North Carolina at Wilmington; M.S., Ph.D., University of California-Santa Cruz (1996) (Graduate)
- GRAVES, REBECCA J.**, Instructor in Adult Health Nursing. B.S., University of Southern Mississippi; B.S.N., M.S.N., University of South Alabama (2007)
- GRAY, CHARLES P.**, Associate Professor of Clinical Physical Therapy. B.S., Ithaca College; M.A., University of Alabama-Birmingham; D.P.T., Temple University (1976) (Graduate)
- GRAY, DAVID L.**, Associate Professor of Leadership and Teacher Education. B.S., M.Ed., Frostburg State University; Ed.D., University of Alabama (1997) (Graduate)
- GREEN, ANDRE' M.**, Assistant Professor of Leadership and Teacher Education. B.S., Alabama State University; M.S., Hampton University; Ed.S., Ph.D., Virginia Tech (2006) (Graduate)
- GRUNER, GREG L.**, Professor of Music-Chair. B.M.E., New Mexico State University; M.M.E., Indiana University; D.A., Ball State University (1993)
- GUBLER-HANNA, CORAL**, Assistant Professor in Physical Therapy. B.S., State University of New York at Stony Brook; M.S., United States Sports Academy; M.P.T., University of Delaware, Ph.D., University of Montana
- GUEST, CHARLES L., JR.**, Associate Professor of Professional Studies-Chair. B.S., University of Southern Mississippi; M.S., Ph.D., Mississippi State University (1996) (Graduate)
- GUION, DENNIS**, Associate Librarian/Head of Circulation/Reserves. B.A., Pan American University; M.L.S., Drexel University (2004)
- GUNGOR, R. BEHIC**, Professor Emeritus of Electrical Engineering (1975-1995)
- GUPTA, SACHIN**, Assistant Professor of Biochemistry and Molecular Biology. B.S., Ismail Yusuf College in Bombay; Ph.D., The Seth G.S. Medical College in Bombay (2008) (Graduate)
- GURCHIEK, LARRY R.**, Professor of Health, Physical Education and Leisure Studies. B.S., M.S., Indiana State University; D.A., Middle Tennessee State University (1994) (Graduate)
- GUYNES, JASON E.**, Professor and Chair of Visual Arts. B.A., Belhaven College; M.F.A., Tulane University (2005)
- GUZY, ANNMARIE**, Associate Professor of English. B.S., M.A., Southern Illinois University at Edwardsville; Ph.D., New Mexico State University (1999) (Graduate)
- HAAS, LAURIE F.**, Instructor and Field Coordinator in Social Work. B.A., Huntingdon College; M.S.W., Tulane University (2005)
- HAGHANI, SASAN**, Assistant Professor of Electrical and Computer Engineering. B.S., Isfahan University of Technology; M.S., Ph.D., University of Alberta, Edmonton (2007) (Graduate)
- HAIN, THOMAS F.**, Associate Professor of Computer and Information Sciences. B.Sc. (Hons), M.Sc., Melbourne University-Australia; M.S., Polytechnic University; Ph.D., Auburn University (1992) (Graduate)
- HAINES, CAROLYN E.**, Assistant Professor of English. B.S., University of Southern Mississippi, M.A., University of South Alabama (2005) (Graduate)
- HALBROOKS, JOHN V.**, Assistant Professor of English. B.A., University of North Carolina, M.A. College of William and Marry, Ph.D., Tulane University (2005) (Graduate)
- HALL, HEATHER R.**, Clinical Assistant Professor of Maternal/Child Nursing. B.S.N., M.S.N., University of South Alabama (2004) (Graduate)
- HALL, HOLLY K.**, Associate Professor Emeritus of Clinical Laboratory Sciences (1976-2006)
- HALL, JENNY L.**, Instructor in Foreign Languages and Literatures. B.A., University of South Alabama; M.A., University of Alabama (2008)
- HAMIL, TRAY W.**, Instructor in Biology. B.S., University of Alabama at Birmingham; M.S., University of South Alabama (2008)
- HAMILTON, KAREN M.**, Clinical Associate Professor of Community/Mental Health Nursing. B.S.N., M.S.N., Ph.D., University of South Alabama (1996) (Graduate)
- HAMILTON, MARSHA L.**, Assistant Professor of History. B.A., Purdue University; M.A., University of California at Riverside; Ph.D., State University of New York at Stony Brook (2003) (Graduate)
- HAMNER, EUGENIE L.**, Professor Emeritus of English (1969-1996)
- HANKS, ROMA S.**, Professor of Sociology-Chair; Director-Gerontology Program. B.A., David Lipscomb College; M.S., Georgia Peabody College-Vanderbilt University; Ph.D., University of Delaware (1991) (Graduate)
- HANNA, MICHAEL**, Professor Emeritus of Communications (1978-2003)
- HANNUM, ELLWOOD B.**, Professor of History; Associate Dean, School of Continuing Education and Special Programs. B.A., University of the South; M.A., Ph.D., University of South Carolina (1970) (Graduate)
- HARDIN, JAMES R.**, Professor of Accounting-Chair. B.S.B.A., M.A., Appalachian State University; Ph.D., University of Mississippi (2007) (Graduate)
- HARKINS, WILLIAM J.**, Professor Emeritus of Political Science (1967-85)
- HARLAN, CHRISTOPHER T.**, Instructor in Adult Health Nursing. B.S.N., M.S.N., University of South Alabama (2006) (Graduate)
- HARLAN, SHANA M.**, Instructor of Adult Health Nursing. B.S.N., M.S.N., University of South Alabama (2008)
- HARRINGTON, DEBORAH LYNN**, Assistant Librarian in the Mitchell College of Business Learning Resource Center. B.S., M.B.A., University of South Alabama; M.L.S., University of Alabama (2006)
- HARRINGTON, ELLEN B.**, Associate Professor of English. B.A., Fordham University; M.A., Ph.D., Tulane University (2002) (Graduate)
- HARRIS, MARY JO**, Professor Emeritus of Education
- HARRISON, B. KEITH**, Professor of Chemical and Biomolecular Engineering, Associate Vice President for Academic Affairs; Dean of the Graduate School. B.S., M.S., Georgia Institute

of Technology; Ph.D., University of Missouri (1986) (Graduate)

**HARRISON, EDWARD L.**, Professor Emeritus of Management (1974-2007)

**HASCHAK, PAUL G.**, Senior Librarian - Coordinator of Collection Management. B.A., Cleveland State University; M.L.S., Louisiana State University (2007)

**HAYDEN, SUSAN J.**, Assistant Professor of Adult Health Nursing. B.S., University of Maine-Farmington; B.S.N., Auburn University-Montgomery; M.S.N., Troy University-Montgomery; Ph.D., Loyola University-Chicago (2008)

**HAYES, RICHARD L.**, Professor of Professional Studies - Dean, College of Education. A.B. Harvard College; Ed.M., Ed.D., Boston University (2004) (Graduate)

**HAYES, RUSSELL M., JR.**, Professor Emeritus of Electrical Engineering (1973-1995)

**HAYWICK, DOUGLAS W.**, Associate Professor of Geology, Adjunct Associate Professor of Marine Sciences. B.Sc., McMaster University; M.S., Memorial University of Newfoundland; Ph.D., James Cook University-Australia (1991) (Graduate)

**HEAVNER, TRACY LEE**, Professor of Music. B.M.E., M.M.E., Appalachian University; D.M.E., University of North Colorado (1995) (Graduate)

**HECK, KENNETH J., JR.**, Professor of Marine Sciences-MESC; Adjunct Professor of Biology. B.S., University of West Florida; M.S., Ph.D., Florida State University (1986) (Graduate)

**HEITMAN, ROBERT J.**, Professor of Health, Physical Education and Leisure Studies. B.S., M.Ed., Ed.D., University of Missouri-Columbia (1981) (Graduate)

**HELMINGER, PAUL**, Professor of Physics. B.S., North Carolina State University; Ph.D., Duke University (1973) (Graduate)

**HENDERSON, CAROL M.**, Professor Emeritus of Adult Health Nursing (1973-1995)

**HENDERSON, JAMES D.**, Associate Professor of Physician Assistant Studies. B.S., Spring Hill College; B.S.Pharm., Auburn University; Ph.D., Emory University (1996) (Graduate)

**HERBERT, DONALD**, Professor of Radiology. B.S., Northwestern University; M.S., University of Oklahoma; Ph.D., University of London (1975) (Graduate)

**HERNANDEZ, FRANK J., JR.**, Research Assistant Professor of Marine Sciences. B.S., Louisiana State University; M.S., University of North Carolina; Ph.D., Louisiana State University (2007) (Graduate)

**HICKEY, SUSAN G.**, Assistant Professor of Speech Pathology and Audiology. B.A., University of Florida; Au.D., Ph.D., University of South Alabama (2007) (Graduate)

**HILL, ALETHEA**, Clinical Assistant Professor of Adult Health Nursing. B.S.N., M.S.N., University of South Alabama (2004)

**HILLMAN, TIMOTHY A.**, Assistant Professor of Philosophy. B.A., Millsaps College; M.A., University of Mississippi; Ph.D., Purdue University (2008)

**HILLYER, RICHARD L.**, Assistant Professor of English. B.A., Exeter University; M.A., Ph.D., University of Michigan (2007)

