This training provides a most desirable background for graduate study in the areas of concentration mentioned and in other professional areas such as law, medicine, and business.

Preparation for Engineering Science
Students anticipating pursuit of studies in Engineering Science should follow the guidelines given for Engineering in this catalog when planning their high school and/or community college studies.

Admissions to Engineering Science
Admissions requirements and procedures are the same as for Engineering. See Admission To College, page 76

Engineering Science Advising
Students pursuing a course of study in Engineering Science are assigned to an adviser who is familiar with the requirements of this program and whose special interests match the student's specialization objectives. Comments and requirements spelled out in the section of Engineering Advising in this catalog are applicable to this program.

FOUR-YEAR PROGRAM—BACHELOR OF SCIENCE IN ENGINEERING SCIENCE DEGREE
The College of Engineering offers a curriculum leading to the Bachelor of Science in Engineering Science degree which stresses the scientific aspects of engineering. The curriculum is a four year program with a minimum requirement of 120 semester hours; and it provides the student with an unusual depth of study in mathematics, science, and engineering without limiting the opportunities to broaden one's education in humanities and social sciences. The exact composition of the curriculum followed by a given student is determined by the student with the advice and consent of the academic adviser, and based on the option chosen.

An option in Applied Mathematics covers applied analytical techniques to establish a more fundamental understanding of basic physical phenomena leading to engineering applications. Areas of mathematics considered from an applied viewpoint include modern algebra, theory of algorithms, classical advanced calculus, complex variable, probability and statistics, numerical procedures, approximation theory, operations research, and applied mathematical programming. The use of computers is emphasized. This program provides the student with an opportunity that is not available in either a pure mathematics curriculum or in a design-oriented engineering program.

Baccalaureate Requirements (minimum 120 credit hours)
The Bachelor of Science in Engineering Science degree program requires a strong foundation in mathematics and science; foundation course work in the humanities, Social sciences, and other non-technical areas; a basic knowledge of engineering fundamentals, and culminates in approximately one year of specialized—often interdisciplinary—studies. These basic requirements are further listed below.

1. Humanities, social science, and other non-technical areas requirements
2. Mathematics and science requirements
3. Engineering Science core requirement
4. Specialization requirement

Other Requirements for Engineering Science
The College's English, Mathematics, Continuation, and Graduation requirements for the Engineering degree program are applicable to the Engineering Science degree program.

FIVE-YEAR PROGRAM—MASTER OF SCIENCE IN ENGINEERING SCIENCE DEGREE
Students who, at the beginning of their senior year, are clearly interested in graduate study are invited to pursue a Five-Year program of study leading simultaneously to the Bachelor of Science in Engineering Science and Master of Science in Engineering Science degrees. The keys to this program are:

1. A two-year research program extending through the fourth and fifth year.
2. The opportunity of taking graduate courses during the fourth year and deferring the taking of senior courses to the fifth year. The requirements or the combined degrees do not differ from those for the two degrees pursued separately.
3. Students apply for admission to this program through their advisor, who should be consulted when additional information is needed. General requirements include:
   1. Senior standing (90 credits) with at least 16 upper level engineering credits completed at the University of South Florida in the engineering science curriculum.
   2. A minimum score of 500 on the verbal and quantitative portions of the Graduate Records Examination is expected.
   3. Above-average performance in the engineering science program is expected.

ENGINEERING TECHNOLOGY
The College of Engineering offers a program leading to the degree of Bachelor of Engineering Technology to serve educational needs in engineering-related technology areas. The program normally provides for two years (60 min. credit hours) of study at the University of South Florida following two years (60 credit hours) of successful study in an engineering technology program which has led to an Associate of Science degree. Many Engineering Technology programs of the State System of Community Colleges uniquely mate with this program. The college also offers a four year program in Computer Technology.

BACHELOR OF ENGINEERING TECHNOLOGY
Upon completion of their full four years of study leading to the award of the Bachelor of Engineering Technology degree, students will have gained a well-rounded background concentrated in the following areas: Engineering Technology, Mathematics and Science, Liberal Arts and Social Science, and Management and the area of Computers. A student who has completed this program should be adequately prepared to assume career responsibilities in technical, technical supervisory, or technical executive positions. Prospective students should note, however, that this program is not intended to be an engineering program. Rather, its function is to bridge the gap between design or research professional engineers, technicians and management. It is for this reason that the program consists of a balance of coursework in technical management, as well as Liberal Arts and Social Science areas.

A typical student pursues the bulk of the Engineering Technology coursework, together with much of the mathematics and science coursework within the framework of a junior college Associate of Science degree engineering technology program. Most of the Liberal Arts and Social Science coursework, Management and computer-oriented studies, and some additional engineering technology coursework is taken by the student at USF during the junior and senior years. The typical four years of study thus exhibit approximately the following course work distribution (in credit hours):
Engineering Technology 53
Management & related studies 20
Liberal Arts, Social Science and Electives 32
Mathematics and Science 15

Total 120

Specific students' programs may deviate from this balance to some extent due to the differences in the students' first two years' program contents. At USF a portion of each student's program may be used for one of the areas of concentration listed below.

Computer Systems Technology
Management Engineering Technology
These areas are designed to complement the technical work received at the community college and need not necessarily be in the same field in which the A.S. degree is awarded.

Students entering this program will have their transcript annotated as to the institution from which their technical training was received as well as their technical specialization as designated by that institution.

Also available is a four-year degree in Computer Systems Technology which is mainly software applications.

Admission
In general, students are expected to have successfully completed an Associate of Science degree in Engineering Technology at a community college or to have accomplished equivalent work. The student must have completed a minimum of mathematics through applied integral calculus, a non-calculus physics sequence, and at least 6 semester hours of Freshman English. Limited resources in the presence of increasing enrollment demand have forced limiting enrollment to this program. The college's admissions requirements and procedures are listed on page 76. Students who meet all admission requirements are required to complete a minimum of 60 additional semester hours to receive the Bachelor of Engineering Technology degree.

Bachelor of Engineering Technology (A.S. *degree plus 80 Semester Hrs.)
*One year non-calculus physics and one year calculus required if not completed in A.S. degree.

Areas of Concentration:
A) Computers
B) Management

<table>
<thead>
<tr>
<th>Areas of Concentration:</th>
<th>Semester I</th>
<th>Hrs</th>
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<tbody>
<tr>
<td>Junior Year:</td>
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<tr>
<td>COC 3300 Introduction to Computers I</td>
<td>3</td>
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<tr>
<td>ECO 2023 Economic Principles (Microeconomics)</td>
<td>3</td>
<td></td>
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<tr>
<td>EGN 3613 Engineering Economy I</td>
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<tr>
<td>ETI 4600 Industrial Systems</td>
<td>3</td>
<td></td>
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<tr>
<td>ACG 2001 Elementary Accounting I</td>
<td>3</td>
<td></td>
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<td></td>
<td>15</td>
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<tr>
<td>Semester II</td>
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<tr>
<td>CDA 3101 Computers II</td>
<td>3</td>
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<tr>
<td>ACG 2011 Elementary Accounting II</td>
<td>3</td>
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<tr>
<td>ECO 2013 Economic Principles (Macroecon.)</td>
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<tr>
<td>COP 3120 Cobol I</td>
<td>3</td>
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<td>Area of Concentration</td>
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<td>Senior Year:</td>
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<tr>
<td>Semester I</td>
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<tr>
<td>STA 3023 Introductory Statistics I</td>
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<tr>
<td>COP 3110 FORTRAN</td>
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<tr>
<td>ETI 4614 Principles of Indus. Ops. I</td>
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<td>Area of Concentration</td>
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Areas of Concentration (17 semester hours)

Computer
COP 3121 COBOL II 3
COP 3310 SIMSCRIPT 3
CDA 3102 Computers III 3
COP 4530 Data Representation & Manipulation 3
COP 4204 Computer Applications 3
General Studies Electives 2

Management
MAN 3025 Prin. of Management 3
MAR 3023 Basic Marketing 3
FIN 3403 Prin. of Finance 3
General Studies Electives 8

Approved listing of General Study Electives/Humanities Social Sciences and Communication Courses available in Engineering Advising Office (ENG 140A).

Bachelor's Curriculum for Computer Technology

<table>
<thead>
<tr>
<th>Semester I</th>
<th>Hrs</th>
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<tbody>
<tr>
<td>ENC 1101 Freshman English</td>
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<tr>
<td>MAC 2243 Elementary Calc I</td>
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</tr>
<tr>
<td>ACG 2001 Elementary Accounting</td>
<td>3</td>
</tr>
<tr>
<td>COP 3110 FORTTRAN</td>
<td>3</td>
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<tr>
<td>Social Science</td>
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<td></td>
<td>16</td>
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<table>
<thead>
<tr>
<th>Semester II</th>
<th>Hrs</th>
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<tbody>
<tr>
<td>ENC 1104 Freshman English</td>
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<tr>
<td>MAC 2244 Elem. Calc. II</td>
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</tr>
<tr>
<td>ACG 2011 Elem. Acct. II</td>
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</tr>
<tr>
<td>COP 3110 FORTTRAN</td>
<td>3</td>
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<tr>
<td>Social Science</td>
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<table>
<thead>
<tr>
<th>Semester III</th>
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<tr>
<td>MAN 3025 Prin Management</td>
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<tr>
<td>EGN 3613C Engr. Econ.</td>
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</tr>
<tr>
<td>PHY 2050 General Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHY 2050L General Physics Lab</td>
<td>3</td>
</tr>
<tr>
<td>CDA 3101 Computers II</td>
<td>3</td>
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<tr>
<td>Approved Non-Tech Elective</td>
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<tr>
<td>PHY 2051 Gen. Physics</td>
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<tr>
<td>PHY 2051L Gen. Physics Lab</td>
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<tr>
<td>CDA 3102 Computers III</td>
<td>3</td>
</tr>
<tr>
<td>STA 3023 Intro. Statistics</td>
<td>4</td>
</tr>
<tr>
<td>ECO 2023 Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>Approved Non-Tech Course</td>
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<td>17</td>
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<table>
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<tr>
<th>Semester V</th>
<th>Hrs</th>
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<tbody>
<tr>
<td>ETI 4600 Industrial Systems</td>
<td>3</td>
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<tr>
<td>COP 3120 COBOL I</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2013 Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>CDA 4152 Mini-Computers</td>
<td>3</td>
</tr>
<tr>
<td>Humanities/Social Science</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>16</td>
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</tbody>
</table>
Computer-oriented courses are offered in two broad categories: (1) those courses which are concerned with the operation, organization and programming of computers and computer systems from the viewpoint of examining the fundamental principles involved in computer usage; and (2) those courses which are concerned with computer applications to a variety of different disciplines, by means of user-oriented-languages such as FORTRAN, PI/I, COBOL, PASCAL, and BASIC.

Students in engineering, the physical sciences, and mathematics must consult their adviser for suitable computer courses, since these courses are not acceptable to a number of degree programs.

College Facilities

Students have access to the University's IBM 3033 system and the College's extensive Prime 850 ring network computer system in support of their coursework. In addition, the College has a wide range of specialized equipment, such as a thin-film and hybrid circuits facility, a high-current test facility, a gas chromatograph/mass spectrometer, specialized computers and computer laboratories such as a DEC PDP 11/44 database and a color computer graphics laboratory, a differential thermal analyzer, a vacuum dry box, and X-ray diffraction unit, estuary current meters, water-quality-analysis test equipment, flow visualization equipment, a 250 kip materials testing system, a computer-aided manufacturing system, and industrial robot, and a well-equipped and staffed machine shop.

Cooperative Education Program

A wide variety of industries and government agencies have established cooperative programs for engineering students to provide them the opportunity to become familiar with the practical aspects of industrial operations and engineering careers. Students in the Cooperative Education (Co-op) Program alternate periods of paid employment in their major field with like periods of study. Students following the Co-op program usually encounter no problems in scheduling their program, since required Social Science and Humanities, Mathematics and Science, and Engineering Core courses are offered every semester. Students normally apply for participation in this program during their freshman year and pursue actual Co-op employment during their sophomore and junior years. The senior year is generally pursued on a full-time study basis, since many specialization courses are not offered every semester.

Florida Engineering and Industrial Experiment Station (USF)

The Florida Engineering and Industrial Experiment Station developed from early research activities of the engineering faculty at the University of Florida and was officially established in 1941 by the Legislature. Its mandate is to "organize and promote the prosecution of research to such of these problems as are important to the industries of Florida." In 1977 the University of Florida extended the provisions of the Engineering and Industrial Experiment to the Engineering College of the University of South Florida and the other two State engineering colleges. The Legislature supported this extension with an appropriation. The four colleges of engineering now work together in a joint effort through EIES to assist industry with special problems that can be appropriately solved by engineering colleges. During the year 1980-81 a sponsored research volume of approximately 1.5 million dollars passed through EIES (USF). All departments, faculty as well as students, contribute to this research at the University of South Florida. The direct exposure of students to real research needs of the State adds extra meaning and depth to the engineering education offered by the college.

NASA/Florida—State Technology Applications Center (STAC)

The State University System, the National Aeronautics & Space Administration and certain cooperating colleges of engineering of Florida, including the University of South Florida, have jointly developed the State Technology Applications Center.

STAC offers rapid access to more than 10 million modern published articles related to almost every field of human endeavor and thus provides information to help solve vexing problems at significant savings in man hours and money. This service is a bright new resource for Florida business
and industry. Just a short decade ago this concept would not have been feasible. Through perseverance the computer minded community developed a remarkable system of “key wording” information which is stored in the memories of computers. Using these “key words,” the computer locates pertinent and required publications, at times far removed from the subject matter in question—titles may be passed over in the usual library investigation. STAC charges a minimal fee for its search since its operation is partially supported through NASA and State funds. The STAC Office at the College of Engineering, University of South Florida, Tampa, FL 33620, serves the south central area of Florida.

Air Force - R.O.T.C.
For Engineering Students

The Engineering curriculum, coupled with the involvement in the Air Force R.O.T.C. program, requires a minimum of five (5) years to complete degree requirements. Air Force R.O.T.C. cadets must take 16 additional hours in aerospace studies, along with an Air Force sponsored summer training camp between their sophomore and junior years in College.
The College of Fine Arts exists in the atmosphere of a comprehensive university. It provides opportunities for students to develop their interest and talents to the highest level possible and encourages them to do so whether they wish to commit to a life in the arts or, as a general interest, wish to develop appreciation and involvement in the arts. For these purposes, the College educates in the practice of creating, performing, presenting and understanding theatre, music, dance and the visual arts. Our mission is three-fold:

1. Teaching the disciplines for creating, performing, presenting and understanding the arts. This is done by providing the full range of educating experiences that prepare students to:
   A. Practice an art as a full time life commitment;
   B. Practice an art as an important element of the individual's life commitment;
   C. Appreciate the arts as important life enrichers.
2. Creating and researching the arts:
   A. To expand horizons and explore new dimensions in the arts;
   B. To contribute to the expansion of general knowledge and information about the arts;
   C. To improve the teacher's own effectiveness with students.
3. Serving the public by providing cultural enrichment and expertise.

In recognition of its academic and artistic achievements the College of Fine Arts has been given program of emphasis status by the Board of Regents of the State University System. The College offers degree programs and courses in art, dance, music, theatre and arts management. In addition, it also offers courses in music education and art education in cooperation with the College of Education.

Fine Arts Management and Events

The College of Fine Arts, recognizing the importance of maintaining an arts-filled environment as an integral part of the total learning experience it offers to the students within the college and to the community at large, is critically aware that a truly comprehensive university performing arts program must include performances and related activities by internationally recognized artists and ensembles.

Through the Artist Series, The Chamber Music Series and the Performing Arts Residency program, the college continually strives to enrich its academic program and the cultural environment by bringing to the campus and into the community artists of the highest stature in dance, music, and theatre from around the world. The list of prestigious artists which have been presented over the years by the College of Fine Arts is impressive and a sampling includes John Cage, the Guarneri String Quartet, Lazar Berman, the New York Pro-Musica, Alvin Ailey, Martha Graham, Marcel Marceau, and the Polish Mime Ballet Theatre. (More extensive lists of visiting artists and performing organizations appearing in this catalog under the sections of the specific academic units in the college in which research, demonstration, teaching, and other educational activities have directly benefited students.)

Fine Arts Management and Events is the designation given to the arts management program of the college. With a faculty whose professional and academic credentials are of the highest quality, Fine Arts Management and Events provides fine artists with the expertise needed to develop and administer these programs. The unit also functions as the technical service wing of the College's departmental performing arts programs and serves as a teaching resource for the academic programs in the college. Courses in arts management and various courses in the design/technology track are taught by members of the Fine Arts Management and Events faculty.

The impact of the Fine Arts Management and Events Program on the cultural life of the University and the community is immeasurable, affording the fine arts student numerous opportunities to become aware of the unlimited options he or she might wish to pursue, and providing for the whole community cultural enrichment opportunities that otherwise would not be available.

BACCALAUREATE LEVEL DEGREE PROGRAMS

Programs Leading to the Baccalaureate Degree

The College of Fine Arts offers programs leading to the Bachelor of Arts degree in the fields of Art, Dance, Music, Music Education, and Theatre, and a Bachelor of Fine Arts degree in Theatre.

Admission to the College

A freshman student may elect to enter the College of Fine Arts as a major in one of the four departments as early as his/her initial entry into the University. At that time, the new freshman should file a Declaration of Major or Change of Curriculum code form indicating the choice of degree program within the College of Fine Arts. However, any continuing student in the University in good standing, upon acceptance by the department, can apply to change from another major to a major in the College of Fine Arts. The student desiring to make this change must initiate a Change of Major form in the college of the present major and transfer his/her current academic records to the College of Fine Arts' advising office.

Transfer students and students from other units within USF with previous college or university fine arts course credits (art, dance, music, theatre) must have such credits evaluated and meet appropriate portfolio or audition requirements when seeking admission to the College of Fine Arts. These students are urged to make early arrangements for any necessary portfolio reviews or auditions, as well as appointments for advising, since these must take place prior to course scheduling and registration. Further, students are required to provide copies of their transcripts showing all previous college or university course work for advising, portfolio review and/or audition appointments. Additional information may be obtained and appointments may be made by telephoning or writing the College's advising office or the office of the department of particular interest.

Advising in the College

The College of Fine Arts operates a central advising office located in the Fine Arts Building. It maintains the records of all major students in the College (art, dance, music, theatre) and provides on-going academic advising, referral services and assistance to all present and potential students. Academic advisers are provided for each of the departments in the College. All music education majors are advised through the music education coordinator's office. For information and appointments call or write the Coordinator of Advising, College of Fine Arts or College of Education.

Degree-seeking graduate students accepted into the M.F.A. program in art, the M.A. program in music education, or the M.M. program in music will be counseled on program requirements and in their selection of courses by the appropriate graduate adviser.

Any student in the University, regardless of major, may enroll in courses offered by the College of Fine Arts when prerequisites are met and space is available. Where applicable, these courses may be used to satisfy Elective or General Distribution Requirements.

In all cases, the responsibility for meeting all graduation requirements rests entirely upon the student.
Graduation Requirements

The College of Fine Arts currently offers two undergraduate degrees, the Bachelor of Arts (B.A.), attainable in the Departments of Art, Dance, Music and Theatre, and the Bachelor of Fine Arts (B.F.A.) in Theatre. The requirements are presented on page 36 of this Catalog, but are briefly summarized here along with the college and departmental requirements:

1. 120 credits for the B.A. and 150 credits for the B.F.A. with at least a "C" average (2.0) in work done at the University of South Florida and in the major. At least 40 credits must be in courses numbered 3000 or above. Since 15 hours is considered a normal, full-time load, students are reminded that programs requiring more than 120 credit hours may require additional semesters for completion of the program.
2. General Distribution Requirements may be satisfied by (1) completing the University's General Distribution Requirements as explained on page 36 of this catalog, (2) completing the A.A. degree from a Florida Junior or Community College, or (3) completing the general education requirements from another Florida state university. General education courses transferred from other accredited institutions will be evaluated based on USF General Distribution equivalencies. The A.A. degree is in no way a requirement for acceptance into the College of Fine Arts (or into any one of its upper level degree programs), or a requirement for graduation from the University.
3. Students admitted to the College of Fine Arts with transfer credits dating ten or more years prior to admission (or readmission) will have those credits reviewed by the College and Department and may be required to take specified competency tests in their major area.
4. Special Fine Arts College Requirement: All majors in the College of Fine Arts must take at least 6 credit hours in one or more of the other departments of the College.
5. A maximum number of ROTC credits totaling no more than the maximum allowed in the Free Elective Area for each major may be counted towards the B.A. or B.F.A. degree.
6. With departmental approval, a maximum of 4 credit hours of elective Physical Education credits taken at USF may be counted as general elective credit toward the B.A. or B.F.A. degree in the College of Fine Arts.
7. Satisfactorily complete the College Level Academic Skills Test CLAST and the writing and computation course requirement of 6A-10.30 (Gordon Rule).
8. Students applying for a B.A. degree must demonstrate competency in a foreign language as described on page 37 of this catalog.
9. Department Requirements:
   - Art Requirements: Completion of a minimum of 46 credit hours in the major, 19 credit hours of Free Electives (of which 16 hours in art may apply), and 9 hours of non-major credits which may be distributed across the departments of the Art Department.
   - Dance Requirements: Completion of a minimum of 42 credit hours in the major, 23 credit hours of Free Electives (of which 19 hours in dance may apply), and 9 hours of non-major credits which may be distributed at the discretion of the Dance Department.
   - Music Requirements: Completion of a minimum of 64 hours in the major and 10 hours of non-major electives of which 5 hours may be distributed at the discretion of the Music Department.
   - Music Education Requirements: For Instrumental Specialization, the completion of a minimum of 22 credit hours of Music Education courses and 61 credit hours of Music courses. For Vocal Specialization, the completion of a minimum of 21 credit hours of Music Education courses and 61 credit hours of Music courses.
   - Theatre Requirements: For the B.A., the completion of a minimum of 50-51 credit hours in the major with 23 credit hours of Free Electives of which a maximum of 10-11 credit hours may be in theatre. For the B.F.A., the completion of a minimum of 75 credit hours in the major with 29-30 credit hours of Free Electives of which a maximum of 10-11 credit hours may be in theatre.
10. Residency Requirements: A minimum of 20 credit hours in the major department must be earned in residence. This requirement, however, may be waived by the department based on examination (e.g. portfolio review, audition, etc.). Also, a student must earn 30 of the last 60 hours of credits in residence at the University of South Florida. However, any course work to be taken and any credits to be earned outside of the University must have prior approval from the appropriate department and the college in order to apply these credits toward graduation.

Waiver of prerequisite course work totaling no more than 12 credit hours in the major or Fine Arts College requirements is possible by demonstration of competence. Unless credit is awarded by approved official tests, i.e. A.P. CLEP, the credit hours must be made up according to departmental or college recommendations. The review for waiver is by faculty committee. Specific questions concerning program requirements for the B.A. and B.F.A. degrees in the College or other related problems, should be directed to the Coordinator of Advising, College of Fine Arts, University of South Florida, Tampa, Florida 33620.

The responsibility for seeing that all graduation requirements are met rests with the student.

Courses for General Distribution Requirements:

Courses in the College of Fine Arts in the departments of Art, Dance, Music and Theatre fall within Area II of the University's General Distribution Requirements. (See page 36 of the University Catalog for a complete description of General Distribution Requirements and special policies for AA degree holders and other transfer students with "General Education Requirements" met.) However, a major in any one of the four departments in the College of Fine Arts may utilize only those courses in the other three departments of the College for Area II General Distribution Requirements:

College Policy for Academic Progress

The following criteria will serve as the basis for disenrollment from a major in the College of Fine Arts.
1. Grade point average below 2.0 in the major
2. Recommendation by major applied (studio) art, dance, music or theatre faculty with approval of respective department chairperson, or art education coordinator.
3. The department may recommend probationary status (rather than disenrollment) for one semester when academic progress is not maintained.

Contracts and Permission Procedures

Directed Studies Contracts:
All Directed Studies and other variable credit courses in the College of Fine Arts require contracts between students and instructors describing the work to be undertaken by the student and specifying the credit hours. These contracts are to be completed in quadruplicate and appropriately signed. It is the student's responsibility to obtain the necessary signatures and make the required distribution of all copies. Important: the student must have his/her signed copy of a contract at the time of registration.

S/U Grade Contracts:
The College of Fine Arts requires that any S/U grading agreement entered into between student and instructor be formalized by a contract in quadruplicate signed by the student and the instructor and distributed according to instructions.

"I" Grade Contracts:
Undergraduates
Incompletes must be contracted for by mutual agreement between student and instructor, with the contract describing specifically the amount and nature of the work to be completed for the removal of the incomplete grade. This contract additionally clearly specifies the date that the work will be due (within legal limits) for grading. Both the student and the instructor must sign this contract and the four copies must be distributed according to instructions. A student must not register for a course again to remove an "I" grade.

Graduates
Incomplete ("I") grades for graduate students must be completed and the grade changed prior to graduation. An "I" grade contract must be completed for each course where an incomplete grade is requested. Consideration for exception to this rule may be made by processing a Request for College Waiver of Academic Policy form (available in the Advising Office). Please see page for more details concerning the University's "I" grade policy.
Permission Procedures:
Admission into some courses is possible only by consent of instructor (CI), consent of chairperson (CC), consent of adviser, or by audition or portfolio review. When such special permission is required, it will be the student's responsibility to obtain any required permission prior to registration.

S/U Grading in the College

1. Non-majors enrolled in courses in the College of Fine Arts may undertake such courses on a S/U basis with instructor approval. See Contracts and Permission Procedures for information concerning S/U Grade Contracts.
2. Credits earned by a non-major student with an "S" grade will not count toward the student’s minor's major course graduation requirement should that student ultimately decide to become a major student in one of the four departments in the College. Instead, such credits earned with an “S” grade will be assigned to the student's Free Elective category (with the exception of music which will become non-countable).
3. Although Fine Arts majors may take course work in their major as Free Electives, they are not entitled to the S/U grading option for these courses taken in their major subject area, even when specifically used or intended to be used as Free Electives.
4. In the college of Fine Arts, the only S/U graded courses available to a major student in his major subject area are those curriculum allowable courses designated S/U (that is, S/U only).
5. With the exception of such courses as may be specifically required under the College’s “Special Requirements” regulation, a maximum of 9 credit hours of S/U credits in non-major courses may apply towards a degree in the College of Fine Arts.

Please see page 32, for more information concerning the University's S/U Grading policy.

Dean's List Honors

See Academic Policies and Procedures, Programs and Services, page 35.

Interdisciplinary Study

In spite of the fact that an undergraduate interdisciplinary degree program is not formally offered in the College of Fine Arts, it is possible for a student to pursue such a program of study in the College by utilizing free electives allowed in the major program. A student may also choose a double undergraduate major in two departments within the College of Fine Arts as a means of interdisciplinary study. See the major adviser in the programs of particular interest.

Minors Program

The College of Fine Arts offers minor programs in Art, Dance, Music, Theatre. Majors in the College of Fine Arts may pursue a minor in any certified minors program at USF except within the same department as the major. The requirements for these programs are located under the departmental academic program descriptions. For University Minor Policy, consult page 39 of this Catalog.

PROGRAMS AND CURRICULA

ART (ART)

Departmental Requirements for the B.A. Degree

The art curriculum is designed to develop the student's consciousness of aesthetic and ideological aspects of art and its relationship to life and to assist students in the realization of personal ideas and imagery. Most B.A. recipients interested in college teaching, museum or gallery work, fine or commercial studio work pursued the extended discipline and experience offered at the graduate level.

Although the Art program allows many possible courses of study, most art major students will select one area of emphasis chosen from the course offerings listed.

The major concentrations, or areas of emphasis, available to undergraduate (B.A. seeking) art students are: Drawing, Painting, Sculpture, Ceramics, Graphics (Lithography and/or Intaglio), Photography, Cinematography, Art History and Theory. Art majors must receive a grade of “C” or better in all art courses.

Transfer studio credit will be accepted on the basis of portfolio and transcript evaluation.

For additional requirements see page 92 for Graduation Requirements, College of Fine Arts.

The requirements for the bachelor's degree in Art Education are listed under the College of Education.

Art Studio Concentration (46 semester hours minimum)

1. Visual Concepts I, II and Introduction to Art, 12 credit hours.
2. Minimum of 12 credit hours of 3000 level studio courses (exclusive of Technique Seminars.)
3. Minimum of 8 credit hours of 4000 and/or 5000 level studio courses exclusive of Technique Seminars with an emphasis in one area.
4. Minimum of 12 credit hours in art history courses from the following: Twentieth Century art is required.
   ARH 4100 ARH 4350 ARH 4530
   ARH 4170 ARH 4430 ARH 4796
   ARH 4200 ARH 4450 ARH 4937
   ARH 4301
5. Art Senior Seminar, 2 credit hours.
6. Maximum of 16 semester hours of art electives.

Art History Concentration (46 semester hours minimum)

1. Visual Concepts I, II and Introduction to Art, 12 credit hours.
2. Minimum of 16 credit hours of 4000 level art history courses including Twentieth Century art history.
3. Seminar in the History of Art History, 4 credit hours.
4. A minimum of 12 credit hours in Directed Readings (1 to 6 semester hours each) and/or Critical Studies in Art History (4 semester hours each).
5. Art Senior Seminar, 2 credit hours.
6. A proficiency in French or German. In lieu of some considerable direct living experience with another language, it is suggested that a minimum of two years or equivalent of college-level study of a language be undertaken.
7. A maximum of 16 semester hours of art electives.

For more specific information concerning this requirement, the student should consult with the art adviser or the faculty of the art history area of the art department.

Requirements for a minor in Art (20 semester hours minimum)

I. Studio Concentration:
   ART 2202C (4) ART 2203C (4) ARH 3000 (4)
   Plus: Two 4 semester hour classes from 3000 studio level (8)
II. Art History Concentration:
   ART 2202C (4) ART 2203C (4) ARH 3000 (4)
   Plus: Two 4 semester hour classes from any of the following:
   ARH 4100 (4) ARH 4301 (4) ARH 4450 (Required) (4)
   ARH 4170 (4) ARH 4430 (4) ARH 4530 (4)
   ARH 4200 (4) ARH 4450 (4)

Visiting Artists and Artist-In-Residence

The art department is widely known for the consistent level of excellence of its programs. Aside from the contributions of its permanent staff, and to insure the continuing expansion of learning opportunities available to students, the art department has brought to the campus internationally known artists and lecturers such as Scott Bartlett, Larry Bell, Friede Drubas, Allen Jones, Nicholas Krushenick, Daniel Lang, Paul Sarkisian, Lucas Smaras, Robert Irwin, James Rosenquist, Robert Rauschenberg, Philip Pearlstein, Edward Fry, Alice Aycock, Alfred Leslie, Linda Benglis, Ron Gorchov, Patterson Sims.
Art Galleries

The University of South Florida, Art Galleries under the aegis of the Art Department presents over thirty exhibitions a year in three on-campus galleries. The exhibition program is an integral part of the studio and art history curriculum of the Art Department as well as other liberal arts areas of the University as it provides a context and forum for students to test and broaden their perceptual and analytical capabilities. Brochures and catalogs documenting the exhibitions are available through the Galleries office (FAH 236).

In addition, the University Collections are made available as loans both on and off campus through the Art Bank Program. Part of the collection is arranged in 65 circulating exhibitions that are available as loans to galleries, universities and major cultural institutions throughout the south-east.

DANCE (DAN)

The dance curriculum is designed for students interested in dance as an art form. Their objectives may be to continue their education in graduate school, to teach in a college or a private school, or pursue a career as a performer and/or choreographer.

Concerts are presented each semester as well as workshop performances. Major dance companies perform on campus providing students with the opportunity of studying with visiting artists.

Requirements for the B.A. Degree (44 semester hours minimum)

Suggested core curriculum pattern:

<table>
<thead>
<tr>
<th>First Year - all students (2 credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAN 3610 2 credit hours (elective)</td>
</tr>
<tr>
<td>DAN 3611 2 credit hours</td>
</tr>
<tr>
<td>TPA 2223 3 credit hours (required elective)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Year - all students (12 credit hours plus electives)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAA 2160 3 credit hours (Ballet requirement, Modern elective)</td>
</tr>
<tr>
<td>DAA 2201 3 credit hours (Modern requirement, Ballet elective)</td>
</tr>
<tr>
<td>DAA 3700 2 credit hours</td>
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<tr>
<td>DAA 3701 2 credit hours</td>
</tr>
<tr>
<td>DAN 3590 2 credit hours</td>
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<tr>
<td>DAN 4120 3 credit hours</td>
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<table>
<thead>
<tr>
<th>Third Year - Modern Concentration (16 credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAA 3161 6 credit hours</td>
</tr>
<tr>
<td>DAA 3202 3 credit hours</td>
</tr>
<tr>
<td>DAA 4702 2 credit hours</td>
</tr>
<tr>
<td>DAN 3710 1 credit hour</td>
</tr>
<tr>
<td>DAN 4151 3 credit hours</td>
</tr>
<tr>
<td>DAN 4906 1 credit hour (Junior Project)</td>
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</table>

<table>
<thead>
<tr>
<th>Third Year Ballet Concentration (14 credit hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAA 3202 6 credit hours</td>
</tr>
<tr>
<td>DAA 3161 3 credit hours</td>
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<tr>
<td>DAA 3220 2 credit hours</td>
</tr>
<tr>
<td>DAA 3710 1 credit hour</td>
</tr>
<tr>
<td>DAN 4151 3 credit hours</td>
</tr>
<tr>
<td>DAN 4906 1 credit hour (Junior Project)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Fourth Year Modern Concentration (14 credit hours)</th>
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</thead>
<tbody>
<tr>
<td>DAA 4162 8 credit hours</td>
</tr>
<tr>
<td>DAA 4703 2 credit hours</td>
</tr>
<tr>
<td>DAN 3710 1 credit hour</td>
</tr>
<tr>
<td>DAN 4170 2 credit hours</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Fourth Year Ballet Concentration (14 credit hours)</th>
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</thead>
<tbody>
<tr>
<td>DAA 4203 8 credit hours</td>
</tr>
<tr>
<td>DAA 3220 2 credit hours</td>
</tr>
<tr>
<td>DAN 3710 1 credit hour</td>
</tr>
<tr>
<td>DAN 4170 2 credit hours</td>
</tr>
</tbody>
</table>

Department Policy For Academic Progress

A maximum of 17 credit hours of Dance electives may apply toward the dance degree. For course descriptions, see page xx.

TPA 2223 Theatre Crafts: Lighting (3) is required of all dance majors and may apply toward Area II of the General Distribution Requirement, or non-major elective, or the 6 hour Special College Requirement.

Dance majors must enroll for at least a minimum of 2 credit hours (1 per semester) in DAN 3590 Practicum in Dance Production. By doing technical preparation and working backstage in a minimum of two major concerts, the student will have a better grasp of production problems and their solutions. The major student is expected to earn 2 credits in DAN 3710 Repertory by performing in at least two concerts or workshops in their junior or senior year.

Dance majors are required to complete a dance project through directed studies (DAN 4906) and senior majors are required to choreograph a group work and perform a solo as a senior project in a dance program.

Entrance to all technique courses is by faculty examination. Until the student is accepted into Modern Dance III or Ballet III he/she will be considered as a probationary dance major. DAA 2160 or DAA 2201 may be repeated only once for credit toward degree requirements.

Prospective students must contact the dance department to arrange for an audition prior to registration.

Critiques

1. All students will be evaluated periodically at faculty sessions as well as critiqued per semester. Majors will be advised accordingly.

2. If the faculty feels that a student is deficient in some area which necessitates a probationary action, the student in question will be advised and asked to sign a probation form. This form is kept on file with the student's advisor.

3. Failure to make satisfactory progress within the following semester shall constitute grounds for Departmental recommendation to drop and discontinue the major.

Minimum Grade for Dance Courses

A student must receive a "C" grade or better in required major courses. Should a student fail to do so, the course(s) in which the student received a "D" or "F" must be repeated and a "C" grade or better earned.

Additional Standards

In addition to meeting the specific requirements and standards discussed above, the student and advisor will periodically evaluate the student's general progress. A less-than-satisfactory rating in one or more of the following areas could place the student on probation. A student on probation is given a specific amount of time to achieve a satisfactory rating before being dropped from the major program:

1. Adequate technical skill and adaptability.

2. Evidence of creative potential.

3. "B" average in major studio classes.

4. Good health which includes adequate control of body weight.

Class probation and department probation require review and final determination at the end of the subsequent semester. Students will be notified of the results of final faculty review, i.e., reinstatement in good standing or recommendation to drop major.

A dance major is expected to keep his/her weight at a level that is aesthetically acceptable to the dance faculty for classroom training and all performances.

For other non-major requirements see page 92 of Fine Arts College requirements and page 36 for the University's General Distribution and graduation requirements.

Requirements for a minor in Dance

(20 semester hour minimum)

1. Minimum of 10 semester hours upper level courses (3000 and 4000 level courses).

II. Admission to all studio classes is by audition only (as with major students) and the student must be ranked by level before being admitted. Studio courses may be repeated for credit as stipulated in the Catalog.

III. Prospective students must contact the Dance department to arrange for an audition prior to registration. DAA 2160 and DAA 2200 may be repeated only once for credit toward the minor.

IV. The student must audition each semester to stay at his/her present level or to advance to a higher level for all technique courses.
Transfer Student Requirements

Transfer students must have a minimum of 8 credits in major technique on campus. The Dance faculty will consider a transfer of credits and/or a waiver of one or two credits for the remaining technique credits required upon the written request of the student. The written request must be accompanied by a letter of recommendation from the student's former instructor. Such a request and letter of recommendation does not obligate the faculty to accept the credits the student wishes to transfer. No technique credits will be considered for transfer unless the university or college from which the student is transferring has a recognized major in dance.

Visiting Artists And Artists-in-Residence

By supplementing its excellent on-going regular staff-instructed dance curriculum with other professional resources made available through the Visiting Artist and Artist-in-Residence programs, the Dance department provides for dance students an overall dynamic program for practice, study and learning.

MUSIC (MUS)

The B.A. Degree (Performance, Piano Pedagogy and Composition):

The music curriculum is designed for those students gifted in the performance and/or composition of music. Candidates for a major in music are required to pass an entrance examination (audition) in their respective performance area. Composition candidates are required to submit appropriate scores and/or tapes of their compositions for faculty appraisal. Before freshmen students may enter the theory sequence, a grade of "C" or better must be made on the theory entrance test. If this grade is not achieved on either section (written and aural) of the test, the student must enroll in a music fundamentals course, which will not apply towards the major requirements. Transfer students are required to take a theory placement test and required to enter at the appropriate level. Students may obtain dates and times for these examinations from the music department office. Completion of those examinations is required before registration in music courses can be permitted.

Academic programs offered include:
Bachelor of Arts degree with concentration in Performance (voice, piano, organ, harp, guitar and orchestral instruments), Composition, and Piano Pedagogy.

General Requirements:
All students seeking a degree in music are required to (1) complete successfully the piano proficiency and music theory/history-literature requirements as defined by the music faculty. A grade of "C" or better must be made on music theory departmental exams to advance through the theory course sequence; (2) present a partial public recital during the junior year - except composition majors; (3) present a full public recital during the senior year; (4) present a record of satisfactory recital attendance during each of the semesters of study at the University (the specific requirements for satisfactory attendance are set by the music faculty). Those requirements are in addition to the actual course requirements listed below.

Core Requirements for all Performance, Pedagogy and Composition Concentrations (36-40 semester hours minimum):

Music Theory (20)

- MUT 1111 (3)
- MUT 1122 (3)
- MUT 1214 (3)

One of MUT 3000 or 4000 course offerings (2)

Music Literature (4)

- MUL 2111 (2)
- MUL 2112 (2)

Music History (6)

- MUC 3211 (3)
- MUC 3212 (3)

Senior Seminar (2)

- MUS 4935 (2)

Major Ensemble - Performance and Pedagogy (8), Composition (4)

All undergraduate students enrolled in applied music for 3 credit hours are required to be enrolled concurrently in a major ensemble appropriate to their performing medium.

Additional Requirements for Specific Concentrations:

Performance Concentration

(64 semester hours minimum):

A total of 24 credit hours of applied music is required with a minimum of 6 hours to be completed at the senior level.

Promotion to the next higher level in applied music is made upon the recommendation of the faculty in the student's respective performance concentration based upon a jury examination conducted by that concentration's faculty.

Piano Pedagogy Concentration

(68 semester hours minimum):

The following requirements for the piano pedagogy concentration are in addition to the above performance concentration requirements:

Music Studio Pedagogy (4)

- MVK 4640 (2)
- MVK 4641 (2)

Junior and Senior recital requirements may be fulfilled in one of the following ways: (1) lecture/recital, (2) ensemble performance, (3) full recital with music, or (4) full recital without music.

Composition Concentration

(72 semester hours minimum):

All students seeking a degree in music with a composition concentration are required to fulfill the senior composition requirements (with the approval of the entire faculty) in one of the following ways; (a) a complete public performance of works by the student composer, (b) the public performance of several compositions in various concerts throughout the composer's senior year, (c) the formal presentation to the composition faculty of an extensive portfolio of compositions plus the public performance of at least one of these works during the senior year, or (d) in other ways so designated by the composition faculty.

Major Ensemble (4)

All undergraduate students enrolled in applied music for 3 credit hours are required to be enrolled concurrently in a major ensemble appropriate to their performing medium.