**HOFFMAN, LEE M.**, Professor Emeritus of Art and Art History (1968-1999)

**HOFFMAN, NORRIS W.**, Associate Professor of Chemistry. B.S., University of Florida; Ph.D., Stanford University (1983)

**HOLLINGSWORTH, CRISTOPHER**, Associate Professor of English. B.A., Amherst College; M.A., Ph.D., Rutgers University (2003) (Graduate)

**HOLLOWAY, BRENDA J.**, Clinical Associate Professor of Community/Mental Health Nursing. B.S.N., University of Mississippi; M.S.N., Mississippi University for Women; D.N.Sc., The University of Tennessee Health Science Center (1989) (Graduate)

**HOLM, ROBERT**, Professor of Music. B.A., Pt. Loma Nazarene College; M.M., DMA., University of Illinois (1997)

**HOLMES, LARRY E.**, Professor Emeritus of History (1968-2005)

**HONKANEN, RICHARD E.**, Professor of Biochemistry and Molecular Biology. B.S., Ph.D., University of Georgia (1993) (Graduate)

**HOSSAIN, AKHTER B.**, Assistant Professor of Civil Engineering. B.S., M.Sc.Eng., Bangladesh University of Engineering and Technology; M.S., University of Cincinnati; Ph.D., Purdue University (2003) (Graduate)

**HOUSTON, WENDELL R.**, Associate Professor Emeritus of history (1968-2007)

**HSIAO, KUANG-TING**, Assistant Professor of Mechanical Engineering. B.S., National Taiwan University; Ph.D., University of Delaware (2003) (Graduate)

**HSU, KO-CHENG**, Associate Professor of Accounting. B.S., M.S., Illinois State University; M.S., Iowa State University; Ph.D., Memphis State University (1993) (Graduate)

**HUANG, JINGSHAN**, Assistant Professor of Computer and Information Sciences. B.E., Fuzhou University; M.E., Ph.D., University of South Carolina (2009)

**HUDSON, C. KENNETH**, Assistant Professor of Sociology, B.A., University of Mobile; M.S.S.W., M.A., University of Louisville; Ph.D., University of North Carolina, Chapel Hill (2005) (Graduate)

**HUEY, TRACY K.**, Instructor in Maternal/Child Health Nursing. B.S., B.S.N., M.S.N., University of South Alabama (2006)

**HULING, NEKITA D.**, Instructor in Communication. B.A., Alabama State University; M.A., University of Alabama (2008)

**HUNSADER, KENNETH J.**, Assistant Professor of Economics and Finance. B.S., Ph.D., Florida State University (2003) (Graduate)

**HUNTER, MONICA R.**, Assistant Professor of Professional Studies. B.S., Alabama State University; M. Ed., University of South Alabama; Ph.D., Auburn University (2005) (Graduate)

**HUSAIN, ZOHAI**, Associate Professor of Political Science. B.A., M.A., Ph.D., University of Pennsylvania (1986) (Graduate)

**ICENOGLU, MARJORIE L.**, Professor of Management-Chair. B.A., Indiana State University; M.S., Ph.D., Georgia State University (1994) (Graduate)

**IRION, GLENN L.**, Associate Professor of Physical Therapy. B.A., M.Ed., Temple University; B.S., University of Central Arkansas; Ph.D., Temple University - School of Medicine (2002) (Graduate)

**IRION, JEAN M.**, Associate Professor of Physical Therapy. B.S., West Virginia University; B.S., M.Ed., Temple University; Ed.D., University of Arkansas Little Rock (2004) (Graduate)

**ISLAM, SAMANTHA**, Assistant Professor of Civil Engineering. B.S., Bangladesh University of Engineering Technology; M.S., Ph.D., Purdue University (2008)

**ISPHORDING, WAYNE C.**, Professor Emeritus of Geology (1966-2007)

**JACKSON, KERN M.**, Assistant Professor of English; Director, African American Studies Program. B.A., University of Virginia; M.A., University of Wisconsin; Ph.D., Indiana University (2004) (Graduate)

**JACKSON, R. EUGENE**, Professor Emeritus of Dramatic Arts (1971-2003)

**JACKSON, THOMAS G.**, Professor of Chemistry. B.S., M.S., University of Southern Mississippi; Ph.D., University of Tennessee (1965)

**JACOBS, MICHAEL B.**, Associate Professor of Adult Health Nursing-Chair. B.S.N., M.S.N., University of South Alabama, D.N.S., LSU Health Sciences Center (1999) (Graduate)

**JALKH, CHUCRI M.**, Instructor in Clinical Radiologic Sciences. B.S., M.S., University of South Alabama (1993)

**JAVINE, VICTORIA**, Instructor in Economics and Finance. B.S., University of Alabama-Tuscaloosa; A.B.D., The University of Tennessee-Knoxville (2007)

**JEFFERSON, GAIL D.**, Assistant Professor of Mechanical Engineering. B.S., Spelman College; B.S., Georgia Institute of Technology; M.S., Ohio State University; Ph.D., Florida Agricultural and Mechanical University (2008)

**JEFFERSON, JOHN R.**, Assistant Professor of Physical Therapy. B.A., Dalhousie University; B.S., University of Toronto; M.S., University of Waterloo (1994) (Graduate)

**JELLETT, FRANK**, Professorial Lecturer in Mathematics and Statistics. B.A., University of Cambridge; Ph.D., Temple University (2002) (Graduate)

**JENKINS, C. MERRILL**, Professor of Physics. B.S., Georgia Institute of Technology; M.S., Ph.D., Florida State University (1988) (Graduate)

**JOHNSON, G. DAVID**, Professor of Sociology; Senior Vice President for Academic Affairs. B.A., Coker College; M.S., Texas A&M University; Ph.D., Southern Illinois University-Carbondale (1984) (Graduate)

**JOHNSON, MATTHEW A.**, Assistant Professor of Visual Arts. B.F.A., University of South Alabama; M.F.A., Louisiana Tech University (2004)