Applied Music (12)

A minimum of 12 credit hours of applied music is required with a minimum of 6 credit hours at the 2000 level.

Composition Courses (24)

Undergraduates concentrating in composition must complete a minimum of 24 credit hours from the following sequence of courses including MUC 3402, and at least one semester of MUC 4204, satisfying all necessary prerequisites for all courses:

- MUC 2202 (3,3)
- MUC 2301 (2)
- MUC 3203 (3)
- MUC 3401, 3402 (3,3)
- MUC 4431, 4342 (3)
- MUC 4311, 4312 (2,2)

For other degree requirements for all the above concentrations, see page 92 of the Fine Arts College requirements and page 36 for the University's General Distribution and graduation requirements.

MUSIC EDUCATION

Requirements for the B.A. Degree (MUE):

All students seeking a degree in music education are required to pass an audition in their respective performance area. Before freshman students may enter the theory sequence, a grade of "C" or better must be made on the theory entrance test. If this grade is not achieved, the student must enroll in a music fundamentals course. This course will not apply toward the major requirements. If either portion (written or aural) of the test is failed, the student must take the fundamentals course. All transfer students are required to take a theory placement test and required to enter at the appropriate level. Students must obtain the dates for these examinations from the music office. Completion of the examinations is required before registration in music courses can be permitted.

Special requirements for all music education majors; successful completion of the piano proficiency requirement as defined by the music
and music education faculties; participation in a major performing ensemble each semester the student is enrolled in applied music; and the presentation of a one-half hour recital in the major performing medium during the senior year.

Students are encouraged to attend on-campus musical events (major ensemble concerts, student and faculty recitals, and Artist Series concerts).

For other degree requirements see page 66 of the College of Education requirements and page 36 for the University's General Distribution and graduation requirements.

A. Instrumental Specialization (83 cr. hrs.)

Music Education courses (22 cr. hrs.)

- MUE 2420 (1) *MUE 3414 (1) *MUE 4314 (3)
- MUE 3411 (1) *MUE 4050 (3) *MUE 4332 (3)
- MUE 3413 (1) *MUE 4130 (3) **MUE 4480 (1)

† must be taken up to two hours
* one credit hour of pre-interning enrollment required with each course.
** elective for band emphasis

Music courses (min. 61 cr. hrs.)

- MUT 1111 (3) MUT 2116 (3) MUL 2111 (2)
- MUT 1112 (3) MUT 2117 (3) MUL 2112 (2)
- MUT 1241 (1) MUT 2246 (1) MUI 3211 (3)
- MUT 1242 (1) MUT 2247 (1) MUI 3212 (3)
- MUG 3101 (2)

Applied Music (21 cr. hrs., min. 3 hrs. senior level)

Applied Music Secondary (Techniques - 5 cr. hrs.)

(One each: woodwind, brass, string, percussion, voice)

Major performing ensembles

(Minimum of one per semester of applied music - 7 cr. hrs.)

Graduating recital

Piano proficiency requirement

Art, Dance Theatre (min. 4 cr. hrs.)

(to be selected from one or more of the other departments of the College of Fine Arts)

B. Vocal Specialization (81 cr. hrs.)

Music Education courses (21 cr. hrs.)

- MUE 2420 (1) MUE 3414 (1) MUE 4314 (3)
- MUE 3411 (1) *MUE 4050 (3) *MUE 4331 (3)
- MUE 3413 (1) *MUE 4130 (3)

† Must be taken up to two hours.
* One credit hour of pre-interning enrollment required with each course.
** Elective for band emphasis

Music courses (min. 61 cr. hrs.)

- MUT 1111 (3) MUT 2116 (3) MUL 2111 (2)
- MUT 1112 (3) MUT 2117 (3) MUL 2112 (2)
- MUT 1241 (1) MUT 2246 (1) MUI 3211 (3)
- MUT 1242 (1) MUT 2247 (1) MUI 3212 (3)
- MUG 3101 (2)

Applied Music (21 cr. hrs. minimum 3 cr. hrs. senior level)

Applied Music Secondary (Techniques 4 cr. hrs.)

(one each: woodwind, brass, string, percussion)

Ensembles

(Throughout of one per semester of applied music - 7 cr. hrs.)

Piano proficiency requirement

Graduating recital

Art, Dance Theatre, (min. 4 cr. hrs.)

(to be selected from one or more of the other departments of the College of Fine Arts)

Requirements for a minor in Music (19-22 semester hour minimum)

Students seeking a minor in music may choose from three concentrations: (1) History-Theory-Literature, (2) Applied Medium and (3) Composition. Each of the concentrations will include the same core curriculum consisting of 11-12 hours.

I. Core Curriculum:

<table>
<thead>
<tr>
<th>Music Theory</th>
<th>Introduction to Music Literature</th>
<th>Music History</th>
</tr>
</thead>
<tbody>
<tr>
<td>(8)</td>
<td>(4)</td>
<td>(3)</td>
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</tbody>
</table>

II. Optional Concentrations:

A. History-Theory-Literature

Music History and/or Theory and/or Literature

Music Ensemble

B. Applied Medium

Performance Studio courses which may include up to two semester hours of class-studio

Music Ensembles

Faculty jury recommendations for sophomore level studio study (minimum)

C. Composition

Introduction to Electronic Music

Composition Studio courses which may include one course of orchestration

Music Ensemble

III. Admission to all studio courses is by audition with major students, and the student must be ranked by level. Class-studio courses may serve as preparation for auditions. Registration in all music courses is by permission of the instructor. Studio courses may be repeated for credit as stipulated in the Catalog.

The Faculty:

USF's superior music faculty has been carefully chosen for its training, performing ability, and ability to teach. It is in every sense a team. This achievement has been demonstrated by such fine musical ensembles as the Faculty String Quartet, the Faculty Brass Quintet, the Ars Nova (faculty) Wind Quintet and the Faculty Chamber Players.

SYCOM

The SYstems COMplex for the Studio and Performing Arts exists to provide essential instructional services and state-of-art reproducing, mixing, editing, and electronic sound generating and processing equipment (digital and analog) for development and implementation of explorative research and creative activity by artists, scientists, and students (generally enrolled in related classes) at USF.

Basic recording facilities in Studio A include a custom designed 12 channel quad. mixing console, constructed around an OPAMPS frame (with patchbay, remotes and monitor controls), an MCI eight-track recorder (1 format; 7 1/2, 15, 30 ips) with DBX 208, an Ampex ATR 102 two-track recorder with Dolby A, a TEAC 404 four-track recorder with DBX, a MIC MIX stereo reverb and four White 1/3 octave equalizers. Four JBL 4315 B studio monitors are powered by two Yamaha amplifiers. The USF a provides a modular synthesizer with a real time 16-voice microprocessor controlled, keyboard/sequencer (6000 notes of storage, cassette "load and store" of software, a Prophet-5 and Emulator complete sound generating capabilities). Computer facilities include a standard Z80 cpu (system upgradable to a Z8000) with 64 K of RAM, and IBM compatible, digital tape drive (7 or 9 track; 800 or 1600 BPI), a 29 megabyte Shugart disk, two 500 K double density floppy diskettes, four channels of 12 bit to a for synthesizer control (8 for pitch; 8 for amplitude; 16 separate triggers), one channel of analog-to-digital conversion and two Hazeltine 1500 terminals. A Megasystems hybrid microprocessor/sequencer with 2000 notes of storage and an array of specialized software entered on a standard ASCII terminal is also available. Peripherals include a Technics SL 1600 MK2 turntable system, an Akai GX-M50 cassette deck, a frequency counter and a digital clock.

Written proposals for individuals or group projects to be sponsored or subsidized by SYCOM and/or extramural granting agencies should be submitted for consideration to the director of SYCOM. The subsequent results of project activities will be exhibited in the form of public lectures, performances, reports, publications, or large theatrical events and special workshops, such as Sound Gallery, the Event/Complex Series, Art-Tech Workshop, and the new music/media festival, INTERMUSE.
Unique Learning Opportunities:
The music department at the University of South Florida offers the student the opportunity to study with a distinguished faculty, work with the newest in creative equipment, and to be in the company of other superior music students for an extensive, exciting and exacting period of study. In addition to the already established programs in the choral, orchestral and wind ensemble areas, opportunities are now available in jazz with performances with the jazz ensemble and chamber jazz ensembles, a full range of jazz courses and professional playing opportunities in the area.

Visiting Artists and Artists-In-Residence:
The Department of Music utilizes guest composers, conductors, and performing musicians to enhance its offerings in terms of teaching faculty, forum appearances, and the conducting of musical programs, symposia, and clinics. Some prominent musicians who have appeared in the past are:
- Howard Hanson
- Norman Dello Joio
- Randall Thompson
- Virgil Thompson
- David Ward-Steinman
- Walter Trampler
- Fred Helme
- Eleazar de Carvalho
- Lukas Foss
- Maurice Andre
- Jean Pierre Rampal
- Adele Adison
- Byron Janis
- Louis Bellson
- David Samuels
- Elliot Schwartz

Howard Hanson: Julius Baker
Norman Dello Joio: Ransom Wilson
Randall Thompson: T. J. Anderson
Virgil Thompson: Hale Smith
David Ward-Steinman: George Russell
Walter Trampler: Billy Wilson
Fred Helme: Guarneri String Quartet
Eleazar de Carvalho: Beaux Arts Trio
Lukas Foss: Boris Goldovsky
Maurice Andre: Gregg Smith
Jean Pierre Rampal: Norman Luboff
Adele Adison: Garrick Ohlsson
Byron Janis: Marilyn Horne
Louis Bellson: Phil Woods
David Samuels: David Baker
Elliot Schwartz: John Cage

Student Organizations:
Sigma Alpha Iota, national professional music fraternity for women, and Phi Mu Alpha Sinfonia, a professional music fraternity for men, are dedicated to serve the cause of music in America. The Student Music Educators National Conference is an affiliate of the Music Educators National Conference and is open to all interested students.

Financial Aid:
The University has made available to highly qualified undergraduate students a number of music service awards. Usually these awards cover in-state tuition fees, and are distributed following open auditions held in February and March. The award is made for the following year for two semesters. Out-of-state tuition waiver is also possible. Also available are scholarships awarded in specified areas including Dawn Randall Zimmerman Scholarship, Mary Corey Bogdonas Scholarship, Richey Symphony Society Scholarship Fund, Steve Penovici Scholarship, and the Zbar Award. Available to graduate students who show special potential for creative contribution to the profession are the Graduate Council Fellowships and graduate assistantships and fellowships. Additionally, loans, grants and work programs are available to qualified University of South Florida students. Financial aid is granted on need, academic promise and character.

THEATRE (TAR)
The Department Major:
Through its curriculum and production program, the Department of Theatre offers to seriously interested students the opportunity to prepare themselves for the beginning of a professional career in the theatre or to continue their studies at the graduate level. In addition, students from other departments and colleges have the opportunity to study and participate in the work of the department, thereby allowing them to gain insight into the creative experience of theatre.
After a thorough orientation to all facets of the art gained in the basic courses, the theatre major pursuing the Bachelor of Arts degree concentrates in the areas either of performance or design/technology.
To earn a B.A. in Theatre, the student following the design/technology concentration must take a minimum of 51 credit hours. The design/technology students are required to take an additional 6 credits (ART 3301C) in the Art Department. These may be applied to the college requirement of 6 credit hours outside the department but within the college. They may also be applied to general distribution requirement Area II.

For other non-major requirements see page 92 for the College of Fine Arts requirements and page 36 for the University's General Distribution and graduation requirements.

Theatre Design/Technology Concentration (51 credit hours minimum)

Suggested Sequence Of Requirements
First Year (11 credit hours)

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<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>TPP 4140</td>
<td>4 credit hours</td>
</tr>
<tr>
<td>TPP 4150</td>
<td>4 credit hours</td>
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Second Year (14 credit hours)

<table>
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<tbody>
<tr>
<td>TPP 3111</td>
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<tr>
<td>TPP 3086</td>
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<tr>
<td>THE 3110</td>
<td>4 credit hours</td>
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Third and Fourth Years (25 credit hours)

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>TPP 4920</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>THE 4180</td>
<td>4 credit hours</td>
</tr>
<tr>
<td>THE 4562</td>
<td>3 credit hours</td>
</tr>
</tbody>
</table>
Second Year (17 credit hours)

THE 2020 2 credit hours
TPA 2200 3 credit hours
TPA 2223 3 credit hours
TPA 2232 3 credit hours
TPP 2110 3 credit hours

Third/Fourth Years (24 credits)

The Involvement: Freshman Lab and Advanced Course Production (3 hours), a weekly lecture (3 hours), and a detailed description of production involvement. Participation is expected to involve themselves in scheduled USF productions as part of regularly assigned class work. The involvements are assigned and may be construction, running crew, or performance work. This ACPl assignment is an integral part of the following courses.

THE 4264 — History of Costume
THE 4266 — Architecture and Decor
TPA 3221 — Lighting: Theory and Practice
TPA 4020 — Light Design
TPA 4040 — Costume Design
TPA 4060 — Scenic Design
TPA 4211 — Stagecraft and Drafting
TPA 4230 — Costume Construction
TPP 3500 — Body Disciplines
TPP 3790L — Voice Preparation for the Actor
TPP 4140 — Scene Study II
TPP 4150 — Scene Study I
TPP 4152 — Scene Study III

All theatre majors (B.A. and B.F.A.) must satisfy four ACPl's before they are approved for graduation. Once the minimum requirement of four ACPl's has been met by the student, he/she will not be expected to participate in the ACPl requirements of courses so designated. Students taking an ACPl course for the first time are exempt from the ACPl requirement at their option. Non-majors and Special Students must fulfill ACPl requirements where applicable for their second and subsequent Theatre Department courses. Academic credit may be given for an ACPl assignment by enrolling in THE 3925 (1 credit).

Requirements for Minor in Theatre (21 hours minimum):

THE 2020 2 credit hours
TPA 2200 3 credit hours
TPA 2223 3 credit hours or TPA 2232 3 credit hours
TPP 2110 3 credit hours

The remaining 10 hours are to be selected by the student based on personal interest. At least 9 hours must be upper level courses. The Theatre advisor will be available to assist the student in developing a course of study that will meet the needs of the individual student.

Students desiring admittance into the ACPl sequence must audition and those entering the design sequence must have a portfolio reviewed.

All theatre minors must satisfy two ACPl's before they are approved for graduation. All theatre courses (with the exception of the above mentioned lab courses) are subject to consent of the instructor.

Requirements for the B.F.A. Degree in Theatre:

The student should submit a letter of application as early as the second semester of the junior year. This should be accompanied by a transcript and a detailed description of production involvement. The student will concentrate in either performance or design technology.

Admission to the B.F.A. program is by audition or portfolio presentation and acceptance by the appropriate faculty committee.

As soon as the B.F.A. candidate has been accepted into the program, the Chairman of the Theatre Curriculum Committee in conference with the student and with the approval of the department chairman will select the student's Advisory Committee. The Advisory Committee will be composed of three members of the Theatre faculty.

This committee has the responsibility to develop a curriculum designed to meet the specific needs of the student and will decide if the following requirements have been met and appropriate standards maintained: (Theatre courses taken prior to the appointment of the B.F.A. Advisory Committee and without the advice of the Committee cannot be considered part of the B.F.A. program.)

Completion of the appropriate Department of Theatre B.A. requirements.

Development and execution of a creative project. Participation in one summer session. A minimum of 30 credit hours above the B.A. including 6 credits of non-theatre electives.

Design/Technology Concentration
7 hours in creative project and execution:

THE 4905 or THE 5909 (Research & Design Creative Project) (4 credit hours) and
TPA 4012 Project Design: Honors (3 credit hours)

Complete third area of design and prerequisite (7 credit hours) 10 credit hours of additional electives of which 6 must be outside the Department of Theatre.

PLUS 6 credit hours.

TPP 4310 Directing I (3 credit hours)
THE 4900 Directed Reading (3 credit hours)

Performance Concentration
12 credit hours of production preparation through performance classes from the following:

THE 4905 1-4 credit hours
THE 4930 1 credit hour
TPA 2250 1 credit hour
TPA 3810 3 credit hours
TPA 3840 4 credit hours
TPP 3121 3 credit hours
TPP 3122 3 credit hours
TPP 3235 3 credit hours
TPP 3510 2 credit hours
TPP 4220 2 credit hours
TPP 4310 3 credit hours
TPP 4311 3 credit hours
TPP 4610 3 credit hours

12 credit hours of additional electives of which 6 must be outside the Department of Theatre.

PLUS 6 credit hours:

TPP 4180 Scene Study Honors (3 credit hours)
THE 4900 Directed Reading (3 credit hours)
Students in the College of Natural Sciences are trained in the tools of logical analysis and the modes of experimentation in the continuing attempt to better understand the nature of man and his relationship to the universe. In all its functions the College is dedicated to fostering a spirit of inquiry and intellectual growth.

The College of Natural Sciences offers programs in biology, including botany, microbiology, and zoology; chemistry; geology; marine science; mathematics; medical technology; and physics. These programs are designed for students planning scientific careers in the science fields or for those planning professional careers having a considerable component of science. These students will typically major in one of the sciences or in a combination of sciences as preparation for employment, transfer to professional schools or admission to graduate school.

In addition, the college administers advising for the preprofessional sciences non-degree program and the medical technology degree program. These programs combine specialized counseling and curriculum planning to assist the student in gaining admission to a professional school or internship program.

BACCALAUREATE LEVEL DEGREE PROGRAMS

Admission to the College

To be admitted to the College of Natural Sciences a student must make written application and satisfy the admission criteria of the college. Upon admission, the student will be assigned a faculty advisor for counseling and program planning. Students preparing for a science or mathematics career must plan their courses carefully because of the sequential nature of the science curricula, and students seeking entrance into a professional school or medical technology internship program require specialized counseling. Because of this, immediate application for admission into the college is strongly recommended.

Information on admission criteria, departments, majors, programs, counseling, and other services of the college may be obtained from the office of the Dean, College of Natural Sciences, University of South Florida, Tampa, Florida 33620.

General Requirements for Degrees

In addition to the University graduation requirements found on page 99, the requirements for graduation in any undergraduate degree in the college are as follows:

1. Completion of a major program with a grade of "C" or higher in each course. A major program is defined to be courses in a department of concentration plus supporting courses in related departments. All courses in the major program must be taken with letter grade (A, B, C) except those courses which are graded S/U only. For a more detailed description of the major program requirements, consult the appropriate departmental section.

2. Satisfactory completion of the College Level Academic Requirements, except: (a) Completion of a major program of six hours in mathematics may be waived by credit in at least six hours of mathematics courses required by the major. (b) In area IV, the minimum of six hours in Natural Sciences may be waived by credit in at least six hours of natural sciences courses required by the major.

3. Completion of 15 hours of courses from the Colleges of Fine Arts, Social and Behavioral Sciences, or Arts and Letters. The student may elect any course from any of these colleges provided:

(a) No more than 9 hours are taken in courses in any one department.

(b) The courses are taken with letter grades (A, B, C, D). Courses taken to satisfy the University Distribution Requirement may not be used to satisfy this requirement. However, "Gordon Rule" writing courses may be used, if not used in GDR.

4. Subsequent to admission to the college, a student must complete at least 90 credit hours of letter graded courses in the college, of which at least 12 credit hours must be applicable to a major.

5. Satisfactory completion of the College Level Academic Skills Test and the writing and computation course requirements of 6A-10.30.

Grading Systems

The College of Natural Sciences will provide a student of evaluation in all structured undergraduate courses prior to the drop deadline. Typically, courses in the University receive letter grades (A, B, C, D, F, I). However, the college recognizes that educational competence may be achieved and demonstrated by experiences other than classroom attendance leading to letter grades. The attention of the student is directed to the following:

1. CLEP and other advance placement examinations.
2. Waiver by either documentation or examination.
3. Off-Campus Term programs.
4. Cooperative Education Program.
5. Independent Study.

A. With the exception of courses graded S/U only, all courses required to satisfy the departmental major and all supporting courses required by the departmental major are considered in the students' major program and may not be taken S/U. However, once the requirements of the major program have been satisfied, subsequent courses taken in the major or supporting areas are considered free electives and may be taken S/U. All hours required to complete the 15-hour rule must be taken by letter grade.
B. With the exception of ENC 1101 and ENC 1104, all courses in Distribution Requirements and all courses in free electives may be taken S/U. There is no restriction regarding the number of hours to be taken S/U except the graduation requirement that the student must earn at least 30 credit hours with letter grades in the College of Natural Sciences.
C. Students will be permitted to enroll in a course by an S/U on the basis of a written contract signed by the student, and the instructor.
of the course. This contract must be completed no later than the third week of the semester in which the course is offered.

D. Each instructor for courses in the College of Natural Sciences will provide students with requirements necessary to attain an "S" grade. Essentially, "S" should be equal to a "C" or better.

E. Students transferring from any other college division of the University will be subject to the above requirements.

Programs Leading to the Baccalaureate Degree

The College offers the Bachelor of Arts degree with majors in Chemistry (CHM), Geology (GEO), Mathematics (MTH), Physics (PHY), and Interdisciplinary Natural Sciences (INS), with a concentration in one of the above disciplines or in Biology. The College offers the Bachelor of Science degree with majors in Biology (BIO), Botany (BOT), Microbiology (MIC), and Zoology (ZOO); Chemistry (CHS), Clinical Chemistry (CHC); Geology (GLS); Medical Technology (MET); and Physics (PHS). For specific requirements, consult appropriate departmental sections of this Catalog.

Academic Minor Programs

Academic Minors are offered in the departments of Geology and Mathematics. To complete a minor, a student must satisfy the course requirements found in the departmental sections of this catalog and must satisfy the University requirements found on page 36. In addition, the student must earn a grade of "C" or higher in each course used to meet a minor requirement of departments of the College of Natural Sciences.

PREPROFESSIONAL SCIENCES

The University of South Florida is an excellent location to prepare for a health profession. The Tampa Veterans Administration Hospital, University of South Florida Medical Center, University of South Florida Mental Health Institute, and University Community Hospital are within walking distance of the campus and offer students excellent opportunities for observation, research, and experience. The College of Natural Sciences offers programs designed to prepare students for admission to professional schools of medicine, osteopathic medicine, dentistry, optometry, podiatric medicine, and veterinary medicine. Usually these professions require four years of preprofessional preparation followed by four years of training in a professional school. A few well-prepared students with exceptional qualifications may be admitted to some professional schools as early as the completion of the junior year of preprofessional work. The preprofessional programs do not meet requirement for a degree. Students should plan to also complete a degree while at USF. Some professional schools prefer students with a bachelor's degree, although they do not specify the choice of major. Most preprofessional students major in the sciences because of their interests in the health sciences, and because of the considerable overlap between an optimal preprofessional curriculum and the degree requirements for majors in the biology and chemistry departments. The College also offers two-year programs leading to the A.A. degree that prepare students for admission to programs in the health professions of pharmacy and physical therapy. Entrance into all professional schools or programs is competitive, and students should begin establishing a record of excellence with the first semester at USF. Furthermore, it is essential that students pursue courses developing a sense of understanding of cultural and humane values and basic social problems.

The College of Natural Sciences provides academic advising in the Preprofessional Sciences Advising Office. The office maintains a library of current catalogs and books on admission requirements for professional schools and it is an important resource center for preprofessional students. Students considering one of the health professions should contact the College of Natural Sciences during the first semester at USF to declare their interest in a preprofessional sciences program. Students are then assigned to the preprofessional sciences advising office for curriculum planning: and each semester the office provides students with updated academic records. The advisers constitute the Preprofessional Sciences Committee, which evaluates students at the time they apply to professional schools. The Committee's evaluation is based upon academic record and test scores, individual evaluations submitted by five faculty members, and an interview. The evaluation is important in the admission selection process and is sent to every school where students are applying.

Preprofessional Sciences Program

The Preprofessional Sciences Program is designed to prepare students for admission to professional schools of dentistry, medicine, osteopathic medicine, and podiatric medicine. All of these professional schools have in common the following course requirements, which should be completed by the end of the junior year, the usual time of application:

**Biology:**
- BSC 2010C (4)
- ZOO 2010C (4)

**Chemistry:**
- CHM 2045 (3)
- CHM 2045L (1)
- CHM 2046 (3)
- CHM 2046L (1)
- CHM 3210 (3)
- CHM 3210L (2)
- CHM 3211 (3)
- CHM 3211L (2)

**Physics:**
- PHY 2050 (3)
- PHY 2050L (1)
- PHY 2051 (3)
- PHY 2051L (1)
- PHY 3040 (3)
- PHY 3040L (1)
- PHY 3041 (3)
- PHY 3041L (1)

**Mathematics:**
- MAC 2243 (4)
- MAC 2244 (4)
- MAC 3411 (4)
- MAC 3412 (4)

In addition to these requirements it is generally expected that preprofessional students will complete two semesters of English. CLEP credit usually is not acceptable to professional schools.

Pre-medical students must include the following courses to meet additional admission requirements of medical schools in Florida:
- PCB 3063 (3)
- STA 3023 (4)
- BCH 3033 (3)

The following courses are recommended by some professional schools:

**Biology:**
- MCB 3010C (4)
- ZOO 4693 (4)
- PCB 4184C (4)
- PCB 3063 (3)
- PCB 4743C (4)
- ZOO 3713C (4)
- PCB 4023C (4)

**Chemistry:**
- BCH 3033 (3)
- CHM 3401 (3)
- CHM 3120C (4)
- CHM 3400 (3)

**Optometry Program**

Optometry schools differ somewhat in requirements, but all optometry schools require at least two years of preoptometry studies, and most schools require the following courses:

**Biology:**
- BSC 2010C (4)
- MCB 3010C (4)

**Chemistry:**
- CHM 2045 (3)
- CHM 2046 (3)
- CHM 2045L (1)
- CHM 2046L (1)
- CHM 3210 (3)

**Mathematics:**
- MAC 2243 (4)
- STA 3023 (4)
- STA 3122 (3)

**Physics:**
- PHY 2050 (3)
- PHY 2050L (1)
- PHY 2051 (3)
- PHY 2051L (1)

In addition, some schools require MAC 2244, PCB 3700, ZOO 3713C, CHM 3211, CHM 3211L, BCH 3033, PCB 4743C, PSY 2012, PSY 3013, and a social sciences elective.

Pre-Veterinary Medicine Program

The Pre-Veterinary Medicine program meets admission requirements of the University of Florida College of Veterinary Medicine, the only
veterinary students should complete veterinary school in the state. Admission into veterinary school is highly selective, and to be competitive students should obtain experience working with animals, preferably through employment with a veterinarian. Pre-veterinary students should complete a degree in the major of their choice while including the following entrance requirements:

**Biology:**
- BSC 2010C (4)
- PCB 3063 (3)
- ZOO 2010C (4)
- MCB 3010C (4)
- PCB 3063 (3)

**Chemistry:**
- CHM 2045 (3)
- CHM 3210 (3)
- CHM 2046L (1)
- CHM 3211L (3)
- ZOO 2010C (4)
- CHM 2045L (1)
- CHM 3210L (2)
- CHM 2046L (1)
- CHM 3211L (2)
- CHM 2046 (3)
- CHM 3211 (3)
- BCH 3033 (3)

**Mathematics:**
- MAC 2243 (4)
- MAC 3411 (4)

**Physics:**
- PHY 2050 (3)
- PHY 2050L (1)
- CHM 3210 (3)
- PHY 3040L (3)
- PHY 3041L (3)

It is required that students have a minimum of 80 hours including 6 hours of English with one course in composition, 6 hours of social science, 9 hours of humanities, and 8 hours of animal science courses which should be completed at the University of Florida no later than the summer prior to application. Recommended courses are ZOO 3713C (4), ZOO 4693 (4), PCB 4743C (4), and MAC 2244 or MAC 3412.

**Prepharmacy Program**

The College offers a two-year program to prepare students for transfer to regional colleges of pharmacy. Prepharmacy students must complete general education requirements and include the following science requirements:

**Biology:**
- BSC 2010C (4)
- ZOO 2010C (4)

**Chemistry:**
- CHM 2045 (3)
- CHM 3210 (3)
- CHM 2045L (1)
- CHM 3210L (2)
- CHM 2046 (3)
- CHM 3211 (3)
- CHM 2046L (1)
- CHM 3211L (2)

**Mathematics:**
- MAC 2243 (4)
- MAC 3411 (4)
- MAC 2244 (4)
- MAC 1104 (4)

**Physics:**
- PHY 2050 (3)
- PHY 2050L (1)
- PHY 2051 (3)
- PHY 2051L (1)

In addition, some schools require another English course, 3 hours of economics, and 8 hours of electives in humanities and social and behavioral sciences. Prepharmacy students should take the Pharmacy College Admission Test (PCAT) in the fall of the sophomore year and apply to pharmacy schools at that time.

**Pre-Physical Therapy Program**

This two-year program prepares students for entrance into upper level physical therapy programs at Florida institutions. Pre-physical therapy students must complete general education requirements and include the following science requirements:

**Biology:**
- BSC 2010C (4)
- ZOO 2010C (4)

**Chemistry:**
- CHM 2045 (3)
- CHM 2046L (1)
- CHM 2046 (3)
- CHM 2045L (1)
- CHM 2046 (3)

**Physics:**
- PHY 2050 (3)
- PHY 2050L (1)
- PHY 2051 (3)
- PHY 2051L (1)

In addition, one of the following mathematics courses must be taken: MAC 2243, MAC 1104, MAT 2034, or MGF 2202. The following courses are required or recommended at specific institutions: ZOO 3713C, PCB 3700, STA 3023, HUS 4020, HES 2000, PSI 2012, DEF 3103, and a psychology elective.

**B.A. Degree for Medical and Dental Students**

Students who are admitted to an approved U.S. medical or dental school after completing their junior year at the University of South Florida may be awarded the B.A. degree in Interdisciplinary Natural Sciences from the College of Natural Sciences subject to the following conditions:

1. Transfer of a minimum of 30 semester hours in science courses from an approved medical or dental school.
2. Fulfillment of the following minimum requirements in attendance at the University of South Florida:
   - A. 90 hours with at least a "C" average (2.00).
   - B. Completion of a minimum of 24 hours in the department of major concentration and a minimum of 16 hours in supporting courses in the College of Natural Sciences outside the department of major concentration. The 24 hours in the department of major concentration must be in courses applicable to a major in that department. The 16 hours in supporting courses must also be taken in courses applicable to a major in that department and must include a minimum of two courses at the 3000 level or above. At least a "C" must be earned in each course in both major concentration and supporting courses.
3. Credit in the following courses:
   - **Biology:**
     - BSC 2010C (4)
     - ZOO 2010C (4)
   - **Chemistry:**
     - CHM 2045 (3)
     - CHM 3210 (3)
     - PCB 3063 (3)
     - CHM 2045L (1)
     - CHM 3210L (2)
     - PCB 4743C (4)
     - CHM 2046 (3)
     - CHM 3211 (3)
     - CHM 2046L (1)
     - CHM 3211L (2)
   - **Physics:**
     - PHY 2050 (3)
     - PHY 2050L (1)
     - PHY 3040L (3)
     - PHY 3040L (1)
     - PHY 3041L (3)
     - PHY 2051 (3)
     - PHY 3041L (1)
     - PHY 2051L (1)
     - PHY 3041L (1)

4. A minimum of 20 credits from the following courses:
   - **Biology:**
     - MAC 1104 (4)
     - PCB 3063 (3)
     - ZOO 4693 (4)
     - MCB 3010C (4)
     - PCB 4743C (4)
     - PCB 4023C (4)
     - ZOO 3713C (4)
     - PCB 4184C (4)
   - **Chemistry:**
     - BCH 3033 (3)
     - CHM 3401 (3)
     - CHM 3120C (4)
     - CHM 3400 (3)
   - **Mathematics:**
     - MAC 1104 (4)
     - MAC 2244 (4)
     - MAC 3411 (4)
     - STA 3023 (4)

5. Completion of the General Distribution requirements of the College of Natural Sciences as approved by the student's adviser.
6. At least 30 credit hours with letter grades earned in the College of Natural Sciences.
7. The last 30 credit hours prior to transfer to a medical or dental school in residence at the University of South Florida.

Application for the baccalaureate degree must be received no later than two years from the date of entrance into the professional school.

**Postbaccalaureate Preprofessional Sciences Program**

A special two-year non-degree program is administered by the Preprofessional Sciences Committee of the College of Natural Sciences for students who hold a baccalaureate degree and need additional courses to prepare for application to professional schools. The program is designed for students who have not completed minimal admission requirements as undergraduates, or who have completed requirements but need to further demonstrate their ability to perform well in the sciences. Students in the
Requirements for the B.A. Degree

• BIOLOGY

The College of Natural Sciences offers competitive opportunities for jobs or for further study beyond the baccalaureate degree for secondary school teachers and the study in any of the various life sciences. The Department attempts to schedule sequences of courses that are all preparatory for careers in teaching, agriculture, and medicine, dentistry, marine biology, biotechnology, or for postgraduate study in any of the various life sciences. The Department attempts to schedule sequences of 5000 level courses which allow seniors in the Biology program to concentrate in such areas as: Ecology, Cell & Molecular Biology, Physiology, and Marine Biology. Students should study the requirements listed below and then make maximum use of the rigorous advising program maintained by the Department in structuring their total program. A reading knowledge of a modern foreign language (German, French, or Russian) is strongly recommended for those who intend to enter graduate school.

Requirements for the B.A. Degree

I. Department of Biology Courses

A. Biology Core Courses (Required for all B.S. degrees, 15 cr. hrs.)

- BSC 2010C (4)

One of the following:

- BOT 2010C (4)
- ZOO 2010C (4)
- MCB 3010C (4)

plus

- PCB 3063 (3) and PCB 4023C (4)

B. Individual Degree Requirements

BIOLOGY MAJOR (BIO) (25 cr. hrs.)

One of the following:

- PCB 4743C (4)
- BOT 4503 (4)
- MCB 4404 (4)

Advising Office no later than March 15 for the fall semester and October 1 for the spring semester.

Once admitted to the program students must complete a minimum of 15 hours per semester (excluding summers) of courses approved by the Preprofessional Sciences Committee with a minimum grade point average of 3.3 each semester. The curriculum is planned individually according to the student’s background, and an approved schedule would typically include at least three rigorous science courses. Courses will generally be at the undergraduate level. Some students may make application to professional schools after one year in the program, but a second year may be necessary. Students lacking familiarity with the profession are expected to obtain adequate exposure while enrolled in the program.

TEACHER EDUCATION PROGRAMS

The College of Natural Sciences offers B.A. and M.A. degree programs for secondary school teachers and the M.A. degree for junior college teachers.

B.A. Degree Program for Secondary School Teachers:

The College of Natural Sciences in cooperation with the College of Education offers degree programs in Mathematics (MAE), in Botany (BOE), in Chemistry (CHE), in Physics (PHE), in Zoology (ZOE), and in Science (SCE). Because requirements exist in both colleges, a student will have an advisor in each college. At the outset the planned courses in mathematics and science must be approved by the student’s advisor in the College of Natural Sciences.

There are two options available to the student to satisfy the science portion of the program:

1. The student may complete the requirements of the departmental major. Departmental majors in Botany and Zoology may be found in this section of the catalog under the heading Biology. The departmental requirements of Chemistry, Mathematics, and Physics are found in this section of this catalog under the respective headings in Chemistry, Mathematics, and Physics.

2. The student may complete requirements of the Interdisciplinary Natural Sciences major with concentration in Biology, Chemistry, Physics, and Mathematics. A complete description of this major is found on page 72. This major is particularly appropriate for Science Education majors (SCE).

Prospective students should consult the College of Education portions of this catalog under the heading “Science Education (SCE)” for the required education courses and sample programs.

CURRICULA

- BIOLOGY (BIO/BOT/MIC/ZOO)

In addition to a set of basic courses in biology, students must have a thorough preparation in other areas of natural sciences in order to be competitive for jobs or for further study beyond the baccalaureate. A modern biology curriculum is built on a foundation of mathematics, chemistry and physics.

Four specific Bachelor of Science degrees (Biology, Botany, Microbiology, and Zoology) are available for students interested in the biological sciences. They are all preparatory for careers in teaching, agriculture, medicine, dentistry, marine biology, biotechnology, or for post-graduate study in any of the various life sciences. The Department attempts to schedule sequences of 5000 level courses which allow seniors in the Biology program to concentrate in such areas as: Ecology, Cell & Molecular Biology, Physiology, and Marine Biology. Students should study the requirements listed below and then make maximum use of the rigorous advising program maintained by the Department in structuring their total program. A reading knowledge of a modern foreign language (German, French, or Russian) is strongly recommended for those who intend to enter graduate school.

In addition, a student must choose two courses from the following list:

- PCB 4184C (4)
- ZOO 4693C (4)

plus one of the following:

- PCB 4184C (4)
- ZOO 4693C (4)

In addition, a student must choose two courses from the following list:

- MCB 4505C (3)
- PCB 4064 (3)
- PCB 5225C (3)
- PCB 5525C (3)
- ZOO 5235C (4)
- ZOO 3713C (4) or BOT 4223C (3)
- PCB 6816C (3)
- BOT 5725C (4)
- PCB 5835C (3)

The remaining credits may be taken from courses numbered 4000 or above in the Biology Department. BCH 3033 may apply toward the Biology electives as well as MCB 3010C (if not part of the Core) and 4 hrs of BSC 4910.

BOTANY MAJOR (BOT) (25 cr. hrs.)

- BOT 2010C (0)
- ZOO 2010C (4) or MCB 3010C (4)
- BOT 4503 (4) or equivalent
- BOT 4933 (1)

One of the remaining credits, not less than 8 must be selected from structured Botany (BOT) courses at the 4000 level or above.

MICROBIOLOGY MAJOR (MIC) (23-26 cr. hrs.)

- BOT 2010C (4) or ZOO 2010C (4)
- MCB 3010C (0)
- MCB 4115 (5)
- APB 4053C (5) or PCB 5235C (3)
- MCB 4404 (4)
- MCB 4950C (3)
- MCB 4934 (1)

One of the following:

- APB 5575C (4)
- BOT 4434C (3)
- BOT 5405C (3)
- ZOO 5235C (4)
ZOOLOGY MAJOR (ZOO) (23-26 cr. hrs.)
ZOO 2010C (0)
BOT 2010C (4) or MCB 3010C (4)
PCB 4043C (3)
PCB 4743C (4)
ZOO 4674 (3)
Three (3) additional structured courses from the Zoology (ZOO, PCB, ENY) or Biology (BSC, PCB) courses listed in this catalog.

II. Supporting Courses in the Natural Sciences (Required for all B.S. degrees, 30-38 cr.)

Chemistry
CHM 2045 (3)
CHM 2045L (1)
CHM 2046 (3)
CHM 2046L (1)
Plus
CHM 3200 (4) or CHM 3210L (3)
CHM 3210L (2) or CHM 3211 (3)
CHM 3211L (2)

NOTE: (CHM 3210, 3210L, 3211, 3211L are especially recommended for biology majors considering graduate or professional schools.)

Mathematics
MAC 2243 (4) or MAC 3411 (4)
MAC 2244 (4) or MAC 3412 (4)
STA 3023 (4)

Physics
8 credits in introductory physics.

III. General Distribution Requirements (Required for all B.S. Degrees, 18 cr., assuming waivers of Areas III & IV. Each student is required to satisfy the General Distribution requirements of the College of Natural Sciences (see page 32). The selection of courses within the requirements is to be done in conference with Biology Department advisers.

IV. Liberal Education Electives
The student must satisfy 15 hours of liberal education electives as described in item 3 of the graduation requirements of the College of Natural Sciences (see page 32).

V. Free Electives (including General Distribution waivers) can be taken over and above major requirements and major electives to complete a 120 hour program.

Teacher Education Programs:
For information concerning the degree programs for secondary school teachers and junior college teachers, see page 37 of this catalog.

Marine Biology:
The field of marine biology is especially important in Florida, and there is a good demand for trained personnel. Several faculty members in the department teach courses and conduct research in this area. Undergraduates interested in specializing in marine biology may do so by taking marine-oriented courses offered within the department.

Appropriate courses include:
BSC 3263 (Marine Biology)
BOT 5185C (Marine Botany)
BOT 5405C (Phycology)
ZOO 3203C (Introductory Invertebrate Zoology)
ZOO 5455C (Ichthyology)
ZOO 5555C (Marine Animal Ecology)
ZOO 5815C (Biogeography)

The Biology Department offers M.S. degrees and the Ph.D. degree which allow specialization in marine biology.

CHEMISTRY (CHS/CHM/CHC)
The Department of Chemistry offers three degrees at the baccalaureate level. Bachelor of Arts degree in Chemistry, Bachelor of Science degree in Chemistry, and Bachelor of Science degree in Clinical Chemistry, and two degrees, Master of Science and Doctor of Philosophy, each with specialization in the areas of analytical chemistry, biochemistry, inorganic chemistry, organic chemistry, and physical chemistry, at the graduate level. In addition, a Master of Arts degree in Chemistry is offered as part of a carefully integrated accelerated B.A.-M.A. program. The chemistry faculty is comprised of 27 full-time senior faculty members, all of whom hold the Ph.D. degree. A comparable number of teaching assistants, generally graduate students enrolled in the Ph.D. program, serve as instructors in the laboratories. The combination of a large and strong faculty with a wide variety of courses and electives provides students with programs of study which can be tailored to fit individual needs while maintaining a sound background in all general aspects of chemistry.