## 282 FACULTY

- JOHNSON, PAMELA T.**, Instructor of Adult Health Nursing. B.S.N., Auburn University; M.S.N., University of South Alabama (2008)
- JOHNSON, R. BURKE**, Professor of Professional Studies. B.S., University of Oregon; M.S., Radford University; M.A., Bowling Green State University; M.P.A., University of Michigan; Ph.D., University of Georgia (1993) (Graduate)
- JOHNSTEN, THOMAS D.**, Associate Professor of Computer and Information Sciences. B.S., Oklahoma State University; M.S., Arizona State University; Ph.D., University of Louisiana-Lafayette (2002) (Graduate)
- JONES, CALVIN N.**, Professor Emeritus of Foreign Languages and Literatures (1979-2008)
- JONES, KATHRYN L.**, Senior Librarian. B.A., University of South Alabama; M.L.S., Louisiana State University (1976)
- JONES, LORETTA**, Instructor in Adult Health Nursing. B.S.N., M.S.N., University of Mobile (2005)
- JORDAN, KAREN J.**, Lab Instructor in Geography. B.S., University of South Alabama; M.S., University of Alabama (2005)
- JUAREZ, BRENDA G.**, Assistant Professor of Professional Studies. B.S., Brigham Young University; M.Ed., Ph.D., University of Utah (2007) (Graduate)
- KAEMPFER, W. W.**, Professor Emeritus of Political Science
- KALININ, BORIS V.**, Associate Professor of Mathematics. B.S., St. Petersburg State University, Russia; Ph.D., Pennsylvania State University (2003) (Graduate)
- KAYES, STEPHEN G.**, Professor of Cell Biology and Neuroscience and Microbiology and Immunology. B.S., University of Wisconsin-Madison; M.S., Tulane University; Ph.D., University of Iowa (1981) (Graduate)
- KEASLER, DIANE S.**, Instructor of Maternal/Child Nursing. B.A., M.S., University of South Alabama (2008)
- KENNEDY, ELIZABETH T.**, Assistant Professor of Physical Therapy. B.S., Georgia State University; M.M.Sc., Emory University; Ph.D., University of Georgia (2006) (Graduate)
- KENNEDY, JAMES E.**, Professor Emeritus of Art and Art History (1968-1997)
- KENNEDY, JAYNE E.**, Instructor in Leadership and Teacher Education. B.S., Auburn University; M.Ed, University of South Alabama (2002)
- KENT, ANDREA M.**, Assistant Professor of Leadership and Teacher Education. B.S., University of Mobile; M.Ed., Ph.D., University of South Alabama (2004) (Graduate)
- KESHOCK, CHRISTOPHER M.**, Assistant Professor of Health, Physical Education and Leisure Studies. B.S.B.A., Ashland College; M.B.A., Central Missouri State University; Ph.D., Florida State University (2003) (Graduate)
- KHAN, AURANGZEB**, Associate Professor of Electrical and Computer Engineering. B.S., M.S., University of Karachi-Pakistan; M.Ph., Quaid-I-Azam University Islamabad, Pakistan; Ph.D., Tottori University-Japan (2002) (Graduate)
- KHAN, IMRAN M.**, Instructor in Marketing. B.S., M.B.A., University of South Alabama (2003)
- KHAN, ZOYA**, Assistant Professor of Foreign Languages and Literatures. B.A., M.A., Nehru University, New Delhi, India; M.A., Ph.D., University of Michigan (2003) (Graduate)
- KIENE, RONALD P.**, Professor of Marine Sciences; Adjunct Associate Professor of Biology. B.S., St. John's University; M.S., Ph.D., State University of New York (1993) (Graduate)
- KIMBALL, MICHELE B.**, Assistant Professor of Communication. B.S., M.A., Ph.D., University of Florida (2008) (Graduate)
- KIMBALL, SYTSKE**, Associate Professor of Meteorology. B.S., Delft University of Technology; M.S., Monash University; Ph.D., Penn State University (1999) (Graduate)
- KING, ANITA H.**, Clinical Assistant Professor of Community Mental Health Nursing. B.A., M.A., University of West Florida; M.S.N., University of South Alabama (2002)
- KING, CLINTON R.**, Senior Instructor in Management. B.S., University of Alabama; M.B.A., University of South Alabama (2001)
- KING, JUDY A.**, Associate Professor of Pharmacology and Pathology. B.A., Carson-Newman College; M.D., Medical University of South Carolina; Ph.D., East Tennessee State (1996) (Graduate)
- KINNIBURGH, LEAH H.**, Assistant Professor of Leadership and Teacher Education. B.S., M.Ed., University of Montevallo; Ed.S., Ph.D., University of Alabama at Birmingham (2006) (Graduate)
- KOVACS, ISTVAN**, Professor Emeritus of Mathematics (1979-1998)
- KOVALESKI, JOHN E.**, Professor of Health, Physical Education and Leisure Studies. B.S., Ohio University; M.A., Central Michigan University; Ph.D., Ball State University (1995) (Graduate)
- KOZELSKY, MARA**, Assistant Professor of History. B.A., Appalachian State University; M.A., West Virginia University; Ph.D., University of Rochester (2005) (Graduate)
- KRACKE, ALICE M.**, Instructor in English. B.A., University of Alabama; J.D., Cumberland School of Law; M.A., Auburn University; A.B.D., Tufts University (2003)
- KRESLEY, KONRAD M.**, Professor Emeritus of Political Science and Criminal Justice (1981-2003)
- LABBE'-COLDSMITH, ELISE E.**, Professor of Psychology. B.A., Loyola University; M.A., Ph.D., Louisiana State University (1986) (Graduate)
- LAMB, GEORGE M.**, Professor Emeritus of Geology (1964-1993)
- LAMBE, NANCY J.**, Instructor in Management. B.S., M.B.A., Illinois Institute of Technology (2007)
- LANDRY, JEFFREY P.**, Associate Professor of Computer and Information Sciences. B.S., M.B.A., University of New Orleans; Ph.D., Florida State University (1998) (Graduate)
- LANE, JOHN M.**, Professor Emeritus of Professional Studies (1967-1999)
- LANE, ROGER S.**, Associate Professor of Biochemistry and Molecular Biology. B.S., McMaster University; M.S., Ph.D., University of Michigan (1977) (Graduate)
- LANGAN, DAVID D., III**, Associate Professor of Computer and Information Sciences. B.A., University of South Alabama; M.S., University of North Carolina; M.S., Ph.D., University of Southwestern Louisiana (1983) (Graduate)
- LANGHINRICHSEN-ROHLING, JENNIFER**, Professor of Psychology. Sc.B., Brown University; M.S., Ph.D., University of Oregon (1998) (Graduate)
- LARSON, DAVID A.**, Professor of Management. B.A., M.A., Michigan State University; Ph.D., University of Maryland (2000) (Graduate)
- LAUDERDALE, W. ELLIOTT**, Assistant Professor of Adult Interdisciplinary Studies. B.S., University of the State of New York; M.A., Ph.D., Cornell University (1993)
- LAUSCH, ROBERT N.**, Professor Emeritus of Microbiology and Immunology. B.S., Muhlenberg College; M.S., Pennsylvania State University; Ph.D., University of Florida (1977) (Graduate)
- LAWRENCE, SHERRY M.**, Instructor of Adult Health Nursing. B.S.N., University of South Alabama; M.S.N., University of Mobile (2008)
- LAWSON, ROBIN M.**, Clinical Associate Professor of Adult Health Nursing. B.S.N., M.S.N., University of South Alabama (2001)
- LEAL, DOROTHY J.**, Professor of Leadership and Teacher Education. B.A., Biola University; M.A., Ed.D., University of Kentucky (2008) (Graduate)
- LEAVESLEY, SILAS J.**, Assistant Professor of Chemical and Biomolecular Engineering. B.S., Florida State University; Ph.D., Purdue University (2008) (Graduate)
- LeDOUX, SUSAN P.**, Professor of Cell Biology and Neuroscience. B.S., McNeese State University; M.S., University of Houston; Ph.D., University of South Alabama (1988) (Graduate)
- LEGENDRE, RICHARD C.**, Professor Emeritus of Chemistry (1964-1999)
- LELONG, MICHEL G.**, Professor Emeritus of Biology (1965-1998)
- LEMCOOL, KATHY E.**, Assistant Professor in Clinical Occupational Therapy. B.S., Eastern Kentucky University; M.A., Texas Women's University; Ph.D., University of South Alabama (1994) (Graduate)
- LEMLEY, LUTHER (TREY)**, Assistant Librarian. B.A., University of Louisville; B.A., M.A., M.M., Indiana University; M.L.I.S., University of Texas; J.D., Indiana University (2006)
- LEWIS, JOE'L P.**, Assistant Professor in Professional Studies. B.S., M.S., University of South Alabama; Ph.D., University of South Alabama (2004) (Graduate)

- LEWIS, MOLLIE E.**, Assistant Professor of History. B.A., Whitman College; Ph.D., Emory University (2008)
- LI, JIE**, Senior Librarian. B.A., West China University of Medical Sciences; M.L.S., University of Washington (1992)
- LI, LONG**, Instructor in Computer and Information Sciences. B.A., Sichuan University, China; M.S., Georgia State University; A.B.D., Virginia Commonwealth University (2008)
- LIGINLAL, DIVAKARAN**, Assistant Professor Computer and Information Sciences. B.S., University of Kerala, India; M.S., Indian Institute of Science, India; Ph.D., University of Arizona (2008)
- LIM, WAN**, Assistant Professor of Cell Biology and Neuroscience. B.A., Wesley College; Ph.D., University of British Columbia (1998)
- LINCOLN, THOMAS**, Professor and Chair of Physiology. B.S., Ph.D., University of Tennessee (2002) (Graduate)
- LINDER, MICHAEL M.**, Associate Professor of Family Medicine; Medical Director for Department of Physician Assistant Studies. B.S., Memphis State University; M.D., University of Tennessee-Memphis (2007)
- LITCHFIELD, BRENDA C.**, Professor of Professional Studies. B.A., University of Florida; M.Ed., University of North Florida; Ph.D., Florida State University (1990) (Graduate)
- LOLLAR, JACQUELINE M.**, Instructor in Maternal/Child Health Nursing. B.S.N., University of Mississippi; M.S.N., University of South Alabama (2005)
- LOMANGINO, HEIDE R.**, Assistant Professor Emeritus of Foreign Languages and Literatures (1975-2005)
- LONGENECKER, HERBERT E., JR.**, Professor of Computer and Information Sciences. B.S., Tulane University; Ph.D., Rockefeller University (1980) (Graduate)
- LOOMIS, ERIC J.**, Associate Professor of Philosophy. B.A., The University of Wyoming-Laramie; Ph.D., University of Texas-Austin (2001) (Graduate)
- LOVE, SYLVIA**, Clinical Assistant Professor of Adult Health Nursing. B.S.N., Troy State University; M.E.D., Auburn University in Montgomery; M.S.N., Troy State University (1998) (Graduate)
- LUNCEFORD, BRETT L.**, Assistant Professor of Communication. B.S., Oregon State University; M.A., California State University-Hayward; Ph.D., The Pennsylvania State University (2007) (Graduate)
- MACALUSO, LEONARD**, Associate Professor of History. A.B., M.A., Emory University; Ph.D., University of Kentucky (1969) (Graduate)
- MACINTYRE, HUGH L.**, Assistant Professor of Marine Sciences. B.A., Cambridge University; M.A., University of Texas-Austin; Ph.D., University of Delaware (2003) (Graduate)
- MADDEN, ELLEN K.**, Instructor in Accounting. B.A., Birmingham-Southern College; M.B.A., Springhill College (2007)
- MAES, JEANNE D.**, Professor of Management. B.S., State University of New York; M.B.A., University of South Alabama; Ph.D., University of Southern Mississippi (1989) (Graduate)
- MAHAN, HOWARD F.**, Professor Emeritus of History (1964-1993)
- MAJOR, CLINTON SMOOT**, Laboratory Instructor in Biology. B.A., College of Atlantic; M.S., University of Maine (2003)
- MAJOR, KELLY M.**, Associate Professor of Biology. B.S., Elmira College; Ph.D., University of Maine (2001) (Graduate)
- MAJORS, SARA C.**, Clinical Associate Professor of Maternal Child Nursing. B.S., M.P.H., University of Alabama in Birmingham (1999) (Graduate)
- MARIN, MIHAELA C.**, Assistant Professor of Foreign Languages and Literatures. B.A., M.A., Babes-Bolyai University, Romania; Ph.D., Tulane University (2008)
- MARK, PATRICIA F.**, Assistant Professor of Communication. B.A., M.B.A., University of South Alabama; Ph.D., University of Southern Mississippi (2004) (Graduate)
- MARSHALL, DOUGLAS A.**, Assistant Professor of Sociology. B.S., Georgia Institute of Technology, M.A., University of North Carolina, Ph.D., University of Virginia (2005) (Graduate)
- MATA, JUAN LUIS**, Assistant Professor of Biology. B.S., M.S., University of Costa Rica; Ph.D., University of Tennessee (2004) (Graduate)
- MATTICS, LEON E.**, Professor Emeritus of Mathematics (1967-1997)
- MATTHEWS, CHARLOTTE T.**, Senior Instructor in Developmental Studies. B.A., William Carey College; M.A., University of Alabama (1986)
- MCADORY, DENISE**, Assistant Professor of Sociology and Anthropology. B.A., Knoxville College; M.A., University of South Alabama; M.A., Mobile College; Ph.D., Union Institute (1995)
- MCCORMICK, VICTORIA J.**, Instructor in English as a Second Language. B.A., Pontificia Universidad Javeriana (2008)
- MCCREADIE, JOHN W.**, Associate Professor of Biological Sciences. B.S., University of Guelph; M.S., Ph.D., Memorial University of Newfoundland (1999) (Graduate)
- MCCREADY, SUSAN E.**, Professor of Foreign Languages and Literatures. B.A., Swarthmore College; M.A., Ph.D., University of Pennsylvania (1998) (Graduate)
- MCDONALD, DANIEL**, Professor Emeritus of English (1966-1992)
- MCGOWAN, MARILYN W.**, Assistant Professor of Leadership. B.S., M.Ed., Ph.D., University of South Alabama (2007) (Graduate)
- MCINTOSH, P. IRENE**, Associate Professor of Professional Studies. B.S., M.S., Ph.D., University of Southern Mississippi; (1996) (Graduate)
- MCIVER, DOROTHY J.**, Professor Emeritus of English (1985-2005)
- MCKINNEY, DAWN**, Senior Instructor in Computer and Information Sciences. B.A., M.S.-C.S., University of South Alabama (1998)
- MCKIVEN, HENRY M., JR.**, Associate Professor of History. B.S., Auburn University; M.A., Virginia Polytechnic Institute; Ph.D., Vanderbilt University (1991) (Graduate)
- MCLAUGHLIN, BECKY R.**, Associate Professor of English. B.A., Goshin College; M.A., University of Arkansas; Ph.D., SUNY-Buffalo (1999) (Graduate)
- MCMULLAN, TARALYN W.**, Instructor in Maternal Child Health Nursing. B.S.N., University of Texas Health Science Center at Houston; M.S.N., University of South Alabama (2006)
- MCMURTRY, IVAN**, Professor of Pharmacology. B.S., University of Wyoming; Ph.D., Colorado State University (2006) (Graduate)
- MEEKER, KEVIN**, Associate Professor of Philosophy. B.A., Wheaton College; M.A., Ph.D., University of Notre Dame (2000) (Graduate)
- MENON, MOHAN**, Professor of Marketing-Chair. B.B.A., Madurai University; M.B.A., University of Madras; D.B.A., Memphis State University (1991) (Graduate)
- MENTON, CATHERINE R.**, Instructor in Maternal Child Health Nursing. B.S.N., M.S.N., University of South Alabama (2007)
- MERRITT, BARBARA**, Instructor in Chemistry. B.S., University of Wisconsin (1998)
- MEYER, MARY W.**, Instructor in Adult Health Nursing, Director of Student Services. B.S.N., M.S.N., University of South Alabama (2005)
- MEYER, THOMAS W.**, Clinical Assistant Professor of Adult Health Nursing. B.S., University of South Alabama; B.S.N., University of Southern Mississippi; M.S.N., University of South Alabama (2001) (Graduate)
- MILLER, HARRISON S.**, Associate Professor of History. B.A., Wesleyan University; M.A., Ph.D., Columbia University (2002) (Graduate)
- MILLER, LYLE B.**, Professor of Performance in Technical Theater and Stage Design. B.F.A., M.F.A., in Design, University of Oklahoma (1985)
- MILLER MARGARET W.**, Professor Emeritus of Biology (1964-2000)
- MILLER, MELBA M.**, Professor Emeritus of Special Education
- MILLER, ROBERT W.**, Instructor in Music and Director of the University Marching Band. B.M.E., Auburn University; M.M., Arizona State University; D.M.A. (ABD), University of Iowa (2008)
- MILLER, SCOTT A.**, Assistant Professor of Chemistry. B.S., University of South Alabama; Ph.D., Vanderbilt University (2008)
- MILLNER, VAUGHN S.**, Assistant Professor of Interdisciplinary Studies-Chair; Interim Dean, School of Continuing Education and Special Programs; Joint Appointment-Assistant Professor of Professional Studies. B.S., University of Alabama; M.S., University of South Alabama; Ph.D., Auburn University (2001) (Graduate)

- MINCHEW, LEIGH ANNE**, Instructor in Maternal Child Health Nursing. B.S., M.S., Troy State University; M.S. University of South Alabama (2007)
- MISHRA, NUTAN**, Assistant Professor of Mathematics and Statistics. B.S., M.S., Ph.D., Indore University, India; M.S., University of South Alabama (2003) (Graduate)
- MISHRA, SATYA N.**, Professor of Statistics. B.S., University of Gorakhpur (India); M.Sc., Benares Hindu University-India; M.A., University of Massachusetts; M.S., Ph.D., Ohio State University (1982) (Graduate)
- MITCHELL, DAVID T.**, Assistant Professor of Economics and Finance. B.S., M.A., Clemson University; Ph.D., George Mason University (2007)
- MOBERG, MARK**, Professor of Anthropology. B.S., University of Iowa; M.A., Ph.D., University of California-Los Angeles (1989) (Graduate)
- MOCKETT, ROBIN J.**, Assistant Professor of Biomedical Sciences. B.S., Queen's University; Ph.D., Southern Methodist University (2007)
- MOFFATT, IAIN**, Assistant Professor of Mathematics and Statistics. M.S., University of St. Andrews, UK; Ph.D., University of Warwick, UK (2008) (Graduate)
- MOHR, CLARENCE L.**, Professor of History-Chair. A.B., Birmingham Southern College; M.A., Ph.D., University of Georgia (1998) (Graduate)
- MOLLISE, DOROTHY C.**, Associate Professor of Developmental Studies; Director, Student Academic Success and Retention. B.A., Emory University; M.Ed., Ph.D., Georgia State University (1990) (Graduate)
- MONHEIT, MICHAEL L.**, Associate Professor of History. B.A., University of California at Berkeley; M.A., Ph.D., Princeton University (1991) (Graduate)
- MOODY, REGINALD F.**, Assistant Professor of Communication. B.A., M.A., University of South Alabama; Ph.D., University of Southern Mississippi (2006) (Graduate)
- MOORE, CARL C.**, Professor of Management; Dean, Mitchell College of Business. B.S., M.A., Ph.D., University of Alabama (1971) (Graduate)
- MOORE, LAURA M.**, Instructor in Music. B.A., Davidson College; M.M., Peabody Institute of the John Hopkins University; M.M., Ph.D., University of North Carolina at Greensboro (2008)
- MOORE, ROBERT E.**, Associate Professor of Speech Pathology and Audiology-Interim Chair. B.A., M.A., Ph.D., University of Tennessee (2001) (Graduate)
- MOORE, TIMOTHY**, Assistant Professor of Internal Medicine and Pharmacology. B.S., Auburn University; Ph.D., M.D., University of South Alabama (2006) (Graduate)
- MORGAN, CYNTHIA L.**, Clinical Assistant Professor of Maternal/Child Nursing. B.S.N., M.S.N., University of Tennessee-Knoxville; D.N.P., University of South Alabama (2008)
- MORISANI, STEPHEN J.**, Assistant Professor of Chemical and Biomolecular Engineering. B.S., Carnegie-Mellon University; M.S., Ph.D., University of Rhode Island (1982) (Graduate)
- MORRIS, ASHLEY B.**, Assistant Professor of Biology. B.S., University of the South; M.S., University of Tennessee; Ph.D., University of Florida (2007) (Graduate)
- MORRIS, STEPHEN D.**, Professor of Political Science; Director of International Studies. B.A., M.A., Georgia State University; Ph.D., University of Arizona (1989) (Graduate)
- MORTAZAVI, BEHZAD**, Adjunct Assistant Professor in Marine Sciences. Ph.D., Florida State University (2008)
- MOSLEY, DONALD C., JR.**, Associate Professor of Management. B.A., Millsaps College; M.B.A., University of South Alabama; Ph.D., Mississippi State University (2000) (Graduate)
- MOULTON, V. GORDON**, President. B.S., Georgia Institute of Technology; M.B.A., Emory University (1966) (Graduate)
- MOUSSALLI, STEPHANIE D.**, Assistant Professor of Accounting. B.S., University of Oregon; B.A., B.S.B.A., M.P.A., M.A., University of West Florida; Ph.D., University of Mississippi (2008)
- MOZUR, JOSEPH P.**, Professor of Languages and Literatures-Russian. A.A., Jefferson State Junior College; B.A., St. Bernard College; M.A., University Regensburg, F.R.G.; Ph.D., University of North Carolina (1984)
- MULEKAR, MADHURI S.**, Professor of Statistics. B.Sc., M.Sc., University of Bombay; Ph.D., Oklahoma State University (1990) (Graduate)
- MURDICK, KENT G.**, Instructor in Mathematics and Statistics. B.M., Peabody Conservation of Music; M.S., Nova University; M.S., Florida Atlantic University (2004)
- MURPHREE, VANESSA D.**, Associate Professor of Communication. B.A., M.A., University of Alabama, Ph.D. University of Southern Mississippi (2005) (Graduate)
- MURRAY, GENEVRA F.**, Instructor in Anthropology. B.A., Ph.D., University of Pennsylvania (2008)
- MYERS, CHARLENE M.**, Clinical Associate Professor of Adult Health Nursing. B.S.N., M.S.N., University of South Alabama (1995) (Graduate)
- MYLES, HATTIE M.**, Adjunct Assistant Professor of Educational Leadership; Assistant Dean, College of Medicine (1994)
- NADLER, MARGARET MOORE**, Instructor in Community/Mental Health Nursing. B.S.N., M.S.N., University of South Alabama (2006)
- NELSON, DAVID A.**, Professor of Mechanical Engineering-Chair. B.S., Duke University; M.S., Ohio State University; Ph.D., Duke University (2006) (Graduate)
- NELSON, RONALD L.**, Assistant Professor of Political Science and Criminal Justice. B.S., Texas A&M University; J.D., University of Miami Law School; M.A., New School for Social Research; Ph.D., University of Texas at Austin (2003) (Graduate)
- NERO, MURIEL D.**, Assistant Librarian. B.A., University of Montevallo, M.Ed., University of South Alabama, M.L.I.S., University of Alabama (2005)
- NEWELL, CHARLES W.**, Associate Professor of Radiologic Sciences-Chair. B.S., William Carey College; M.S., University of Southern Mississippi; R.T., Providence Hospital; Ed.D., Auburn University (1976)
- NI CHADHAIN, SINEAD M.**, Assistant Professor of Biology. B.S., University of Scranton; Ph.D., University of Delaware (2008)
- NICHOLLS, J. KEITH**, Associate Professor of Political Science; Director, USA Polling Group. B.A., M.A., Memphis State University; Ph.D., Florida State University (1990) (Graduate)
- NIGOTA, JOSEPH A.**, Associate Professor of History. B.S.F.S., Georgetown University; M.A., Ph.D., Emory University (1966) (Graduate)
- NOLAND, THOMAS GORDON**, Associate Professor of Accounting. B.A., University of Kentucky; M.S., Georgia Institute of Technology; Ph.D., University of Mississippi (2010)
- NORRELL, PHILLIP M.**, Associate Professor of Health, Physical Education, and Leisure Studies. B.S., M.S., University of Southern Mississippi; M.S.S., United States Sports Academy; M.A., Webster University; Ed.D., University of Alabama (2002) (Graduate)
- NORRIS, KIMBERLY C.**, Instructor of Maternal/Child Nursing. B.S., B.S.N., M.S.N., University of South Alabama (2008)
- NORRIS, PHILLIP**, Associate Professor of Interdisciplinary Studies; Director, USA Baldwin County. B.A., M.S.W., University of Alabama; M.Ed., Ed.D., University of Massachusetts (1981) (Graduate)
- NOVOVIC, MARIJA**, Laboratory Instructor in Physics. B.S., University of NIS- Yugoslavia; M.S., Louisiana Tech University (2004)
- NOWLIN, BARRY**, Assistant Professor of English. B.A., M.A., Ph.D., University of South Alabama (1989)
- OAKES, JOHN E.**, Professor of Microbiology and Immunology. B.S., M.S., University of Nebraska; Ph.D., University of Tennessee (1977) (Graduate)
- O'BRIEN, JOHN J.**, Assistant Professor of Biology; Adjunct Assistant Professor of Marine Sciences. B.A., Stanford University; Ph.D., University of California-Santa Barbara (1993) (Graduate)
- O'CONNOR, TRACY**, Clinical Assistant Professor in Occupational Therapy. B.S., Tuskegee University; B.S., M.S., Auburn University; OTD, University of St. Augustine
- O'KEEFE, CATHERINE A.**, Senior Instructor in Health, Physical Education and Leisure Studies. B.A., Springhill College; M.Ed., University of South Alabama (1990)
- OLSEN, JOSEPH M.**, Professor of Civil Engineering. B.S., M.S., Ph.D., Massachusetts Institute of Technology (P.E., UT) (1987)
- OLSON, JACK W.**, Professor of Pharmacology. B.S., University of New Mexico; Ph.D., University of Southern California (1997) (Graduate)
- OMAR, HUSAM ANWAR**, Associate Professor of Civil Engineering. B.S., M.S., University of Texas-Arlington; Ph.D., University of Manitoba (1988) (Graduate)