The Bachelor of Science degree in Chemistry (CHS) is a rigorous program which supplies the foundation in chemistry required for both the student who begins a chemical vocation immediately upon graduation as well as the one who pursues advanced study in chemistry or related areas. In accord with this goal the curriculum for the B.S. degree meets the requirements for degree certification by the American Chemical Society.

The Bachelor of Science degree in Clinical Chemistry (CHC) offered by the Department of Chemistry, one of only a few such programs in the country, is specifically designed to train personnel for this new and growing field of the medical profession; however, the strong scientific background and specific technical expertise provided by this program also afford the student an excellent preparation for graduate study in clinical chemistry, biochemistry, or medicine. Interested students should see the Coordinator of the Clinical Chemistry Program in the Department of Chemistry for further information.

The Bachelor of Arts degree (CHM) provides a course of study designed for the student who does not intend to become a professional chemist but whose career goals require a thorough understanding of chemistry. Inherent in this program is a high degree of flexibility which permits tailoring a course of study to the student’s own educational objectives. As such it offers considerable advantages to pre-professional students planning careers in medicine and the other health-related fields and an excellent preparation for primary and secondary school teachers of chemistry or physical science. The B.A. student whose goals change in the direction of graduate work in chemistry should supplement this curriculum by addition and/or substitution of a selection of advanced courses from the B.S. program.

The combined Bachelor of Arts—Master of Arts program is a carefully integrated accelerated course of study and research in which an exceptionally able student can earn both degrees within five years from entry as a freshman or three from entry as a junior college transfer. The B.A. coursework is augmented, and research is undertaken continuously from the junior year onwards, so that the student who elects to exit from the program at the bachelor’s level, to enter medical school, for example, can depart with a degree which meets requirements for American Chemical Society certification and with an unusually strong research background. For the student who continues into the graduate year, the M.A. program allows considerable freedom of choice among the available chemistry courses, so that the student’s own preference within chemistry may be cultivated with unusual intensity. Research and coursework proceed without interruption, there being no additional admission requirements or diagnostic examinations, and the graduate degree is earned by the end of the summer of the graduate year. Upon completion of the program, the student is exceptionally well placed to continue to professional school or to further graduate work leading to the doctorate degree.

Requirements for the Baccalaureate Degrees

1. Chemistry Courses*

B.A. CHEMISTRY (CHM) (39 cr. hrs.)

CHM 2045 (3) CHM 3211 (3)
CHM 2045L (1) CHM 3211L (2)
CHM 2046 (3) CHM 3400 (3)
CHM 2046L (1) CHM 3401 (3)
CHM 3120C (4) CHM 3402C (1)
CHM 3210 (3) CHM 3610C (4)
CHM 3210L (2)

Chemistry electives (3000 level or above; may include not more than one hour of CHM 4970 (6)

B.S. CHEMISTRY (CHS) (46 cr. hrs.)

BCH 3033 (3) CHM 3211 (3)
CHM 2045 (3) CHM 3211L (2)
CHM 2045L (1) CHM 4060 (1)
CHM 2046 (3) CHM 4130C (4)
CHM 2046L (1) CHM 4131C (4)
CHM 3120C (4) CHM 4410 (3)
CHM 3210 (3) CHM 4411 (3)
CHM 3210L (2) CHM 4412 (3)
CHM 4610 (3)
B.S. CLINICAL CHEMISTRY (CHC) (49 cr. hrs.)

BCH 3033 (3) CHM 3211 (3)
BCH 3033L (2) CHM 3211L (2)
CHM 2045 (3) CHM 4410 (3)
CHM 2045L (1) CHM 4412 (3)
CHM 2046 (3) CHS 4100C (3)
CHM 2046L (1) CHS 4300 (3)
CHM 3120C (4) CHS 4301L (1)
CHM 3210 (3) CHS 4302 (4)
CHM 3210L (2) CHS 4310C (4)

II. Supporting Courses in the Natural Sciences

B.A. CHEMISTRY (CHM) (26 cr. hrs.)

MAC 3281 (3) PHY 2050 (3) PHY 2051 (3)
or
MAC 3411 (4)
MAC 3282 (3)
or
MAC 3412 (4)
Electives (must be acceptable for credit towards a Natural Science College discipline major) (8)

B.S. CLINICAL CHEMISTRY (CHC) (38-42 cr. hrs.)

BSC 2010C (4) MCB 3010C (4)
ZOO 2010C (4) PHY 4744C (3)
COC 3300 (3)
MAC 3281 (3)
MAC 3282 (3)
or
MAC 3283 (3) MAC 3411 (4)
MAC 3283 (3) MAC 3412 (4)
PCB 3700 (5) or
PCB 4743C (4)
PHY 2050 (3)
or
PHY 2050L (1)
PHY 2051 (3)
or
PHY 2051L (1)

B.S. CHEMISTRY (CHS) (20-23 cr. hrs.)

MAC 3281 (3) MAC 3411 (4)
MAC 3282 (3) MAC 3412 (4)
MAC 3283 (3) MAC 3413 (4)
PHY 3040 (3) BSC 2010C (4)
PHY 3040L (1)
PHY 3041 (3)
PHY 3041L (1)

Electives (3000-4000 level except PHY 3020) (3)

Transfer Credit

It is strongly recommended that students transferring from community/junior colleges to the University of South Florida complete whole sequences of chemistry courses, such as general and organic chemistry, before the transfer. Even though courses may carry the same common course number, topics may vary sufficiently from school to school to leave the transfer student ill-prepared to proceed within a sequence.

Teacher Education Programs:

For information concerning the degree programs for secondary school teachers, see page 102 and junior college teachers, see USF Graduate Catalog.

Requirements for the Combined BA-MA Program:

Admission

Regular admission to the program will normally occur towards the end of the sophomore year or early in the junior year, or at transfer from junior college. Students who have completed not less than ten semester credit hours of chemistry courses, and have maintained a "B" average in chemistry courses and overall, may apply. Applications will be considered individually and applicants may be called for interview. Provisional admission may be granted to incoming freshmen whose academic background and performance indicate the likelihood of their meeting the regular requirements in due course. It should be noted that, in view of the heavy research component and orientation of the program, and the limitations of facilities and individual faculty time available for research direction, admission to the program is by no means automatic upon meeting minimum requirements.

Course Requirements

Undergraduate: The B.A. coursework curriculum (q.v.) is augmented as follows:
1. CHM 4410, 4412 and 4130C (or CHS 4310C) replace CHM 3400, 3401 and 3402C.
2. Chemistry coursework hours (excluding research) total 40 rather than 39;
Graduate: Not less than 20 credit hours of formal, regularly scheduled chemistry graduate courses, including not less than two of the five core courses (BCH 5065, CHM 5225, CHM 5425, CHM 5621, CHM 6150). At least 10 of the credit hours must be at the 6000 level. The core course requirement may be waived in part or entirely by recommendation of the supervisory committee on the basis of past work, performance on a test, or substitution of more comprehensive and advanced courses.

Research and Thesis:

CHM 4970 (12) CHM 6973 and CHM 6971 (10)

To satisfy the research credit hour requirements and to produce results suitable for publication in a refereed scientific journal, it will be necessary for the student to be enrolled during the summers of his junior, senior and graduate years. Completion of the program will require the presentation and formal defense of a research thesis for the master's degree.

Supervision and Promotion:

A Supervisory committee consisting of two faculty members will be appointed for each student admitted to the program. A carefully planned individual timetable will be worked out and progress will be monitored each semester. Continuation from the senior year into the graduate year will be contingent upon the maintenance of the "B" average in chemistry and overall, and upon satisfactory recommendation by the Student's research director. Diagnostic and qualifying examinations will not be required of students in this program. The supervisory committee during the graduate year will consist of three faculty members, including the research director.
Requirements for the M.S. Degree:

- General requirements for graduate work are given in the USF Graduate Catalog.
- All entering graduate students who have no advanced work beyond a B.A., or B.S. will be required to take the core courses in each of five areas: Analytical, Biochemistry, Inorganic, Organic, and Physical Chemistry. This requirement can be waived by recommendation of the supervisory committee on the basis of past work, performance on a diagnostic test, or substitution by more comprehensive and advanced courses. The required core courses are:
  - BCH 5065
  - CHM 5425
  - CHM 5225
  - CHM 5621
  - CHM 6150

Diagnostic Examinations:

- All entering graduate students are required to take a series of diagnostic examinations which are administered during the week prior to enrollment. These examinations are in the five areas of chemistry: Analytical, Biochemistry, Inorganic, Organic, and Physical. A course of study is then agreed upon with each student according to their performance on the diagnostic examinations, their previous academic performance, and their stated academic preferences and goals.

Course Requirements

- Each student is required to pass graduate level core courses (3 semester hours each) in all five divisional areas as described above. These contribute to the minimum requirement of 30 semester hours of which 16 semester hours must be at the 6000 level with 10 of these in formally scheduled courses.

Comprehensive Examination

- The M.S. student is required to pass a written comprehensive examination in the area of specialization within two years of enrollment in the program. The examination is administered and evaluated by the division in which the student has specialized.

Final Thesis Defense

- Upon completion of the thesis research and preliminary approval of the thesis by the supervisory committee, the M.S. candidate will be orally examined by the committee on the results of his/her research.

Requirements for the Ph.D. Degree

Diagnostic Examinations

- All entering graduate students are required to take a series of diagnostic examinations which are administered during the week prior to enrollment. These examinations are in the five areas of chemistry: Analytical, Biochemistry, Inorganic, Organic and Physical. A course of study is then agreed upon with each student according to their performance on the diagnostic examinations, their previous academic performance, and their stated academic preferences and goals.

Course Requirements

- Each student is required to pass graduate core courses of 3 semester hours each in all five divisional areas as described under the M.S. degree requirements. These will contribute to the minimum course requirement of 90 semester hours of which 12 must be in structured 6000-level chemistry courses.

Language Requirements

- A reading knowledge of the chemical literature in any two of the languages—German, Russian, and French (or any other language approved as appropriate by the supervisory committee) must be demonstrated. As an alternative to one or both of the language requirements the student may demonstrate proficiency in skills or specializations outside the discipline of chemistry but pertinent to scholarly work in chemistry.

Major Comprehensive Examination

- A comprehensive examination must be passed in the student's area of specialization. This examination must be passed within two (2) years from the end of the student's first academic year and one year before graduation.

Admission to Candidacy

- Completion of the foregoing requirements admits the student to candidacy for the Ph.D.

The supervisory committee of doctoral students must evaluate the student for admission into candidacy by the end of the three years (six semesters after matriculation). If the committee does not recommend admission to candidacy by that time, it may dismiss the student or grant an extension for the immediately subsequent semester. At the end of the additional semester (the 7th semester enrollment, excluding summers), the committee must recommend that the student be admitted to candidacy or dismissed from the program.

Final Dissertation Defense

- When the Supervisory Committee has inspected the final draft (final unbound form; typewritten and ready for duplication with the exception of possible minor corrections) of the dissertation and finds it suitable for presentation, the Major Professor will complete a form requesting the scheduling and announcing of the final oral examination. The request form will be submitted via the department chairperson to the College Dean and the Director of the Graduate School at least two weeks before the end of the semester.

The Examination Committee shall consist of a chairperson and the members of the student's Supervisory Committee including the Major Professor(s). The Chairperson of the Examination Committee shall be appointed by the Dean of the College and shall not be a member of the student's Supervisory Committee or the department or program in which the degree is sought.

The candidate may expect questions concerning the details and significance of the research after the oral presentation which is open to the public. Final approval of the candidate's degree will require approval by a majority of the Examination Committee, which shall include the Chairperson.

GEOLOGY (GLY)

- The Department of Geology offers programs leading to the Bachelor of Arts or Bachelor of Science degree, and to a Master of Science degree. Geology is one of the broadest of all sciences because of its dependence on fundamentals of biology, chemistry, mathematics, and physics as applied to the study of the earth. As a result, undergraduate students are expected to obtain a broad background in the other sciences as well as a concentration in geology.

The Bachelor of Science degree program is designed to provide the geology major with a broad foundation that will prepare the student for employment in industry or with various governmental agencies as well as the necessary training to continue study in graduate school. The Bachelor of Arts program is designed primarily for the liberal arts student who has interest in the subject but is not preparing for a career in the field or for the pre-professional school student. A student who elects the B.A. program and decides to pursue the geology profession or attend graduate school will need at least physics and field geology in his/her program.

The graduate program in geology allows the student to specialize in nearly all of the major areas of concentration. Because of the geographic and geologic location of the University in a rapidly expanding urban center of coastal Florida, there are a number of areas of specialization which are being emphasized. These include coastal geology, hydrogeology, low temperature and pollution geochemistry, applied geophysics, geology of carbonate rocks and phosphate deposits. All of these are closely related to local problems of the environment.

Requirements for the B.A. Degree:

I. Geology Courses (30 sem. hrs.)
   - GLY 2016 (4)
   - GLY 3610 (4)
   - GLY 4550 (3)
   - GLY 2100 (4)
   - GLY 4200 (4)
   - GLY 3400 (4)
   - GLY 4220 (5)
   - A minimum of 2 sem. hrs. from
     - GLY 4920 (1)

II. Supporting Courses (22-28 sem. hrs.)
   a. CHM 2045 (3)
   b. CHM 2045L (1)
   c. CHM 2046 (3)
   d. CHM 2046L (1)
   e. Two courses in mathematics at 2000 level or above (6-8 sem. hrs.)
   f. Two courses in biology or physics selected from:
      - BSC 2010C (4)
      - BOT 2010C (4)
      - ZOO 2010C (4)
      - PHY 2050-2050L (4) or PHY 3040-3040L (4)
      - PHY 2051-2051L (4) or PHY 3041-3041L (4)
III. General Distribution Courses (40 sem. hrs. excluding waivers.)  
The student is required to satisfy the General Distribution requirements of the College of Natural Sciences. (See page 99.)

IV. Liberal Education Electives  
The student must satisfy 15 hours of liberal education electives as described in item 3 of the graduation requirements of the College of Natural Sciences. (See page 99.)

V. Free Electives (Including Distribution waivers) (29-35 sem. hrs.)

Requirements for the B.S. Degree:

I. Geology (40-42 sem. hrs.)
- GLY 2016 (4)  
- GLY 3610 (4)  
- GLY 4220 (5)

- GLY 2100 (4)  
- GLY 4200 (4)  
- GLY 4550 (3)  

- GLY 3400 (4)

- GLY prefixed structured electives (6)

A minimum of 2 sem. hrs. from:
- GLY 4920 (1)

Field Geology requirement (4-6 sem. hrs.) can be fulfilled by taking GLY 4750 (3) and GLY 5752 (2) Geological Field Excursion or by taking the geology summer field camp.

II. Supporting Courses (22-26 sem. hrs.)
- CHM 2045 (3)  
- CHM 2045L (1)  
- CHM 2046 (3)  
- CHM 2046L (1)

- MAC 3281 (3)  
- MAC 3282 (3)  
- PHY 3040 (3)  
- PHY 3040L (1)  

- MAC 3411 (4)  
- MAC 3412 (4)  
- PHY 3041 (3)  
- PHY 3041L (1)

III. General Distribution Courses (40 sem. hrs. excluding waivers.)

The student is required to satisfy the General Distribution requirements of the College of Natural Sciences. (See page 99.)

IV. Liberal Education Electives

The student is required to complete the General Distribution requirements of the College of Natural Sciences. (See page 99.)

V. Free Electives (Including Distribution waivers) 19-25 sem. hrs.

The student will choose, in consultation with his/her Geology adviser, such courses in the College of Natural Sciences that support his/her major interest in the field of Geology. Courses in computer programming and additional Mathematics are of particular value. Those students who anticipate continuing for a doctorate in graduate school are encouraged to take a foreign language, preferably French, German, or Russian.

All geology majors are strongly urged to take a course in technical writing. All entering students anticipating a major in Geology are advised to enroll in:
- GLY 2016  
- CHM 2045  
- CHM 2046

in the freshman year and to seek curriculum counseling with a Geology adviser.

Minor in Geology

A minor in geology consists of 16 credit hours and must include GLY 2016 and 2100. Additional courses, approved by the geology adviser, are designed to complement the student's major program. Only those courses which are acceptable toward the major in geology may be used toward the minor.

Teacher Education Programs:

Prospective elementary and secondary school teachers desiring to teach science should include basic courses in Geology and related sciences as part of their curriculum.

■ INTERDISCIPLINARY NATURAL SCIENCES (INS)

The Bachelor of Arts in the Interdisciplinary Natural Sciences major is designed for majors in an interdisciplinary program in the College and for majors in Science Education and Mathematics Education. For information on teacher certification in science or mathematics, prospective teachers should consult the section entitled Teacher Education Programs on page 102, and also consult the College of Education section of the catalog.

The requirements for graduation for this degree are the same as those contained on page 99 except that item 1 of the requirements is altered as follows:

1a. For Science Education and Mathematics Education Majors only completion of a major consisting of a minimum of 24 credit hours in College of Natural Sciences courses applicable to a major in the College. In these hours there must be a minimum of 24 credit hours in a discipline of major concentration and a minimum of 16 credit hours in supporting courses outside the discipline of major concentration. At least two of the supporting courses must be at the 3000 level or above. The student must earn a grade of "C" or better in each course in the major concentration and in each supporting course.

1b. For College of Natural Sciences Majors only completion of a minimum of 45 hours in College of Natural Sciences courses applicable to a major in the College. In these hours there must be a minimum of 24 credit hours in a discipline of major concentration and a minimum core of supporting courses comprising a calculus sequence and the introductory science sequence from each department in the College outside the discipline of major concentration. Courses in the supporting core must be taken from the following:

- BSC 2010C and one of the following:
  - BOT 2010C  
  - ZOO 2010C  
  - MCB 3010C  
  - CHM 2045  
  - CHM 2045L  
  - CHM 2046  
  - CHM 2046L  
  - GLY 2016  
  - GLY 2100  
  - MAC 2243  
  - MAC 2244

- PHY 2050  
- PHY 2050L  
- PHY 2051  
- PHY 2051L

The student must earn a grade of "C" or better in each course in the major concentration and in each supporting course.

■ MATHEMATICS (MTH)

The Departments of Mathematics offers a diversity of courses designed not only to enable the student to pursue a profession in mathematics itself, but also to enhance his competence in the fields of engineering, the physical sciences, the life sciences, and the social sciences. The department offers programs leading to the B.A., M.A., and Ph.D. degrees. The undergraduate program emphasizes the broad nature of modern mathematics and its close associations with the real world. The program is designed to prepare students for entry into graduate school or careers in industry or secondary education.

The department has a flexible Ph.D. program which is designed to encourage students to take an active role in the shaping of their own curricula. This flexibility is coupled with a desire to promote interdisciplinary research. In cooperation with the Departments of Marine Science and Physics, and the Colleges of Engineering and Medicine, the department offers special Ph.D. programs in the applications of mathematics. While programs in the more traditional areas of pure mathematics are offered, the department is committed to emphasizing applied mathematics at both the graduate and undergraduate levels. For both graduate and undergraduate work, students and faculty have access to the University's computer, an IBM 3081.

The Department of Mathematics consists of 31 fulltime faculty members, whose areas of interest include algebra, applied mathematics, applied statistics, approximation theory, celestial mechanics, complex analysis, functional analysis, graph theory, harmonic analysis on Lie groups, logic, mathematical physics, nonlinear functional analysis, number theory, ordinary differential equations, partial differential equations, probability theory, real analysis, statistics, theoretical computer science, and topology.
Requirements for the B.A. Degree

The courses taken to satisfy the Program I and Program II requirements below will constitute the major program referred to in the general graduation requirements of the College of Natural Sciences.

I. Mathematics Requirement (Min. 38 cr. hrs.)

- Majors must complete the following courses and either Program I or Program II.
  - COP 3215 (3) M HF 3102 (3)
  - MAC 3411 (4) MAS 3103 (3)
  - MAC 3412 (4) MAA 4211 (4)
  - MAC 3413 (4) MAA 4212 (4)

Program I

- Three (3) courses (including one sequence) from the following:
  - MAP 4302 (3) MAA 5306-5307 (6)
  - MAS 5146 (3) MAA 5402-5403 (6)
  - STA 4442 (3) MAS 5311-5312 (6)
  - MTG 5316-5317 (6)

Program II

- Four (4) courses (including one sequence) from the following:
  - MAP 4302 (3) MAA 5306-5307 (6)
  - MAS 5146 (3) MAP 5316-5317 (6)
  - MAS 5405 (3) MAP 5205 (3)
  - MAD 4401 (4) STA 4442-4321 (6)

Although the following description of Programs I and II is neither exhaustive nor restrictive, it is intended as a general guide. Program I is a liberal arts program designed to prepare a student in pure mathematics which could lead to either graduate study in pure or applied mathematics, a teaching career, or a career where mathematical approaches to problems are needed, such as law or business. Program II emphasizes various areas of applied mathematics which are frequently used in physical and engineering sciences. It could lead to graduate study in applied mathematics, an engineering career, or to a career in industry as an applied mathematician. Majors in mathematics for teaching should consult the section Mathematics (MAE) on page 72 for mathematics requirements.

The following is a suggested course program for the first two academic years:

<table>
<thead>
<tr>
<th>Semester I</th>
<th>Semester II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman Year</td>
<td>Sophomore Year</td>
</tr>
<tr>
<td>MAC 1104</td>
<td>MAC 3411</td>
</tr>
<tr>
<td>MAC 3412</td>
<td>MAC 3413</td>
</tr>
<tr>
<td>M HF 3102</td>
<td>MAS 3103</td>
</tr>
</tbody>
</table>

Students with a strong background in high school mathematics may omit MAC 1104. Students with a strong background in algebra, but who deficient in trigonometry, should take MAC 1114 instead of MAC 1104.

II. Mathematics Related Courses (15-20 cr. hrs.)

- Majors, except for majors in mathematics for teaching, must take two of the following sequences, one of which must be in the College of Natural Sciences.
  - BSC 2010C and either BOT 2010C or ZOO 2010C
  - CHM 2045, CHM 2045L, CHM 2046, CHM 2046L
  - G LY 2016, G LY 2100
  - E CO 2023, E CO 2013, and one of E CO 3101 or E CO 3203
  - E GN 3373, E GN 3374, E GN 3375
  - E GN 3343, and one of E MC 3103 or E MC 3117
  - E GN 3313, E GN 3321, E GN 3331
  - P HY 3040, P HY 3040L, P HY 3041, P HY 3041L
  - P SY 2012, P SY 3013, P SY 3213

Majors will not receive credit toward graduation for the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Grade</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 3033</td>
<td>G EB 3121</td>
<td>STA 3122</td>
</tr>
<tr>
<td>E CO 4402</td>
<td>P HY 3020</td>
<td>STA 3023</td>
</tr>
</tbody>
</table>

Majors wishing to take a course in statistics should take STA 4321.

III. General Distribution Courses (40 cr. hrs. excluding waivers)

- Majors must satisfy the General Distribution requirements of the College of Natural Sciences, which must include (or show competence in) one of the following sequences:
  - FRE 1100, FRE 1101
  - GER 1100, GER 1101
  - RUS 1100, RUS 1101

IV. Liberal Education Electives

The students must satisfy 15 hours of liberal education electives as described in item 3 of the graduation requirements of the College of Natural Sciences. (See page 99).

Teacher Education Programs:

For information concerning the degree programs for secondary school teachers, see page 102 and junior college teachers, see USF Graduate Catalog.

Mathematics Minor

Although open to all students, the minor in mathematics is designed particularly for students in science and engineering who wish to enhance their mathematical capabilities to benefit their major. A student wishing to receive a minor in mathematics must take the following courses:

- Total credit hours required: 29 (minimum)
  - MAC 3411-3413 (12) Calculus I-III or equivalent
  - M HF 3102 (3) Set Theory
  - MAS 3103 (3) Linear Algebra
  - COP 3215 (3) Introduction to Computer Programming with Mathematics Application (or 3 hours of approved programming in BASIC, FORTRAN, or PL 1)
  - M AA 4211 (4) Advanced Calculus I
  - M AA 4212 (4) Advanced Calculus II

In addition, one sequence from the following:

1. BSC 2010C and either BOT 2010C or ZOO 2010C
2. CHM 2045, 2045L, 2046, 2046L
3. G LY 2016, 2100
4. E CO 2023, 2013, and one of E CO 3101 or 3203
5. E GN 3373, 3374, 3375
6. E GN 3343 and one of E MC 3103 or E MC 3117
7. E GN 3313, 3321, 3331
8. P HY 3040, 3040L, 3041, 3040L
9. P SY 2012, 3013, 3213

MEDICAL TECHNOLOGY (MET)

Medical Technology is one of the growing professions associated with the advances in modern medical science. Working in the clinical laboratory, the medical technologist performs chemical, microscopic, bacteriologic, and other scientific tests to help track the cause and treatment of disease. This talent requires specialized training and a baccalaureate degree is essential preparation for certification as a medical technologist.

The University of South Florida offers a four-year program leading to the Bachelor of Science degree in Medical Technology. A student electing to major in Medical Technology will spend the first three years of the program on the campus of the University of South Florida; the fourth year (12 months) will be spent in one of the affiliated hospitals or clinical laboratories. Admission to the fourth year is limited by the number of openings in the affiliated hospitals. Selection of interns is made by the hospitals.

During the first three years, the medical technology student will complete the liberal arts and basic science requirements for entrance into the fourth year of the program for clinical training. To remain in good standing as a Medical Technology major during this period, a reasonable grade point average, determined by the College of Natural Sciences, must be maintained. To be eligible for entrance into the program's fourth year, the student must have completed not less than 90 credit hours of work (excluding physical education courses). Of these hours, at least 20 credit hours must be from the College of Natural Sciences at the University of South Florida (in courses approved by the Director of the Medical Technology Program). The following courses must be included in the three years of work which precedes the fourth year of clinical training.

1. Biological Science
   - A minimum of 16 hours is required with at least one course in microbiology and one course in immunology. Physiology (PCB 3700 or PCB 4743C) and Determinative Bacteriology (MCB 4115) are strongly recommended.

2. Chemistry
   - A minimum of 18 hours is required including one semester of Elementary Organic Chemistry (CHM 3200, CHM 3210L), and one semester of Elementary Analytical Chemistry (CHM 3120C). Biochemistry (CHS 3033) and Clinical Chemistry (CHS 4300) are strongly recommended.
3. Physics
A minimum of 8 hours (one full-year majors-type course) is required.

4. Mathematics
A minimum of 6 hours including at least one course at the level of College Algebra (MAC 1104) or Elementary Calculus I (MAC 2243) is required. Statistics (STA 3122 or STA 3023) is required.

5. General Distribution Requirements
Courses satisfying the general distribution requirements of the College of Natural Sciences.

6. Courses in non-science fields to insure a broad background.
Upon successful completion of this curriculum, recommendations by the College, and acceptance by one of the affiliated hospitals or clinical laboratories the student will complete 12 continuous months of training at that hospital or laboratory.

This training period usually begins in early August or September of each year. During this period, one will continue to be registered as a full-time student of the University and will receive a total of 30 credit hours of work in:

- MLS 3031
- MLS 4309
- MLS 4605C
- MLS 4215
- MLS 4405
- MLS 4625C
- MLS 4216
- MLS 4545

These courses will be taught at the hospital or clinical laboratory. Students successfully completing this program will be granted a Bachelor of Science degree in Medical Technology.

**PHYSICS (PHY/PHS)**

The Department of Physics offers programs leading to a Bachelor of Arts or a Bachelor of Science degree, and to a Master of Science degree. Both thesis and non-thesis programs are available for the M.S. degree.

Qualified graduate students with appropriate backgrounds may obtain a Ph.D. in applied mathematics or engineering science. An interdisciplinary arrangement with the Department of Mathematics and with the College of Engineering provides for such an opportunity. Students should consult with the Physics Graduate Adviser for details.

Special courses may be offered upon sufficient demand. Modern excellently equipped classrooms and laboratories provide an outstanding environment for students.

At the graduate level, thesis research areas include theoretical and experimental plasma physics, theoretical and experimental solid state physics, experimental gaseous electronics, elementary particle theory, environmental science and medical physics. Supporting facilities include an IBM 3033N computer, a Tektronix 4501 graphics systems terminal located in the Physics Building, an excellently equipped machine shop and electronic shop, a glass blowing shop, an electron microscope, and an X-ray photoelectron spectrometer. Teaching assistantships and financial aid are available through the College.

**Requirements for the Baccalaureate Degrees:**

<table>
<thead>
<tr>
<th>I. Physics Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B.A. PHYSICS (PHY)</strong> (34 cr. hrs.)</td>
</tr>
<tr>
<td>PHY 3040&lt;sup&gt;1&lt;/sup&gt; (3)</td>
</tr>
<tr>
<td>PHY 3040L&lt;sup&gt;1&lt;/sup&gt; (1)</td>
</tr>
<tr>
<td>PHY 3041&lt;sup&gt;1&lt;/sup&gt; (3)</td>
</tr>
<tr>
<td>PHY 3041L&lt;sup&gt;1&lt;/sup&gt; (1)</td>
</tr>
<tr>
<td>PHYSICS Electives (7)</td>
</tr>
<tr>
<td><strong>B.S. PHYSICS (PHS)</strong> (43 cr. hrs.)</td>
</tr>
<tr>
<td>PHY 3040&lt;sup&gt;1&lt;/sup&gt; (3)</td>
</tr>
<tr>
<td>PHY 3040L&lt;sup&gt;1&lt;/sup&gt; (1)</td>
</tr>
<tr>
<td>PHY 3041&lt;sup&gt;1&lt;/sup&gt; (3)</td>
</tr>
<tr>
<td>PHY 3041L&lt;sup&gt;1&lt;/sup&gt; (1)</td>
</tr>
<tr>
<td>PHY 3123 (3)</td>
</tr>
<tr>
<td>PHY 3223 (3)</td>
</tr>
<tr>
<td><strong>Total B.S. 43 cr. hrs.</strong></td>
</tr>
</tbody>
</table>

<sup>1</sup>The sequence PHY 3101, PHY 3223, PHY 3822L, PHY 4224, PHY 4930, PHY 5405, may be substituted for the sequence indicated.

**II. Supporting Courses in the Natural Sciences**

**B.A. and B.S. PHYSICS (20 cr. hrs.)**

| CHM 2045 (3) |
| CHM 2045L (1) |
| CHM 2046 (3) |

**MAC 3281 (3), MAC 3282 (3), and MAC 3283 (3) may be substituted for the sequence indicated.**

**III. General Distribution Requirements**

(40 cr. hrs. excluding waivers)

The student is required to complete the General Distribution requirements of the College of Natural Sciences (see page 99). Selection of a foreign language, preferably French, German, or Russian is also strongly recommended.

**IV. Liberal Education Electives**

The student must satisfy 16 hours of liberal education electives as described in item 3 of the graduation requirements of the College of Natural Sciences (see page 99).

**V. Free Electives**

(Including General Distribution waivers) to complete a 120 hour program.)

**Teacher Education Programs:**

For information concerning the degree programs for secondary school teachers, see page 102 and junior college teachers, see USF Graduate Catalog.
New College of the University of South Florida, located on USF's Sarasota campus, is a distinguished residential college that serves as an honors college in the State University System. It offers a nationally recognized liberal arts education at regular state tuition rates.

The New College student/faculty ratio is approximately 8:1; ninety-four percent of the faculty hold earned doctorates. Students work closely with faculty members in small classes, tutorials and on individual projects.

Admission is selective. The College looks for students who have demonstrated above average ability, academic motivation and self-discipline. About half the students are from Florida.

New College offers to students a level of faculty support and facilities for study generally found only at very expensive private colleges. This is possible because the gap between public funding and the actual cost of a New College education is closed by annual grants to the University from the New College Foundation.

The Foundation also raises substantial scholarship funds for meritorious students.

**Educational Program**

The New College degree is awarded for intensive, individualized study in the liberal arts and sciences. Classes, tutorials and independent study projects are tools the student, with faculty guidance, uses to discover and pursue intellectual and career interests. Study at the College culminates in a senior thesis and baccalaureate examination in the student's chosen area of concentration.

New College offers excellent academic facilities. A $7 million library opened on the campus in 1985, housing a collection presently numbered at over 170,000 volumes. The library is linked through inter-library loan to the USF system of over one million volumes, and to a network of thousands of other libraries. It also subscribes to computerized data bases that extend its reach beyond the region. The New College Natural Sciences laboratories, open to students around the clock, feature many research-grade instruments, including a scanning electron microscope. The College has special access to significant biological field research sites in the Sarasota area. Computer facilities available to students range from "user friendly" Macintoshes to an IBM main frame.

Campus-based studies can be supplemented by off-campus field research and internships, and by study abroad. The College participates in the Florida State University Study Centers in London and Florence, as well as in other programs, and has an exchange program with the University of Glasgow.

**Areas of Study**

All programs at the College lead to the Bachelor of Arts. Students may concentrate in a specific discipline or they may design, with faculty approval, an interdisciplinary concentration. The faculty offers the following areas of study:

- Anthropology
- Art History
- Biology
- Chemistry
- Classics
- Computer Science
- Economics
- Environmental Studies
- Experimental Psychology
- Fine Arts
- History
- Languages
- Elementary through advanced studies in French, German, Russian, Spanish, Latin and Greek language and literature
- Literature
- Mathematics
- Music and Musicology
- Philosophy
- Physics
- Political Science
- Psychology
- Religion
- Sociology

**The Academic Calendar and Residence Requirements**

The New College calendar consists of two 15-week semesters and a four-week independent study period in January. Fall semester begins in late August and ends just before Christmas. Spring semester begins the first week in February and ends the last week of May. All enrollment at New College is full-time.

Students may complete the degree in seven semesters—three and one-half years—as a result of New College's longer academic year and the advanced nature of the program. Three Independent Study Projects are carried out during January and/or the summer recess. Students may register for up to two additional semesters if their academic programs require it; they may also take up to two semesters of academic leave during their tenure at the College without loss of scholarship support. By special petition and with summer study, qualified students may complete the degree requirements in three years. All students must complete a senior thesis and pass a baccalaureate examination based upon the senior thesis.

Transfer students may have the number of semesters required for graduation reduced through the awarding of transfer credit for college-level work done elsewhere. The maximum allowable transfer credit is equivalent to three semesters and one independent study project.

**Admissions Requirements**

New College actively seeks those students who will benefit most from the flexible curriculum and contribute significantly to the New College community. The College looks for evidence of intellectual potential, strong academic preparation, self-motivation and initiative, tenacity, curiosity and concern for others.

Applicants must submit a State University System application, New College supplementary application, official high school transcript, SAT or ACT scores, teacher's recommendation and school report. An interview is strongly recommended. Transfer applicants must also submit transcripts from all colleges or universities they have attended.

New College welcomes transfer applicants. A growing number of students come to the College from Florida's two-year community colleges.

New College tuition is the same as for other institutions within the State University System. During the first two semesters of study, students are considered lower division for fee purposes; for the remaining semesters, they are considered upper division.

This low tuition for a small-college program is made possible through generous annual grants to the University by the New College Foundation. The Foundation contributes over $2,500 per year toward the cost of each New College student's education.

Both need-based financial aid and merit-based scholarships are available to New College students, and about 75% of the students receive some type of direct financial assistance. Students must apply for need-based aid and for USF scholarships. Merit scholarships from the New College Foundation are awarded by the New College Admissions Office to those students the College believes will make an outstanding contribution to the New College community.
The New College Admissions Office processes applications on a rolling basis, with decisions beginning about December 1. Students applying for need-based financial aid and USF scholarships must apply by February for the fall semester.

Application forms and literature can be obtained from the New College Admissions Office, 5700 N. Tamiami Trail, Sarasota, Florida 33580. Phone (813) 355-0668 or 355-7671.

Student Life

New College is a residential college, with the majority of its students living on campus or in adjacent neighborhoods. All students are full-time.

Students are challenged to accept major responsibilities for the direction of their own affairs, including social and extra-curricular activities. The Student Affairs Office, through its professional staff, is responsible for personal counseling, housing, health services, and other support services.

All first-year students live on-campus. Upper-class students may choose College or non-College housing. Students have the option of using the food service or of making independent arrangements.

A medical plan gives students access to a fully staffed walk-in clinic near the campus.
The College of Nursing is committed to the improvement of nursing and health care services through its educational programs, community service, and related research activities. In order to carry out its commitment in nursing education, the college offers an upper division competency-based program that leads to a Bachelor of Science degree with a major in nursing, and a graduate program that leads to a Master of Science degree with a major in nursing.

The undergraduate program provides for (a) generic students (qualified students with no previous preparation in nursing), and (b) registered nurses, who are graduates of diploma or associate degree nursing programs. The program is designed so that generic students with appropriate preparation equivalent to two years of college can enroll in the nursing major and complete requirements for the degree in four semesters and a summer session of full-time study on the Tampa campus. The curriculum is also designed so that registered nurses are provided with: (a) choices in learning experiences for those with special areas of interest and preparing for a shift in career goals to focus on leadership in nursing and the health care system, (b) a variety of opportunities to validate previous education and experience and to demonstrate achievement of program competencies, and (c) opportunities for full-time and part-time enrollment on the Tampa campus or part-time enrollment on the regional campuses at Fort Myers, Sarasota, and St. Petersburg. Registered nurses who attend college as full-time students may complete requirements for the degree in three semesters.

The undergraduate program is accredited by the National League for Nursing and approved by the Florida State Board of Nursing. Graduates of this program are eligible for admission to examinations leading to licensure to practice as professional nurses in the State of Florida or to apply for licensure to practice in other states. Graduates also have the educational background necessary for graduate study in nursing.

The major objective of the graduate program is the preparation of professional nurses who will assume leadership roles (a) as clinical specialists in acute health care settings, (b) as adult primary care nurses in ambulatory or extended care settings, (c) as teachers of nursing, or (d) as clinicians in gerontological nursing. At present the curriculum focuses on adult health nursing and is designed to meet the needs of full and part-time students. The graduate program is accredited by the National League for Nursing.

Applications from all qualified applicants are accepted without regard to age, sex, cultural, racial, religious or ethnic background. The College of Nursing has quota programs in that limitations are set on enrollments on the basis of availability of sufficient qualified faculty, laboratory and classroom facilities, and clinical resources for nursing practice experience for students. Therefore, admissions are based upon selection processes developed by the faculty of the College of Nursing. Florida residents are given priority.

Professional Nursing

The health care delivery system is rapidly changing and these changes are creating new demands on health care professionals, including nurses. The primary purpose of the College of Nursing is to prepare professional practitioners at the undergraduate and graduate levels. Graduates of these programs perform their functions in a variety of settings to assist clients/patients in maintenance and promotion of health, prevention of disease and restoration to an optimal level of functioning in society.

The faculty believe that man is a holistic being who lives in an ever-changing environment. Throughout the life span, man functions as an individual in a variety of systems, including family, community and society. The potential for wellness at any given point in time is influenced by factors such as: ability to meet needs, cultural determinants, value systems, socioeconomic states, religious beliefs, and interaction with environment. Nursing practice is influenced by environmental variables which make an impact upon professional nursing practice and health care delivery.

Nursing is a professional discipline which demonstrates a set of scholarly, pedagogical, social and political practices carried out by a professional community. Nurses are responsible for performing professional services on the basis of a body of knowledge which is continuously expanding through research.

The conceptual framework for the undergraduate and graduate curriculum is derived from the philosophy and purposes of the College of Nursing. Man, health, environment and nursing are the major concepts from which subconcepts relevant to the profession of nursing are identified. Nursing process, a method of scientific inquiry, provides for the implementation of nursing care in primary, secondary and tertiary care settings.

Goals of the University of South Florida College of Nursing

The College of Nursing is committed to provide a climate of excellence for the acquisition and utilization of knowledge in programs of studies which foster inquiry, autonomy, responsibility and accountability in the preparation of professional nurses at the undergraduate and graduate levels. In order to achieve this the College of Nursing will:

1. Attract and retain students who demonstrate potential for leadership in nursing, including those with nontraditional backgrounds who have diverse skills, experiences, and learning preferences.
2. Offer comprehensive curricula that prepare the learner to make an impact on the changing health needs of society.
3. Expand education leading to the first professional degree and at the graduate level, including development of doctoral programs, to prepare nurses to meet predicted societal health care needs.
4. Promote and facilitate lifelong learning opportunities responsive to students, graduates, faculty, community, and regional needs.
5. Be committed to the advancement of knowledge and its application to nursing and health care of people through collaboration with faculty within the University of South Florida, the Medical Center, and with professionals in other health care and community agencies.
6. Promote scholarship and research among students and faculty.
7. Promote faculty development by providing time, resources and programs.
8. Support activities that interpret and promote the role of the professional nurse.
9. Plan for the establishment of a center for research which will provide a resource for the nursing community.

Undergraduate Education in Nursing

Qualified students with no previous preparation in nursing, and registered nurses who are graduates of associate degree or hospital programs are eligible for admission. Students may complete all requirements for admission to the College of Nursing through enrollment at the University of South Florida, or they may complete the University's general education distribution requirements and College of Nursing admission prerequisites elsewhere and transfer to USF for the nursing major. College graduates and transfer students from other baccalaureate nursing programs are also eligible for admission to the major.

Lower division students who enroll at USF are admitted to the Division of Undergraduate Studies. They must meet the same requirements as other applicants for admission to the University, and should follow the admission procedures outlined elsewhere in this Catalog.