- OP'T HOLT, TIMOTHY B.**, Professor of Cardiorespiratory Care. B.S., Michigan State University; M.H.P.E., University of Illinois; Ed.D., Auburn University (1994)
- ORTMANN, ALICE C.**, Assistant Professor of Marine Sciences. B.S., Simon Fraser University; Ph.D., University of British Columbia (2008)
- O'SHEA, TIMOTHY**, Associate Professor of Political Science and Criminal Justice. B.A., Southern Illinois University; M.A., Northeastern Illinois University; M.A., Ph.D., University of Illinois at Chicago (1996) (Graduate)
- OSZUSCIK, PHILIPPE**, Associate Professor of Art History. B.A., Northeast Louisiana State University; M.A., Louisiana State University; Ph.D., University of Iowa (1977) (Graduate)
- OVERSTREET, PAUL R.**, Instructor in Computer and Information Sciences. B.S., M.S., University of Alabama (2006)
- PALANKI, SRINIVAS**, Professor of Chemical Engineering-Chair. B.S., Indian Institute of Technology, Delhi; M.S.E., Ph.D., The University of Michigan Ann Arbor (2007) (Graduate)
- PALOMBO, ALEESHA S.**, Senior Instructor in Physical Education and Leisure Studies. B.A., University of South Florida; M.A., University of South Alabama (1991)
- PANNELL, LEWIS**, Professor of Biochemistry. B.S., Ph.D., University of Canterbury, New Zealand (2002) (Graduate)
- PARDUE, HAROLD J.**, Professor of Computer and Information Sciences; IS Coordinator. B.A., M.S., University of South Alabama; Ph.D., Florida State University (2000) (Graduate)
- PARK, KYEONG**, Associate Professor of Marine Sciences. B.E., Seoul National University; M.S., State University at New York Stony Brook; Ph.D., College of William and Mary (2003) (Graduate)
- PARKER, JAMES C.**, Professor of Physiology. B.S., Washington and Lee University; Ph.D., University of Mississippi (1977) (Graduate)
- PARKER, MARTIN R.**, Professor of Electrical and Computer Engineering. B.Sc., Glasgow University, UK; Ph.D., Salford University, UK (1996) (Graduate)
- PASTUKH, VICTOR**, Instructor of Pharmacology. M.S., Ph.D., Kiev State University, Ukraine (2006)
- PAYNE, LINDA**, Associate Professor of English. B.A., Messiah College; M.A., Ph.D., University of Delaware (1990) (Graduate)
- PENNYWELL, GWENDOLYN P.**, Assistant Professor of Economics and Finance. B.S., Prairie View A&M University; A.B.D., Georgia State University (2007)
- PEREZ-PINEDA, FEDERICO**, Associate Professor of Languages and Literatures-Spanish. B.A., State University of New York; M.A., Ph.D., Pennsylvania State University (1989)
- PERINE, DONALD R.**, Assistant Professor of Chemistry. B.S., Dillard University; M.S., Ohio State University; M.B.A., University of South Alabama; D.A., Middle Tennessee State University (2008)
- PETERSON, KAREN W.**, Instructor in English. B.A., University of South Alabama; M.A., University of New Orleans (2004)
- PHAN, ANH-VU**, Associate Professor of Mechanical Engineering. M.E., Ho Chi Minh City University of Technology; M.S., National Polytechnic Institute of Grenoble; M.E., Ph.D., University of Montreal (2002) (Graduate)
- PHAREZ, MARYE C.**, Clinical Assistant Professor of Community Mental Health Nursing. B.S.N., M.S.N., University of South Alabama (2002) (Graduate)
- PICKETT, GABRIELLA SEGALLA**, Assistant Professor of Mathematics. Laurea in Mathematics, Università Degli Studi di Padova; Ph.D., Tulane University (1992)
- PICOU, J. STEVEN**, Professor of Sociology. B.A., Southeastern Louisiana University; M.A., Ph.D., Louisiana State University (1988) (Graduate)
- PIETRI, PAUL H., JR.**, Professor of Management; Director, Management Development. B.A., Southeastern Louisiana University; M.S., Louisiana State University; D.B.A., Mississippi State University (1975) (Graduate)
- PILLEN, CORNELIUS**, Professor of Mathematics. Diploma, Albert-Ludwigs University; M.S., Ph.D., University of Massachusetts (1992) (Graduate)
- PIPER, SUSAN N.**, Instructor in Leadership and Teacher Education. B.S., M.Ed., A.B.D., Auburn University (2008)
- POHLMANN, CHERIE L.**, Senior Instructor in Clinical Radiologic Sciences. B.S., William Carey College; M.S., University of South Alabama (1999)
- POSTON, TED L.**, Assistant Professor of Philosophy. B.A., The Baptist College of Florida; M.A., Trinity Evangelical Divinity School; M.A., University of Wisconsin at Milwaukee (2006) (Graduate)
- POWERS, SEAN PAUL**, Associate Professor of Marine Sciences. B.S., Loyola University; M.S., University of New Orleans; Ph.D., Texas A&M University (2002) (Graduate)
- PRENDERGAST, AMY C.**, Senior Librarian. B.A., Mississippi University for Women; M.A., University of South Alabama; M.L.S., University of Alabama (1992)
- PRESCOTT, GREGORY L.**, Senior Instructor in Accounting. B.S., Troy State University; M.A., University of South Alabama (1994)
- PROKHOROV, VASILII A.**, Professor of Mathematics. M.Sc., Moscow State University; Ph.D., Dr.Sc., Steklov Mathematical Institute (1999) (Graduate)
- PRUITT, WILLIAM CHARLES**, Senior Instructor in Clinical Cardiorespiratory Care. B.A., Georgia College; M.B.A., Brenau College (1999)
- PUGH, STEVEN F.**, Associate Professor of Health, Physical Education, and Leisure Studies. B.S., M.Ed., University of South Alabama; Ph.D., Florida State University (1998) (Graduate)
- QUIETT, KIMBERLY J.**, Assistant Professor of Adult Health Nursing. B.S.N., Samford University; Ida Moffett School of Nursing; M.S.N., University of South Alabama; D.N.S., Louisiana State University Health Sciences Center (2007)
- QUINN, BERNARD J.**, Professor Emeritus of Foreign Languages and Literatures (1979-2004)
- RABER, MICKI S.**, Clinical Assistant Professor of Community Mental Health Nursing. B.S.N., University of South Alabama; M.S.N., Mississippi University for Women (2001) (Graduate)
- RACHEK, LYUDMILA**, Assistant Professor of Cell Biology and Neuroscience. M.Sc., Kiev State University, Ukraine; Ph.D., Ukrainian Academy of Sciences, Ukraine (2005) (Graduate)
- RACZKOWSKI, CHRISTOPHER T.**, Assistant Professor of English. B.A., Middleburg College; M.A., Ph.D., Indiana University (2006) (Graduate)
- RAHMAN, ARIFUR**, Professor of Electrical and Computer Engineering. B.S., University of Dacca, Bangladesh; M.S., Texas A&M University; Ph.D., University of Kentucky (1982) (Graduate)
- RAINOSEK, ALVIN P.**, Professor of Statistics. B.S., B.A., Ph.D., Texas A&M University (1970) (Graduate)
- RALPH, JOAN R.**, Professor Emeritus of Nursing (1977-1991)
- RAMKISSOON, ISHARA**, Assistant Professor of Speech Pathology and Audiology. B.S.H.T., University of Durban-Westville, M.A., Ph.D., University of Illinois at Urbana-Champaign (2005) (Graduate)
- RAND, ANGELA M.**, Assistant Librarian. B.A., Athens State University; M.L.I.S., University of Southern Mississippi (2008)
- RAVINE, TERRENCE J.**, Assistant Professor of Biomedical Sciences. B.S.M.T., M.S., University of Akron; Ph.D., Medical College of Virginia/VCU (2002)
- REIDY, DENNIS E.**, Instructor in Psychology. B.S., University of Scranton; M.S., Ph.D., University of Georgia (2008) (Graduate)
- RESTAD, CAPTAIN MARK K.**, Assistant Professor of Air Force Studies. B.A., University of Washington; M.S., Air Force Institute of Technology (2007)
- RETZLAFF-ROBERTS, DONNA L.**, Professor of Management. B.S., M.S., University of Illinois; Ph.D., University of Cincinnati (2003) (Graduate)
- RHODES, ROSEMARY S.**, Professor of Adult Health Nursing, Associate Dean for Academic Affairs of Nursing, College of Nursing. B.S.N., University of Alabama-Birmingham; M.N., University of Mississippi; D.S.N., Louisiana State University (1977) (Graduate)
- RICH, THOMAS**, Assistant Professor of Pharmacology. B.A.E., M.S., Georgia Institute of Technology; Ph.D., Vanderbilt University (2005) (Graduate)
- RICHARDS, ELIZABETH A.**, Assistant Professor of Visual Arts. B.A., Colby College; M.A., Ph.D., Cornell University (2007)
- RIGSBY, KATHERINE B.**, Instructor in Communication. B.A., M.A., University of South Alabama (2005)