Transfer students seeking admission to the College of Nursing must also apply for admission to the University. Applications for admission to the University may be obtained by contacting the Office of Admissions, University of South Florida, Tampa, Florida 33620. Transfer students may not be admitted to the College of Nursing unless they are eligible for admission to the University. Official transcripts certifying completion of all requirements for admission must be available to the College of Nursing before admission will be confirmed and enrollment permitted.
At the present time, one class of generic students is admitted in the fall semester of each year. The deadline for University application is January 4 of the year in which the student enrolls. Applications are available from: Office of Admissions, University of South Florida, Tampa, Florida 33620. In addition, a separate application must be submitted directly to the College of Nursing no later than February 1. College applications are available from: College of Nursing Undergraduate Admissions, University of South Florida, Tampa, Florida 33612.

Registered nurse students may be admitted to the College on a more flexible basis contingent upon completion of admission prerequisites and requirements, and the availability of the appropriate sequence of nursing courses on the campus to which they are seeking admission. The deadline for receipt of an application from registered nurse students is at least one (1) semester in advance of the semester in which they intend to enroll. For more specific information contact the Undergraduate Admissions Office.

GENERAL REQUIREMENTS

Admission Requirements and Course Prerequisites

The minimum academic requirements used as a basis for evaluating eligibility of applicants for admission to the upper division major are outlined below.

A. Overall Requirements

1. Completion of 60 semester hours of college level work with a cumulative grade point average of 2.5. Credit received on the basis of CLEP or Advanced Placement examinations or other appropriate procedures may be included to meet some of these requirements.

2. Completion of the University of South Florida general education distribution requirements as part of the above. These requirements may be satisfied by the completion of 40 semester hours in the following areas with not less than 6 semester hours in each area:
   a) English Composition
   b) Humanities/Fine Arts
   c) Mathematics/Quantitative Methods*
   d) Natural Sciences*
   e) Social Sciences*

3. Students with an A.A. degree (other than in nursing) will be considered to have met all of the USF General Education Distribution requirements but also must meet specific college requirements in the areas marked "**".

4. Satisfactory completion of the College Level Academic Skills Test and the writing and computation course requirements of 6A-10.30.

5. Satisfactory completion of an approved cardiopulmonary resuscitation (CPR) course.

6. Evidence of computer literacy.

B. Specific Course Prerequisites

The college of Nursing requires certain courses within the general education distribution for the natural, social and behavioral sciences, and mathematics. These requirements are outlined below. The student must: 1) earn a grade of "C" or better in each course, 2) repeat no course more than once, 3) repeat no more than two (2) courses. Suggested courses are also included. Courses taken at another institution will be evaluated individually on the basis of content. Students in Florida community colleges can obtain information about equivalent courses from their counselors or by contacting the College of Nursing Undergraduate Admissions (813/974-2191). One class of generic students is admitted in the fall semester of each year. The deadline for University application is January 4 of the year in which the student enrolls. Applications are available from: Office of Admissions, University of South Florida, Tampa, Florida 33620. In addition, a separate application must be submitted directly to the College of Nursing no later than February 1. College applications are available from: College of Nursing Undergraduate Admissions, University of South Florida, Tampa, Florida 33612.

Registered nurse students may be admitted to the College on a more flexible basis contingent upon completion of admission prerequisites and requirements, and the availability of the appropriate sequence of nursing courses on the campus to which they are seeking admission. The deadline for receipt of an application from registered nurse students is at least one (1) semester in advance of the semester in which they intend to enroll. For more specific information contact the Undergraduate Admissions Office.

b) Chemistry—A minimum of 6 semester credits. Courses should include content in 1) principles of chemistry, 2) structure of matter, 3) atomic and molecular structure, 4) states of matter, 5) chemical formulas and nomenclature, 6) solutions, 7) chemical kinetics and equilibrium, 8) theory and practice of quantitative analysis, 9) organic chemistry.

Can be partially met with CLEP. CHEM 2045, 2046 or *CHM 2030, 2031.

*Chemistry sequence for non-science majors.

c) Other—the remaining credits can be earned by completing additional courses in biology and chemistry, or in genetics, physics, physical science, etc. (A course in non-quantitative physics is not recommended but may be required.)

2. Completion of the University of South Florida general education distribution requirements as part of the above. These requirements may be satisfied by the completion of 40 semester hours in the following areas with not less than 6 semester hours in each area:

3. Social Sciences: completion of each of the following with a grade of "C" or better in each course.

   a) American government—one course in modern American government or state and local government. CLEP is acceptable.

   b) Individual and Social Community Behavior: completion of at least three courses with at least one course in sociology and one additional course in psychology, sociology, anthropology, gerontology or human sexual behavior. CLEP is acceptable.

4. Supporting Sciences: All courses must be completed prior to enrollment in the nursing major with a grade of "C" or better in each course.

   a) Microbiology—one course. CLEP is not acceptable.

   b) Anatomy and Physiology—one course. A combined course in anatomy and physiology which is equivalent to PCB 3700 is acceptable or individual courses.

   c) Nutrition—one course. College of Nursing Challenge Examination or University of Florida correspondence course are acceptable.

D. ACT/PEP and College of Nursing Examinations

In accordance with University policies, College Level Examination Program (CLEP) general and subject examinations may be taken in several areas. The CLEP general examinations apply toward the distribution requirements at USF, and successful performance results in credit for any one or all five of the required areas. In addition, credit may be earned for a number of College of Nursing prerequisite courses, including: American Government POS 2041; English Composition ENC 1101, 1102; Biology BSC 2010C, BOT 2010C, ZOO 2010C; General Chemistry CHM 2045; and Statistics STA 3122. Additional information may be obtained from the Office of Evaluation and Testing, University of South Florida.

D. ACT/PEP and College of Nursing Examinations

Successful completion of the following examinations (s) can be used to fulfill course requirements as designated below:

1) College of Nursing—Nutrition Challenge Examination: a total of 3 semester credits can be earned by any undergraduate student to meet the course requirement in nutrition. Information about the college examination in nutrition may be obtained by contact-
ing the College of Nursing Undergraduate Admissions, University of South Florida.

2) Registered nurses who are graduates of diploma programs may receive 20 semester general elective lower division credits through successful completion of the ACT/PEP examinations in nursing. These credits do not apply toward meeting the University requirement of 40 upper division credits, or toward meeting the requirements of the upper division nursing major. The credits earned by passing the ACT/PEP examinations in nursing apply only to the B.S. degree with a major in nursing program offered by the College of Nursing. Additional information about the CLEP and ACT/PEP examinations may be obtained from the Office of Evaluation and Testing, University of South Florida.

3) Registered nurses who are graduates of associate degree programs may receive up to 20 semester general elective lower division credits for their previous nursing education.

4) Both generic and registered nurse students may earn up to 6 semester credits and fulfill the college's prerequisite requirement in anatomy and physiology through successful completion of the ACT/PEP examination in anatomy and physiology.

**E. Other Requirements**

In order to be considered for admission to the college, the applicant must:

1) have submitted application to USF by the appropriate deadline.
2) have submitted application and all supporting materials, including transcripts, to the College of Nursing by the appropriate deadline.
3) have a minimum grade point ratio of 2.5 with a grade of "C" or better in each prerequisite course.
4) be able to complete prior to enrollment in the major all those general education and specific prerequisites required for admission to the major.
5) have completed all prerequisites with not more than two (2) repeated courses and not more than one (1) repeat of any given prerequisite course.
6) have current licensure in Florida if enrolling in the program as a registered nurse.

In addition to the minimum requirements listed above, applicants will be evaluated on factors which are relevant to program completion and professional nursing practice: cumulative grade point average, performance in specific courses, and ability to communicate verbally and in writing. All applicants who appear to be eligible for admission may be interviewed.

Those applicants with the highest total rankings are accepted in order until the quota is filled. As vacancies occur prior to the enrollment date, those next on the list are accepted to fill them. Enrollment of all students is contingent upon verification through official transcripts of satisfactory completion of all requirements for admissions.

**DEGREE REQUIREMENTS**

Students will be certified for the Bachelor of Science degree with a major in nursing upon completion of a minimum of 126 semester hours composed of general education requirements, science prerequisites (physical, biological, social and political), upper division and nursing electives, and required nursing courses.

A minimum grade of "C" or better must be attained in each course in the major and cumulative grade point ratio of 2.0 or better must be maintained throughout the program. At least 40 semester hours must be upper division level work (courses numbered 3000 or above).

**Nursing courses - Generic Students**

**Junior Year (3 semesters)**
- NUU 3500 - Introduction to Professional Nursing (3)
- NUR 3612 - Nursing Process I (3)
- NUR 3612L - Nursing Intervention I (2)
- NUR 3722C - Client Assessment I (2)
- NUU 3501 - Ethical-Legal Aspects in Nursing and Health Care (2)
- NUR 3130 - Nursing Process II (2)
- NUR 3130L - Nursing Intervention II (3)
- NUR 3321 - Nursing Process III (2)
- NUR 3321L - Nursing Intervention III (2)
- NUR 3723C - Client Assessment II (2)
- NUU 3502 - Leadership-Management Aspects in Nursing and Health Care (2)
- NUR 4430 - Nursing Process IV (1)
- NUR 4430L - Nursing Intervention IV (1)
- NUR 4636 - Nursing Process V (2)
- NUR 4636L - Nursing Intervention V (3)

**Senior Year (2 semesters)**
- NUU 4505 - Introduction to Research (2)
- NUR 4651 - Nursing Process VI (2)
- NUR 4651L - Nursing Process VI (2)
- NUR 4652 - Nursing Process VII (2)
- NUR 4652L - Nursing Process VII (2)
- NUR 4653 - Nursing Process VIII (2)
- NUR 4653L - Nursing Process VIII (2)
- NUU 4506 - Nursing Core V (3)
- NUR 4943L - Preceptorship (6)

In addition to the requirements listed above, a minimum of 10 credits in upper division electives will be required for graduation: at least six (6) credits in upper division courses in general education (courses in arts, humanities, natural or behavioral sciences, economics, business or management, education, etc., are acceptable) and at least four (4) credits in nursing electives (NUR 4930, Selected Topics in Nursing, and/or NUR 4910C, Independent Study in Nursing, are currently used for this purpose).

**Nursing Courses - Registered Nurse Students (3 semesters)**
- NUU 3500 - Introduction to Professional Nursing (3)
- NUR 3722C - Client Assessment I (2)
- NUR 3641 - Nursing Process in Primary Care (3)
- NUR 3641L - Nursing Practicum I (3)
- NUU 4504 - Intermediate Core (4)
- NUR 4654 - Nursing Process in Complex Situations (4)
- NUR 4654L - Nursing Practicum II (4)
- NUU 4506 - Nursing Core V (3)
- NUR 4943L - Preceptorship (6)

In addition to the requirements listed above, a minimum of 10 credits in upper division electives are required for graduation: at least six (6) credits in upper division courses in general education (courses in arts, humanities, natural or behavioral sciences, economics, business or management, education, etc., are acceptable) and at least four (4) credits in nursing electives (NUR 4930, Selected Topics in Nursing and/or NUR 4910C, Independent Study in Nursing are currently used for this purpose).
The social and behavioral sciences are primarily concerned with human beings: their history, their individual behavior, their social and political institutions, and their manifold problems. The study of man by the broadly-conceived methods of science contributes to an understanding of the individual in a social context. Such insight provides an essential component of a liberal education by instilling a more enlightened world view and by helping the student to become a better informed citizen realistically prepared for a fulfilling role in contemporary society.

The social and behavioral sciences deal not only with the human but also with the humane. While the basic disciplines are dedicated to the satisfaction of additional criteria prior to admission.

Social Work, however, is a limited access degree program and does require additional criteria for New Students. This application is also available in the College of Social and Behavioral Sciences. With a virtually even balance of basic and applied programs, the College is uniquely structured to allow the student to gain the general knowledge necessary to pursue graduate education as well as to gain experience and background for future applications in human service fields, in government, in business and in other fields of endeavor.

### BACCALAUREATE LEVEL DEGREE PROGRAMS

**Admission to the College**

Admission to the College of Social and Behavioral Sciences is open to students who have been accepted to the University of South Florida and who declare a major in a particular field within the college. The Bachelor of Social Work, however, is a limited access degree program and does require satisfaction of additional criteria prior to admission.

Undergraduate students must submit a formal application for admission to the college. This usually occurs during Orientation and Advising for New Students. This application is also available in the College Office of Advising and Student Records for continuing students. Following admission to the College, students will then be counseled by an academic adviser in his/her major field. Information about majors, departments, programs, advising, and other services of the college may be obtained from the Assistant Dean, College of Social and Behavioral Sciences, University of South Florida, Tampa, Florida 33620.

Any student in the University may take courses in the College of Social and Behavioral Sciences. Students in other colleges or adults in the community may select social and behavioral science courses of particular interest.

**Honors Programs**

Faculty and selected students in the college participate in the University Honors Program. In addition, the College of Social and Behavioral Sciences offers undergraduate honors programs in two fields: Political Science and Psychology. Students interested in one of these honors programs should consult the appropriate department for further information.

**General Requirements for Degrees**

The College of Social and Behavioral Sciences currently offers three undergraduate degrees: Bachelor of Arts, Bachelor of Science and Bachelor of Social Work. Requirements for graduation (referred to on page 2) are summarized as follows:

1. 120 credits with at least a “C” average (2.0) in courses taken at the University of South Florida. At least 60 of these credits must be from baccalaureate degree granting institutions. At least 40 of these 120 credits must be in courses numbered 3000 or above. (A maximum of two credits of physical education courses may be counted toward graduation requirements; no credits in physical education are required.) No more than 9 credits from R.O.T.C. (aerospace studies, military science), may be counted toward graduation.

2. 40 credits of general distribution courses are required by the University in the areas of English Composition, Fine Arts and Humanities, Mathematics and Quantitative Methods, Natural Sciences, and Social and Behavioral Sciences. (See General Distribution Requirements, page 1.) Transfer students with standard AA degrees will be considered to have met the University’s General Education Requirements; however, such students who have not gained exposure to each of the five areas are strongly encouraged to make up deficiencies early in their USF careers.

3. 12 credits of courses requiring written assignments of 6000 words; 6 credits of college level math. (Transfer students with AA degrees from Florida public institutions will be considered to have met this requirement.) These courses may be used to satisfy General Distribution Requirements.

4. Completion of a major in a subject or an integrated major, with at least a “C” average (2.0), or 2.75 in the case of Social Work majors. (See following pages for requirements in specific majors offered in the college.)

5. 80 credits outside the major.

6. Credits transferred from other institutions will not be included in the computation of the grade point average for graduation. To be eligible for graduation with honors requires at least 3.5 average in all USF work and all previous college work.

7. A student must complete at least 30 of the last 60 credits in academic residence at USF. The approval of the Dean of the college granting the degree must be secured for any transfer credits offered for any part of these last 60 hours.

8. Satisfactory completion of the College Level Academic Skills Test, and the writing and computation course requirements of 6A-10.30.

Students are encouraged to consult regularly with an academic adviser in his/her major. It must be noted, however, that the student assumes full responsibility for satisfying all University, College, and departmental requirements for graduation.

Students must apply for graduation by the deadline at the beginning of their last term of residence at USF. Students who receive permission to complete requirements for the B.A., B.S. or B.S.W. as transient students should apply for graduation the term after all coursework has been completed.

**Advice To Freshmen and Lower Level Transfers**

Working with an adviser, plan a schedule each semester of 12 to 18 credits. Each term until you’re accepted into upper division take:
1. At least one course with writing assignments of 6000 or more words until you have completed 12 credits of such courses. Start with ENC 1101 and 1104 unless you have received CLEP credit for Freshman English.

2. A college level math course (if you are eligible following math testing) until you have completed 6 credits, or a natural science course (suggestions: BSC 2933, CHM 1015, PHY 2038, GLY 2850, GLY 3006, OCE 3001, any AST) until you have completed 6 credits. Six credits in each area are required for graduation.

3. One course in the Social Sciences designed for freshman and sophomores. These courses have prefixes of AFA, AMH, EUH, GEA, SYG, POS, SSI, and WST, and are at the 1000 or 2000 levels.

4. One course in the Behavioral Sciences from among ANT 2000, PSY 2012, SYG 2900. As sophomores, you may also choose from ANT 3005, CCJ 3003, DEP 3103, GEY 3000, HUS 3001, SPA 4004, SSI 2221.

5. An elective outside the College of Social and Behavioral Sciences. You are most likely to find appropriate courses in the Colleges of Arts and Letters, Fine Arts, and Natural Sciences. At least 6 of these credits should be in the humanities, unless you have chosen humanities courses to fulfill item 1 above.

Programs Leading to the Baccalaureate Degree

The College of Social and Behavioral Sciences offers a major in 13 fields as described in the following pages. In addition to the departmental majors, interdisciplinary majors are offered. (See Interdisciplinary Social Sciences, International Studies, and Social Science Education listed below.) Economics offers two majors, one in the College of Social and Behavioral Sciences and the other in the College of Business Administration.

A Bachelor of Arts Degree is offered in the following:
- African and Afro-American Studies (AFA)
- Anthropology (ANT)
- Criminal Justice (CCJ)
- Economics (ECN)
- Geography (GPY)
- Gerontology (GEY)
- History (HTY)
- Interdisciplinary Social Sciences (SSI)
- International Studies (INT)
- Political Science (POL)
- Psychology (PSY)
- Sociology (SOC)
- Social Science Education (SSE)*

A Bachelor of Science Degree is also offered.

A Bachelor of Social Work Degree (B.S.W.) is also offered.

*Offered jointly with the College of Education.

SPECIAL NON-DEGREE PROGRAMS

The OFF-CAMPUS TERM PROGRAM offers a wide variety of opportunities for self-designed, supervised educational experiences for credit. This program is presently housed administratively in the Department of Interdisciplinary Social Sciences, and the courses are listed under Off-Campus Term and Social Sciences Interdisciplinary.

The WOMEN'S STUDIES PROGRAM consists of courses designed to deal with historical, anthropological, sociological, and psychological aspects of the woman's role and of the female experience. This program is presently housed in the Department of Interdisciplinary Social Sciences, and the courses are listed under Women's Studies.

The HUMAN SERVICES courses are designed for students interested in careers in the human sciences and services, and may be taken in conjunction with any major or by special students. These courses are coordinated by the Department of Gerontology, and the courses are listed as:

- HUS 3001
- HUS 4020
- HUS 4700
- HUS 5505
- HUS 3502
- HUS 4100
- HUS 5325
- SOW 4332

COLLEGE OF SOCIAL AND BEHAVIORAL SCIENCES

Certificate of Interpretation

For The Deaf

The College of Social and Behavioral Sciences offers a Certificate in Interpretation for the Deaf for students who want to facilitate the communicative needs of the deaf in our complex society. The certificate program incorporates academic training with practice designed to provide the student with interpreting experiences in a variety of situations. Students seeking this certificate must meet the admission requirements of the University and possess as a minimum the sign language proficiency equivalent of a Level II score on the Quality Assurance Examination for Sign Language. Information and advice about the certificate program may be obtained from the Interpreter Training Program Coordinator in the Department of Communication. The program is open to students in all colleges.

The certificate program consists of the following courses:

- SPA 4004 (2)
- SPA 4040 (3)
- SPA 4930-003 (3)
- SPA 4363 (4)
- SPA 4930-001 (3)
- SPA 4050-001 (1)
- SPA 4334 (2)
- SPA 4930-002 (3)
- SPA 4050-004 (5)

Approval by the Coordinator of the Interpreter Training Program must be obtained prior to enrollment in this certificate training program. When the student has completed the above requirements, the Coordinator of the Interpreter Training Program will recommend the student for the certificate.

Certificate in Latin American Studies

The College of Social and Behavioral Sciences offers a Certificate in Latin American Studies for students who wish to gain an intensive multidisciplinary understanding of the Spanish-speaking world.

A minimum of 24 semester hours is required of all students seeking such a certificate. Of these, at least 15 must be planned around the following core courses:

- GEA 3400 Geography of Latin America
- LAH 3022 Modern Latin America
- CPO 4930 Comparative Government and Politics (Latin America)
- SPT 3131 Spanish American literature in translation; or equivalent in original language.

The remaining 9 hours must be selected from other specified courses with Latin American content, a list of which is available from the Latin American Studies Coordinator.

In addition, students seeking a Certificate in Latin American Studies must have competency in Spanish, Portuguese, or another major Indo-American language or must have completed no less than two semesters of study in that language, or its equivalent. It is hoped that the student will develop an even higher level of competency in one language and at least a minimum proficiency in a second language.

When the student has completed the above requirements, the Latin American Studies Coordinator will recommend the student for the Certificate, which will be awarded upon the successful completion of all degree requirements for the major.

Information and advice about the certificate program may be obtained from the Latin American Coordinator or the Assistant Dean. Only degree-seeking undergraduate students may earn a Certificate in Latin American Studies. The program is open to all majors in all colleges.