- RINNE, CHRISTINE R.**, Assistant Professor of Foreign Languages and Literature. B.A., Valparaiso University; M.A., Ph.D., Indiana University-Bloomington (2008)
- RIVIZZIGNO, VICTORIA L.**, Associate Professor of Geography; Assistant Dean of the College of Arts and Sciences. B.S., M.A., State University of New York-Buffalo; Ph.D., Ohio State University (1978)
- ROBENSTINE, CLARK**, Professor of Professional Studies. B.S., Ohio University; M.S., University of Kentucky; Ph.D., Ohio State University (1992) (Graduate)
- ROBERTSON, JUSTIN C.**, Associate Librarian. B.A., Emory University; M.L.I.S., Clark Atlanta University (2000)
- ROBINSON, BRIDGET K.**, Instructor in Adult Health Nursing. B.S., M.S.N., University of South Alabama (2005)
- ROBINSON, CHERYL B.**, Clinical Assistant Professor of Maternal/Child Health Nursing. B.S.N., University of Alabama; M.S., University of Colorado (1994) (Graduate)
- ROBINSON, LYNN**, Professor Emeritus of Marketing. (1968-1989)
- ROBINSON, MARY ANN**, Associate Professor of Professional Studies. B.S., M.Ed., Ph.D., University of South Alabama (1999) (Graduate)
- ROCIC, PETRA**, Assistant Professor of Biochemistry and Molecular Biology. B.A., Oberlin College; Ph.D., University of Alabama (2008) (Graduate)
- ROCKWELL, STEVEN C.**, Associate Professor of Communication. B.A., University of South Alabama; M.A., Ph.D., University of Alabama (1998) (Graduate)
- RODDY, HARRY L., JR.**, Assistant Professor of Foreign Languages and Literatures. B.S., Tulane University, M.A., Ph.D., The University of Texas at Austin (2005)
- RODGERS, JANET M.**, Instructor in Adult Health Nursing. B.S.N., University of Mobile; M.S.N., University of South Alabama (2005)
- RODNING, CHARLES B.**, Professor of Surgery, Associate Professor of Cell Biology and Neuroscience. B.S., Gustavus Adolphus College; M.D., University of Rochester; Ph.D., University of Minnesota (1981) (Graduate)
- RODRIGUEZ, HAROLD V.**, Professor Emeritus of Engineering (1969-1993)
- ROE, DIANE**, Instructor in Chemistry. B.S., University of South Alabama (1998)
- ROGERS, DANIEL E.**, Professor of History. B.A., University of Alabama; M.A., Ph.D., University of North Carolina-Chapel Hill (1991) (Graduate)
- ROHLING, MARTIN L.**, Professor of Psychology. B.S., University of Illinois at Urbana-Champaign; B.A., Southern Illinois University Carbondale; M.A., Ph.D., University of Alabama (2001) (Graduate)
- ROHRER, JAMES W.**, Associate Professor of Microbiology and Immunology. B.A., Ph.D., University of Kansas (1979) (Graduate)
- ROMEY, ELIZABETH A.**, Assistant Professor of Leadership and Teacher Education. A.A., B.A., Simon's Rock College of Bard; M.A., University of Georgia; Ph.D., University of Connecticut (2006) (Graduate)
- ROUSSEL, LINDA A.**, Professor of Community/Mental Health Nursing. B.S.N., William Carey College; M.S., University of Southern Mississippi; D.S.N., University of Alabama-Birmingham (2003) (Graduate)
- ROWE, CONNIE**, Senior Instructor in Developmental Studies. B.S., Auburn University; M.A., University of South Alabama (1990)
- ROWELL, THOMAS L.**, Assistant Professor of Music. A.A., Northeast Mississippi Junior College; B.M., Union University; M.M., Austin Peay State University; D.M.A., Southwestern Baptist Theological Seminary (2005) (Graduate)
- ROY, DEBRA A.**, Instructor in English. B.A., University of Missouri; M.A., University of Virginia; Ph.D., Rutgers University (2007)
- RUSS, SAMUEL H.**, Assistant Professor of Electrical and Computer Engineering. B.A., Ph.D., Georgia Institute of Technology (2007) (Graduate)
- RUSSELL, EMILY A.**, Instructor of Maternal/Child Nursing. B.S., University of Alabama; M.S., University of West Florida (2007)
- RUSSELL, THOMAS**, Professor Emeritus of Curriculum and Instruction (1966-1995)
- RYAN, REBECCA**, Professor of Adult Health Nursing. B.S., Jacksonville State University; M.P.A., Georgia Southern University; Ed.D., Georgia Southern University (1999) (Graduate)
- RYDER, ROY H.**, Professor of Geography. B.S., M.S., University of Glasgow; Ph.D., University of Florida (1989)
- SADOVSKAYA, VICTORIA V.**, Associate Professor of Mathematics. B.S., M.S., St. Petersburg State University, Russia; Ph.D., Pennsylvania State University (2003) (Graduate)
- SAKLA, ADEL A.**, Associate Professor of Electrical and Computer Engineering. B.S., Assiut University (Egypt); M.S., Cairo University (Egypt); Ph.D., University of Illinois (1979) (Graduate)
- SAMANT, LALITA**, Assistant Professor of Cell Biology and Neuroscience. B.S., Ph.D., University of Mumbai, India (2004) (Graduate)
- SAMANT, RAJEEV S.**, Assistant Professor of Pharmacology. M.S., Ph.D., Indian Institute of Technology, Powai, Bombay, India (2004) (Graduate)
- SAMMONS, J. MICHAEL**, Instructor in Music. B.M., University of Florida; M.M., A.B.D., University of Arizona (2008)
- SANDERS, JUSTIN M.**, Associate Professor of Physics. B.S., Texas A&M University; Ph.D., Kansas State University (1995) (Graduate)
- SANFORD, JULIE T.**, Associate Professor of Adult Health Nursing. B.S.N., University of Alabama-Tuscaloosa; M.S.N., University of South Alabama; D.N.S., Louisiana State University Health sciences Center (2006) (Graduate)
- SANTOLI, SUSAN P.**, Associate Professor of Leadership and Teacher Education, B.A., Oklahoma State University; M.R.C.P., University of Oklahoma; Ph.D., Auburn University (2000) (Graduate)
- SAUER, JANICE A.**, Senior Librarian. B.A., Marquette University; M.L.S., University of Alabama (1992)
- SAWYER, CAROL F.**, Assistant Professor of Earth Sciences. B.S., Montana State University; M.S., Ph.D., Texas State University (2007)
- SCAFFA, MARJORIE E.**, Professor of Occupational Therapy. B.A., University of Maryland; M.S., Virginia Commonwealth University; Ph.D., University of Maryland (1993) (Graduate)
- SCAFFIDI, FREDERICK M.**, Professor of Health, Physical Education and Leisure Studies-Chair. B.A., University of South Carolina; M.S., Hunter College; Ph.D., Vanderbilt University (1980) (Graduate)
- SCAMMELL, JONATHAN**, Professor of Pharmacology; Professor and Chair of Comparative Medicine. B.S., University of Alabama-Tuscaloosa; Ph.D., University of Florida (1986) (Graduate)
- SCHAFFER, STEPHEN W.**, Professor of Pharmacology. B.S., Buena Vista College; Ph.D., University of Minnesota (1981) (Graduate)
- SCHNEIDER, NICOLE A.**, Instructor in Visual Arts. B.F.A., Baylor University; M.F.A., University of Wisconsin-Madison (2008)
- SCHROEDER, WILLIAM W.**, Professor of Marine Sciences. B.S., San Diego State University; Ph.D., Texas A&M University (1971)
- SCHULER, MICHELLE**, Assistant Professor of Comparative Medicine. B.S., Pennsylvania State University; D.V.M., Auburn University; Ph.D., University of Alabama at Birmingham (2003) (Graduate)
- SCHULZE, CORINA S.**, Instructor in Political Science and Criminal Justice. B.A., New Mexico State University; M.A., Ph.D., University of New Orleans (2008) (Graduate)
- SEBASTIAN, GLENN R.**, Associate Professor Emeritus of Geography (1967-2007)
- SEGAL, MARK A.**, Professor of Accounting. B.A., M.B.A., J.D., Tulane University; L.L.M., Emory University (1987) (Graduate)
- SELLERS, DANIEL E.**, Professor Emeritus of Speech Pathology and Audiology (1976-2003)
- SHAH, ARVIND K.**, Professor Emeritus of Statistics (1976-2001)
- SHAMBACK, BENJAMIN J.**, Associate Professor of Art and Art History. B.A., Central Connecticut State University; M.F.A., Fontbonne College (2001) (Graduate)
- SHARLAND, ALEXANDER P.**, Associate Professor of Marketing. B.A., University of Stirling; M.B.A., Virginia Tech; Ph.D., Florida State University (2008) (Graduate)
- SHARPE, THOMASINA**, Assistant Professor of Family Practice. B.S., M.D., University of South Alabama (1998)
- SHAW, EDWARD L., JR.**, Professor of Leadership and Teacher Education. A.B., University of Georgia; M.Ed., Columbus State

- University; Ed.D., University of Georgia (1987) (Graduate)
- SHAW, THOMAS C.**, Assistant Professor of Political Science and Criminal Justice. B.S., M.A., University of Southern Mississippi; Ph.D., University of New Orleans (2005) (Graduate)
- SHEARER, ROBERT A.**, Professor of Management, Assistant to the President (Academic). B.A., Belhaven College; M.Ed., University of Tampa; J.D., Stetson University of Law (1986) (Graduate)
- SHELLY-TREMBLAY, JOHN F.**, Assistant Professor of Psychology. B.S., Colorado State University; M.A., The New School for Social Research; Ph.D., The City University of New York (2002) (Graduate)
- SHERMAN, TIMOTHY D.**, Associate Professor of Biological Sciences. B.S., Arkansas Technical University; Ph.D., Texas A&M University (1993) (Graduate)
- SHIPP, ROBERT L.**, Professor of Marine Sciences-Chair, Adjunct Professor of Biology. B.S., Spring Hill College; M.S., Ph.D., Florida State University (1971) (Graduate)
- SILVER, DANIEL**, Professor of Mathematics. B.S., Trinity College; Ph.D., Yale University (1983) (Graduate)
- SIMPSON, JENNIFER L.**, Instructor in Leadership and Teacher Education. B.A., Southern Louisiana University; M.Ed., University of South Alabama (2005)
- SIMPSON, LARRY B.**, Professor of Art. B.F.A., Minnesota School of Art; M.F.A., Michigan State University (1991)
- SINNOTT, JOAN**, Associate Professor of Research Psychology; Adjunct Associate Professor of Speech Pathology and Audiology. B.A., Indiana University; Ph.D., University of Michigan (1988) (Graduate)
- SKIADAS, MARGARITA**, Assistant Professor of Art and Art History. B.F.A., College of Santa Fe; M.F.A., University of Colorado at Boulder (2001)
- SMITH, AGNES**, Associate Professor of Leadership and Teacher Education. B.S., University of South Alabama; M.Ed., Northeast Louisiana University; Ed.D., Auburn University (1997) (Graduate)
- SMITH, ANITA J.**, Associate Professor of Maternal/Child Health Nursing. B.S.N., M.N., University of Washington; Ph.D., University of San Diego (2006) (Graduate)
- SMITH, JOHN W.**, Associate Professor of Professional Studies. B.S., Berry College; M.Ed., West Georgia College; Ed.D., Mississippi State University (2008)
- SMITH, KANDY K.**, Associate Professor of Adult Health Nursing. B.S.N., University of Southern Mississippi; M.S.N., Emory University; D.N.S., Louisiana State University (2006) (Graduate)
- SMITH, MELISSA E.**, Instructor in Computer and Information Sciences. B.S., Troy State University; M.S., University of South Alabama (2006)
- SMITH, PHILLIP T.**, Assistant Professor of Physician Assistant Studies. B.S., University of Mississippi Medical Center; M.S., University of South Alabama (2008)
- SNEATH, JULIE Z.**, Associate Professor of Marketing. B.S., University of Arkansas; M.S., Ph.D., Georgia State University (2003) (Graduate)
- SNOW, DEREK B.**, Instructor in Computer and Information Sciences. B.S., M.S., University of South Alabama (2005)
- SOLODUSHKO, VICTOR G.**, Assistant Professor of Pharmacology. B.S., M.S., Ph.D., T. Shevchenko Kiev State University (2003) (Graduate)
- SOMMERHÄUSER, YORCK**, Assistant Professor of Mathematics and Statistics. M.A., Ph.D., Ludwig-Maximilians-Universität München (2007)
- SPAIN, LINDA**, Senior Instructor in English. B.A., M.A., University of South Alabama (1991)
- SPAKE, DEBORAH F.**, Professor of Marketing; Associate Dean, Mitchell College of Business. B.A., University of South Alabama; M.A., Ph.D., University of Alabama (2002) (Graduate)
- SPARKS, MEGAN S.**, Instructor in Communication. B.A., M.A., University of South Alabama (2007)
- SPECTOR, MICHAEL P.**, Professor of Biomedical Sciences. Adjunct Assistant Professor of Microbiology and Immunology. B.S., Philadelphia College of Pharmacy and Science; Ph.D., Marshall University School of Medicine and West Virginia University (1988) (Graduate)
- ST. CLAIR, JUSTIN M.**, Assistant Professor of English. B.A., Washington and Lee University; M.A., Ph.D., University of Iowa (2007) (Graduate)
- STANFIELD, CINDY L.**, Associate Professor of Biomedical Sciences and Director of Health Pre-Professional Program. B.S., Ph.D., University of California, Davis (1992) (Graduate)
- STARK, JOHN**, Professor Emeritus of Chemical and Biomolecular Engineering (1965-1989)
- STEADMAN, JOHN W.**, Professor of Electrical and Computer Engineering-Dean, College of Engineering. B.S., M.S., University of Wyoming; Ph.D., Colorado State University (2003) (Graduate)
- STEARNS, J. DAVID**, Adjunct Professor of Educational Leadership; Associate Vice President for Enrollment Services. B.A., Fort Lewis College; M.A., Adams State College; Ed.D., University of Alabama (1985)
- STEFURAK, JAMES R.**, Assistant Professor of Professional Studies. A.B., M.Ed., Ph.D., University of Georgia (2007) (Graduate)
- STENSON, ALEXANDRA C.**, Assistant Professor of Chemistry. B.S., Ph.D., Florida State University (2005)
- STEVENS, TROY**, Professor of Pharmacology. B.S., Chadron State College; M.S., Ph.D., Colorado State University (1996) (Graduate)
- STRADA, SAMUEL J.**, Professor of Pharmacology; Dean, College of Medicine. B.S., M.S., University of Missouri-Kansas City; Ph.D., Vanderbilt University (1983) (Graduate)
- STRANGE, JOHN H.**, Professor of Professional Studies. B.A., Duke University; M.A., Ph.D., Princeton University (1990) (Graduate)
- STRONG, MICHELE M.**, Assistant Professor of History. B.A., Meredith College; M.A., University of North Carolina; Ph.D., University of North Carolina-Chapel Hill (2007)
- STUTSMAN, DOUGLAS**, Professor Emeritus of Economics (1968-1995)
- STUTSMAN, SAMUEL T.**, Instructor in Geography. B.S., University of South Alabama; M.S., University of Alabama (2002)
- SUBERLY, LYNN A.**, Assistant Professor of Accounting. B.S., Ph.D., Florida State University; M.P.A., University of Nebraska at Omaha (2006) (Graduate)
- SUMMERLIN, AMEINA S.**, Instructor in Mathematics and Statistics. B.S., University of Mobile; M.S., University of South Alabama (2002)
- SURRY, DANIEL W.**, Associate Professor of Professional Studies. B.S., University of Alabama-Tuscaloosa; M.S., University of South Alabama; Ed.D., University of Georgia (1999) (Graduate)
- SWEENEY, ROBERT B., JR.**, Associate Professor of Computer and Information Sciences; ITE Coordinator. B.S., Auburn University; M.S., Memphis State University; Ph.D., University of Memphis (1999) (Graduate)
- SWOFFORD, JAMES L.**, Professor of Economics. B.A., University of Richmond; M.A., Ph.D., University of Florida (1984) (Graduate)
- SYKORA, RICHARD E.**, Assistant Professor of Chemistry. B.S., Troy State University; Ph.D., Auburn University (2005) (Graduate)
- SYLVESTER, NICHOLAS D.**, Professor of Chemical and Biomolecular Engineering. B.S., Ohio University; Ph.D., Carnegie-Mellon University P.E. (OH) (1996) (Graduate)
- SZEDLMAYER, STEPHEN T.**, Assistant Professor of Research-CRDI. B.A., Millersville University of Pennsylvania; M.S., University of South Florida; Ph.D., College of William and Mary (1991)
- TALBOTT, RICHARD E.**, Professor of Speech Pathology and Audiology; Dean of Allied Health Professions. B.S., M.S., West Virginia University; Ph.D., University of Oklahoma Health Sciences Center (2003) (Graduate)
- TAN, MING**, Assistant Professor of Cell Biology and Neuroscience. Ph.D., University of Texas-Houston; M.D., West China University (2007) (Graduate)
- TASHBIN, GHOLAMREZA**, Instructor in Professional Studies. B.S., M.B.A., Springhill College; ABD, University of South Alabama (2006)
- TATE, VICKI L.**, Senior Librarian; Head, Government Documents. B.A., Knox College; B.S., Illinois State University; M.S., University of Illinois (1995)



- TAYLOR, APRIL D.**, Instructor in Communication. B.S., M.S., University of Southern Mississippi (1998)
- TERWEY, WESLEY D.**, Instructor in Earth Sciences. B.A., B.S., Valparaiso University; M.S., Ph.D., Colorado State University (2008)
- THAKUR, RAJIV R.**, Instructor in Earth Sciences. B.A., M.A., University of Delhi; M.A., University of Akron (2008)
- THOMAS, THOMAS G., JR.**, Associate Professor of Electrical and Computer Engineering. B.S., B.S.E.E., University of South Alabama; M.S.E.E., University of Alabama at Birmingham; Ph.D., University of Alabama at Huntsville (1999) (Graduate)
- THOMPSON, JAMES J.**, Professor Emeritus of Behavioral Studies and Educational Technology (1967-1995)
- TODD, CARL E.**, Professor Emeritus of Education (1967-1986)
- TOELKEN, KATHRYN I.**, Assistant Professor of Communication. B.A., University of Michigan-Flint; M.A., Ph.D., Wayne State University (2007) (Graduate)
- TOWNSLEY, MARY I.**, Professor of Physiology. B.A., Lycoming College; Ph.D., University of California-Davis (1984) (Graduate)
- TRISLER, STEVEN W.**, Assistant Professor of Military Science (2008)
- TRUMBO, GEOFFREY**, Instructor in English. B.A., University of Kentucky; M.F.A., University of Alabama; M.A., University of Kentucky (2007)
- TUNKS, KARYN W.**, Assistant Professor of Leadership and Teacher Education. B.S., M.Ed., University of South Alabama; Ph.D., Florida State University (2004) (Graduate)
- TURNER, JOHN G.**, Assistant Professor of History. B.A., Middlebury College; M.A., University of Notre Dame; M.Div., Louisville Presbyterian Theological Seminary; Ph.D., University of Notre Dame (2006) (Graduate)
- TURNER, LISA A.**, Professor of Psychology. B.S., M.A., Ph.D., University of Alabama (1993) (Graduate)
- TURNIPSEED, DAVID L.**, Professor of Management. B.S., M.B.A., Ph.D., University of Alabama (2007) (Graduate)
- TURNISPEED, PATRICIA H.**, Assistant Professor of Leadership and Teacher Education. A.B., M.A., Ed.D., University of Alabama (2007) (Graduate)
- TURRENS, JULIO F.**, Professor of Biomedical Sciences; Associate Dean and Director of Graduate Studies-College of Allied Health Professions. Adjunct Associate Professor of Biochemistry. M.S., Ph.D., University of Buenos Aires (1990) (Graduate)
- UHLING, GEORGE E.**, Professor Emeritus of Behavioral Studies and Education Technology (1976-2007)
- URBANCIC, FRANK R.**, Professor of Accounting. B.B.A., Cleveland State University; D.B.A., Kent State University (1990) (Graduate)
- VALENTINE, JOHN F.**, Professor of Marine Sciences-MESC. B.A., University of Texas; Ph.D., University of Alabama (1995) (Graduate)
- VAN DYKE, LEON**, Professor of Dramatic Arts-Chair. B.A., Hope College; M.A., Western Michigan University; Ph.D., Wayne State University (2003) (Graduate)
- VAN HANEGHAN, JAMES P.**, Professor of Professional Studies. B.A., M.A., State University of New York; Ph.D., University of Maryland (1995) (Graduate)
- VANDE WAA, ELIZABETH A.**, Associate Professor of Adult Health Nursing. B.S., Hope College; Ph.D., Michigan State University (1994) (Graduate)
- VARGHESE, SANKOORIKAL L.**, Professor of Physics-Chair; Associate Dean of Arts and Sciences. B.Sc., M.Sc., Kerala University-India; M.S., University of Louisville; Ph.D., Yale University (1980) (Graduate)
- VARNADO, S. LOWREY**, Professor Emeritus of English (1967-1990)
- VARNER, GARY L.**, Instructor in Emergency Medical Services. B.S., Auburn University-Montgomery; M.P.H., University of Alabama-Birmingham (2002)
- VARNER, JOYCE M.**, Clinical Associate Professor of Adult Health Nursing. B.S.N., Auburn University-Montgomery; M.S.N., University of Alabama (2001) (Graduate)
- VETROSKY, DANIEL T.**, Assistant Professor of Physician Assistant Studies. B.A., St. Patrick's College; B.H.S., Duke University; M.Ed., Augusta College (1996) (Graduate)
- VINSON, RICHARD G.**, Professor Emeritus of Mathematics (1969 -1999)
- VITULLI, WILLIAM F.**, Professor Emeritus of Psychology (1965-2001)
- VRETTOS, CHERYL D.**, Instructor and Clinical Coordinator in Physician Assistant Studies-Interim Chair. B.S., Florida State University; M.H.S., University of South Alabama (2002)
- WADE, GINA**, Laboratory Instructor in Geography. B.S., University of South Alabama; M.S., Mississippi State University (2003)
- WADE, RYAN**, Instructor in Meteorology. B.S., University of South Alabama; M.S., Mississippi State University (2003)
- WALKER, SUE B.**, Professor of English-Stokes Distinguished Professor. B.S., University of Alabama; M.A., M.Ed., Ph.D., Tulane University (1981) (Graduate)
- WALL, JAMES CHRISTOPHER**, Professor of Physical Therapy; Adjunct Professor of Professional Studies. B.Sc., University of London; M.Sc., University of Surrey; Ph.D., University of London; M.Ed., University of Toronto (1989) (Graduate)
- WALLS, NORETTA**, Clinical Assistant Professor of Community/Mental Health Nursing. B.S.N., M.S.N., University of South Alabama (2003) (Graduate)
- WALTON, CAPTAIN LILLIAN J.**, Associate Professor of Air Force Studies (2008)
- WANG, BIN**, Assistant Professor of Statistics. B.S., University of Science and Technology of China; Ph.D., Case Western University (2003) (Graduate)
- WARD, ALICE S.**, Professor Emeritus of Adult Health Nursing (1978-97)
- WARD, RICHARD L.**, Associate Professor of Communication; B.A., University of Southern California; M.A., University of Southern Mississippi; Ph.D., University of Texas (1996) (Graduate)
- WASELKOV, GREGORY A.**, Professor of Anthropology; Director, Center for Archaeological Studies. B.A., University of Missouri; M.A., Ph.D., University of North Carolina (1988) (Graduate)
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