Academic Minor Programs

In order to help students develop some concentration in elective work taken in conjunction with their chosen major, the College of Social and Behavioral Sciences offers minors in the following fields: African Studies, Afro-American Studies, Anthropology, Economics, Geography, History, Human Services, International Studies, Manual Communications, Political Science, Psychology, Sociology, and Women's Studies. (See following pages for requirements in specific minors offered in the college.) There are certain restrictions that apply to students earning a minor in the College of Social and Behavioral Sciences: (1) students who major and minor in the College of Social and Behavioral Sciences may not use courses in the major for the minor or for general distribution requirements; (2) only degree-seeking students may earn a minor in the social and behavioral sciences; and (3) SSI majors may not earn a minor in any of the social and behavioral sciences incorporated in their contracts. Minors will be certified at the time of graduation.
PROGRAMS AND CURRICULA

■ AFRICAN AND AFRO-AMERICAN STUDIES (AFA)

The African and Afro-American Studies Program provides a quality undergraduate education leading to a Bachelor of Arts degree in African and Afro-American Studies. Essentially it is a service program which provides opportunities for all students to broaden the bases of their knowledge of the entire human experience and intercultural understanding so essential to living in a multi-racial society and a world that has become a global village. It provides a new horizon in liberal education that seeks reunification of the knowledge of human experience and strikes at the narrowness and ethnocentrism of the traditional disciplines which tended to contribute much to race prejudice and misunderstanding.

In the interest of general education the program provides a basic and broad knowledge about Africa and peoples of African descent from prehistoric times to the turbulent present. Part of its mission is to assist the black student to achieve a more dignifying identity and fuller participation in the mainstream of his society and nation. It attempts to help him to develop a greater awareness of himself and his talents and to provide him with educational and research opportunities necessary for the acquisition and understanding of political and economic realities and tools that must enable black people and other minorities to become effective determinants of their own political and economic life. To the non-black student the program provides an opportunity to acquire additional perspectives from which to view, analyze and deal with contemporary social issues and political problems.

Admission to the African and Afro-American Studies major is open to all students who have been duly admitted to the University of South Florida by the Office of Admissions and who file necessary papers in the Office of the Coordinator of Advising, College of Social and Behavioral Sciences, to declare a major in the field. All of the program's courses are open to all other students — regular and special — of the University.

Requirements for the B.A. Degree:

The major in African and Afro-American Studies consists of a minimum of 36 hours in the field specified as follows:

**Required Core Courses (15 cr. hrs.)**

- AFA 2001 (3)
- AFH 3200 (3)
- AMH 3572 (3)

- AFA 3100 (3)
- AMH 3571 (3)

- AFA 4150 (3)
- AFS 4901 (1)
- PHM 4120 (3)

- AFS 3311 (3)
- ECP 4143 (3)

**Suggested Elective Courses (15 cr. hrs.)**

- AFA 4331 (3)
- INR 4254 (3)
- PUP 3313 (3)

- AFS 4321 (3)
- AFA 4900 (2-3)
- AFA 4931 (1-3)

- HUM 3420 (3)
- CPO 3444 (3)
- CPO 4254 (3)

Electives (9 hours) selected from:

- AFS 4321 (3)
- AFA 4313 (3)
- AMH 3572 (3)

- AFA 4931 (1-3)
- HUM 3420 (3)

**Requirements for the Minor:**

African and Afro-American Studies Program offers minors in African and Afro-American Studies to meet the interest of students. Each minor comprises eighteen (18) hours, exactly one-half of the upper division credits required for a major. Requirements for the minors are as follows:

African and Afro-American Studies Option I (Minimum of 18 hours): Required Core Courses (9 hours)

- AFA 2001 (3)
- either: AFA 3100 (3) or AFH 3200 (3)
- either: AMH 3571 (3) or AMH 3572 (3)

Electives (9 hours) selected from:

- AFA 4150 (3)
- CPO 4204 (3)
- INR 4254 (3)

- AFA 4931 (1-3)
- CPO 4254 (3)
- PUP 3313 (3)

- AFS 3311 (3)
- HUM 3420 (3)

African and Afro-American Studies Option II (Minimum of 18 hours): Required Core Courses (9 hours)

- AFA 2001 (3)
- AMH 3571 (3)
- AMH 3572 (3)

Electives (9 hours) selected from:

- AFA 4150 (3)
- AFS 3311 (3)
- PHM 4120 (3)

- AFA 4331 (3)
- ECP 4143 (3)
- PUP 3313 (3)

- AFA 4931 (1-3)
- HUM 3420 (3)

**AFRICAN STUDIES (Minimum of 18 hours)**

**Required Core Courses (9 hours)**

- AFH 3100 (3)
- CPO 4204 (3)
- INR 4254 (3)

**Electives (9 hours) selected from:**

- AFA 4150 (3)
- AFS 3311 (3)
- HUM 3420 (3)

■ ANTHROPOLOGY (ANT)

Anthropology aims at comprehending people as biological and social beings. It is concerned with all forms of people through time and space. One consequence of this broad-ranging view is the presence within anthrop-ology of four branches: physical anthropology, archaeology, cultural anthropology, and linguistics. Exposure to anthropological information and the cross-cultural perspective produces heightened sensitivity in the student to the world about him/her. This helps the student to adopt an intellectual posture of disciplined skepticism with respect to any scheme which purports to define and account for regularities in human life. In response to an increasing interest on the part of students, an undergraduate focus in applied anthropology has been created to offer the Department's majors the option of including career training as part of their anthropology curriculum. The focus includes emphasis in applied anthropology coursework and a practicum course in which the student applies anthropological method and theory in off-campus settings.

Students majoring in other fields may find anthropology coursework an exciting and valuable supplement to their primary academic interest. A minor in anthropology has been developed with this purpose in mind. The minor program is structured to allow the student maximum flexibility in course selection within a broadly defined progression of anthropological concerns. Thus, the student is able to tailor a minor in anthropology to best suit special wants and needs in the context of an overall curriculum.

The M.A. program, initiated in 1974, was the first such program in the USA. Its primary goal is to train students for nonacademic employment in such domains of application as health practice and services delivery, community, regional and international development, and urban planning, design and services delivery. Training is also provided for those interested in teaching applied anthropology in academic settings. Each student performs a full-time internship for two semesters during which he/she works as a member of the professional staff of a governmental or private-sector agency or organization engaged in problem-solving in the USA or elsewhere. The Ph.D. program, while independent, complements the M.A. program. The deadline for receipt of all application materials for admission in fall Semester is March 1; for admission in either Spring or Summer Semester the deadline is November 1 of the preceding year.

The Center for Applied Anthropology is in the Human Resources Institute, College of Social and Behavioral Sciences. The Center is concerned with applying anthropological knowledge, theory, method, and perspectives to problems of contemporary society. Illustrative areas of activity include human services needs assessment, program planning and evaluation, social and environmental impact assessment, and public policy analysis.

**Requirements for the B.A. Degree in Anthropology (ANT)**

The major in Anthropology consists of a minimum of 33 credit hours. ANT 2000 is prerequisite to all subsequent courses. ANT 3100, ANT 3410, ANT 3511 and ANT 3610 are required as intermediate level training in the main subdivisions of the field, and ANT 4034 and ANT 4935 complete the
specific requirements. Majors are required to complete a minimum of 12 hours of elective coursework, 9 hours of which must come from three of the following four subdivision clusters. ANT 3511 counts in Area IV (Natural Sciences) of the General Distribution Requirements, for non-majors.

Cluster I (Archeology)
ANT 4133 (3)  ANT 4172 (3)  ANT 4124 (4)
ANT 4153 (3)  ANT 4181 (4)  ANT 4158 (4)
ANT 4162 (3)  ANT 4182 (3)  ANT 4180 (4)
ANT 4163 (3)

Cluster II (Physical Anthropology)
ANT 4542 (3)  ANT 4552 (3)  ANT 4583 (3)
ANT 4586 (3)

Cluster III (Anthropological Linguistics)
ANT 4620 (3)  ANT 4750 (3)

Cluster IV (Cultural Anthropology)
ANT 4226 (3)  ANT 4316 (3)  ANT 4462 (3)
ANT 4231 (3)  ANT 4326 (3)  ANT 4495 (3)
ANT 4241 (3)  ANT 4340 (3)  ANT 4521 (3)
ANT 4302 (3)  ANT 4367 (3)  ANT 4705 (3)
ANT 4305 (3)  ANT 4432 (3)  ANT 4723 (3)
ANT 4312 (3)  ANT 4442 (3)

The remaining 3 minimum elective hours may come from any of the department's elective offerings, including ANT 4901 (1-4), ANT 4907 (2-4), ANT 4930 (3), and those in the clusters described above. Anthropology majors are urged to become competent readers and speakers of a relevant foreign language, to acquire communicative and quantitative skills appropriate to their interests, and to achieve at least a minimal level of computer literacy. Exceptions to course prerequisites require the consent of the instructor.

Required Core Courses (21 cr. hrs.)
ANT 2000 (3)  ANT 3511 (3)  ANT 4034 (3)
ANT 3100 (3)  ANT 3610 (3)  ANT 4935 (3)
ANT 3410 (3)

Requirements for the Minor in Anthropology
The minor in Anthropology consists of a minimum of 18 credit hours with a "C" average (2.0), distributed among three areas. Students will normally progress through these areas in the order listed below, selecting courses prerequisite or otherwise appropriate to courses desired in subsequent areas. Exceptions to this pattern must be approved by the department's undergraduate adviser. Students are urged to consult with the major and minor student advisers to create the most beneficial specific set of courses.

A. 2000-level required core course (3 cr. hrs.)
   ANT 2000 (3)

B. 3000-level subfield courses (3-6 cr. hrs.)
   ANT 3100 (3)  ANT 3511 (3)
   ANT 3410 (3)  ANT 3610 (3)

C. 4000-level elective courses (9-12 cr. hrs.) (as described in Clusters I, II, III, and IV above)

Requirements for the Undergraduate Focus in Applied Anthropology
This sequence is designed for Anthropology majors who wish to include career training as part of their Anthropology curriculum. The student is required to complete the major in Anthropology, making certain to take the following Focus courses:

ANT 4495 (3)  ANT 4442 (3)
ANT 4705 (3)  or
ANT 4442 (3)  ANT 4462 (3)

In addition, the student must take ANT 4907 (3), the setting in which the off-campus practicum is pursued. A departmental Letter of Achievement is awarded upon graduation and successful completion of Focus requirements with a "B" average (3.0). Information regarding admission into the Focus program may be obtained from the department undergraduate adviser.

COMMUNICOLGY
(AUD/AUF/ARH/ARF/SPP/SPF)

The Department of Communicology does not offer baccalaureate degree programs. Undergraduate students who meet entrance requirements listed in the Graduate Catalog may enroll in a combined undergraduate/graduate program terminating in a master of science degree in Audiology, Aural (Re)Habilitation or Speech-Language Pathology.

Requirements for the Minor in Manual Communications
A Minor in Manual Communications is available to undergraduate students interested in attaining an understanding of the communication problems associated with deafness and developing competency in receptive and expressive manual language skills. The minor consists of the following courses:

- SPA 4333 (1) SPA 4336 (2) SPA 5380 (1)
- SPA 4334 (2) SPA 4363 (4) SPA 5384 (4)

Departmental approval for the minor must be obtained prior to enrolling in any of the required courses.

CRIMINAL JUSTICE (CCJ)

The major in criminal justice provides students with an indepth exposure to the total criminal justice system including law enforcement, detention, the judiciary, corrections, and probation and parole. The program concentrates on achieving balance in the above aspects of the system from the perspective of the criminal justice professional, the offender, and society. The objective of the graduate program in criminal justice is to develop a sound educational basis for professional training in one or more of the specialized areas comprising the modern urban Criminal Justice System.

Requirements for the B.A. Degree:
A minimum of 39 semester hours is required of all undergraduate majors in Criminal Justice including the following courses or their equivalents:

- CCJ 3020 (3)  CCJ 3701 (3)  CCJ 4501 (3)
- CCJ 3280 (3)  or
- CCJ 4360 (3)
- CCJ 3620 (3)  CCJ 4700 (3)  CCJ 4934 (3)
- CCJ 4110 (3)

In addition to the above, a minimum of 15 hours in Criminal Justice must be selected by the student to complete the requirements.

Transfer students should be aware that by University regulation they are obligated to establish academic residency by completing the equivalent of one academic year (30 semester hours) in "on-campus" courses. All undergraduate transfer students electing Criminal Justice as their major will be required, moreover, to take a minimum of 27 credits in major coursework at the University of South Florida.

These residence requirements are designed to insure that transfer students who subsequently receive their baccalaureate degree from the University of South Florida with a major in Criminal Justice will have been exposed to the same body of knowledge in their major as those students who complete all or a major portion of their coursework at the University of South Florida.

Any student who receives a grade of "D" or lower in more than one USF CCJ course will be automatically barred from continuing as a Criminal Justice major.

ECONOMICS (ECN)

Economics offers a clear, logical way of thinking about complicated business problems as well as contemporary societal issues such as controlling unemployment, inflation, pollution, and crime. The department offers both major and minor programs requiring four courses in basic economic analysis. With elective courses offered in industrial organization, labor economics, international trade, public finance, monetary economics, econometrics, history of economic thought, economic development, comparative economic systems, and other areas, students may tailor their study toward business, teaching, or government service careers. The economics curriculum also provides excellent preparation for those students seeking graduate or professional degrees in social sciences, law, or business.
Requirements for a Minor of Economics

Students majoring in Social Sciences, as well as students from other colleges, may minor in economics. Total requirements are:

(a) A minor must include the following four courses in basic economics:
   - ECO 2023 Economic Principles: Microeconomics (3)
   - ECO 3101 Economic Principles: Macroeconomics (3)
   - ECO 3203 Intermediate Price Theory (3)

(b) In addition, a minor must include two or more upper level courses taken in the Economics Department (excluding the variable credit courses ECO 4905, 4914, and 4935), bringing the total credit hours in economics to a minimum of 18. GEB 3121, Business and Economic Statistics II, or its equivalent, is acceptable for credit in a minor.

(c) Before being recognized as a minor in economics, a student must obtain approval by the adviser in the Economics Department of the courses involved in the student's minor program.

(d) A grade point average of 2.0 or better must be achieved in the minor coursework for a student to be certified for graduation with a minor in economics.

(e) At least 12 of the required 18 credits must be taken in residence at USF.

GEOMETRY (GY)

Requirements for the B.A. Degree:

Geography explains the variable character of the earth's surface. The two major divisions of geography include physical and cultural (human). Physical geography includes the study of earth-sun relationships, weather, climate, and natural features of the landscape, such as landforms, soils, vegetation, and hydrology. Cultural geography studies people, their various cultures, levels of technology, and economic activities, that operate differentially to alter the natural landscape.

Geography's overriding purpose is to understand the earth as the home of man. A major concern of geography is the wise use of natural, human, and economic resources. Therefore, ecological and environmental considerations are central to the study of geography.

Students are encouraged to take elective credits in a wide variety of disciplines because of the cross-disciplinary approach to geography. Geographers typically work as urban and regional planners, environmental specialists, map and aerial photographic analysts, and resource managers.

A major in geography consists of 36 credit hours as follows:

Required core courses (12 credit hours):
- GEO 3013 (4)
- GEO 3370 (4)
- GEO 4100C (4)

One of the following (4 credit hours):
- GEO 4280C (4)
- MET 4002 (4)
- MET 4010 (4)

Two of the following (8 credit hours):
- GEO 3402 (4)
- GEO 4440 (4)
- GEO 4470 (4)
- GEO 4372 (4)
- GEO 4460 (4)
- GEO 4500 (4)

One course with a GEA prefix (4 credit hours).

Any additional 8 credit hours in geography, excluding
- GEO 3901 (4)
- GEO 4900 (4)
- GEO 4910 (4)
- GEO 3911C (4)
- GEO 1930 (4)

Requirements for the Minor:

A minor in Geography consists of sixteen hours, with a minimum grade point average of 2.0. The required courses are:
- GEA 3000 (4)
- GEO 3013 (4)
- GEO 3370 (4)

One upper level elective (GEA, MET, or URP 3000-5000 level) (4).

GERONTOLOGY (GEY)

Gerontology is the study of the process of human aging in all its many aspects - physical, psychological, and social. In the Department of Gerontology, particular emphasis is placed upon applied gerontology, with the goal of educating students who in their professional careers in the field of aging will work to sustain or improve the quality of life of older persons.

To this end the Department offers the degrees of Bachelor of Arts in Gerontology, Bachelor of Science in Gerontology, and Master of Arts in Gerontology.

Requirements for the B.A. Degree:

The Bachelor of Arts Degree in Gerontology entails 39 semester hours of required course work. In this program the course of study is intended to provide students with a liberal education in gerontology and some exposure to the various career opportunities in the field of aging. This degree is especially appropriate for students who are undecided about their eventual career goals in aging or who plan to pursue graduate work in gerontology or some other field.

Required courses:
- MAN 3025 (3) GEY 3601 (3) GEY 3625 (3)
- GEY 4323 (3) GEY 4360 (3) HUS 4700 (3)
- GEY 4930 (2) GEY 4640 (3) GEY 4945 (6)
- Plus 3 of:
  - MAN 3150 (3) HUS 4020 (4) SYP 4640 (3)
  - HUS 5505 (3) GEY 4935 (3)

Requirements for the B.S. Degree:

The Bachelor of Science Degree in Gerontology is a specialist degree which, in addition to providing students with a basic education in gerontology, is intended to prepare them for entry level positions in Nursing Home Administration. It is especially appropriate for students who intend to begin working immediately following completion of the degree program.

Required courses:
- MAN 3025 (3) MAN 3150 (3) GEY 3601 (3)
- GEY 3625 (3) GEY 4323 (3) GEY 4327 (3)
- GEY 4328 (3) GEY 4329 (3) GEY 4360 (3)
- GEY 4640 (3) GEY 4941 (3) GEY 4945 (6)

Prior to beginning course work in either the B.A. or B.S. option of the degree program, students must have taken certain prerequisites. For the B.A., the prerequisites are: GEY 3000, Introduction to Gerontology and HUS 3001, Introduction to Human Services. For the B.S., the prerequisites are: ACG 2001, Finance and Management Accounting I, ACG 2011, Finance and Management Accounting II, and GEY 3000, Introduction to Gerontology.

The gerontology prerequisite can only be satisfied by a student's having taken GEY 3000 at this university or comparable work at another institution. The human services prerequisite can be satisfied either by a student's having taken HUS 3001 or an equivalent course at another institution or by having had suitable work experience in the human services. The prerequisites of accounting can be fulfilled by taking ACG 2001 and ACG 2011 at this university or comparable work at another institution.

Students interested either in the B.A. or the B.S. option should contact the Department as early as possible in their careers at the University of South Florida.
Minor in Human Services

An undergraduate minor in Human Services is available for students interested in pursuing careers in fields such as social welfare, health care and mental health care, rehabilitation, and corrections. This minor may be taken in conjunction with any undergraduate major but it should be particularly beneficial to persons who are majoring in such disciplines as anthropology, criminal justice, nursing, political science, psychology, social work, and sociology. The Human Services courses are closely related to the Urban Community Psychology and Gerontology Program of Distinction and will be taught by qualified faculty from the various disciplines within the College of Social and Behavioral Sciences. The Human Services minor is coordinated by the Department of Gerontology. Requirements for the minor are a total of 15 hours of the following upper-level courses:

- HUS 3001
- HUS 4100
- HUS 5325
- HUS 3502
- HUS 4700
- HUS 5505
- HUS 4020

Center for Applied Gerontology

The Center for Applied Gerontology is one of five specialized centers in the Human Resources Institute within the College of Social and Behavioral Sciences. The activities of the Center include research on aging, program evaluation, short-term training of agency personnel and other activities intended to complement the educational program in gerontology.

**HISTORY (HTY)**

**Requirements for the B.A. Degree:**

A minimum of 32 semester hours is required for a major in history. Twelve hours of 2000 level courses, or their equivalent, constitute the lower level requirements. At least 12 hours of course work must be drawn from the 3000-4000 level. HIS 4152 and 4936 constitute the upper level requirements for the degree. With the prior written consent of the student's adviser, majors may take up to six (6) hours of course work offered by other departments and apply these hours toward meeting the course requirements in history. The course work undertaken outside the Department of History must complement the student's program in history.

It is recommended that history majors take ENC 3310, "Advanced Expository Writing," SPC 2023, "Fundamentals of Speech Communication," LIS 2001, "Use of the Library," and additional hours drawn from the following disciplines: Afro-American Studies, American Studies, Anthropology, Economics, Geography, Political Science, Interdisciplinary Social Sciences, Psychology, Philosophy, Sociology, Literature, the Humanities, and the Fine Arts. Majors intending to pursue graduate work should take a minimum of two years of classical or modern foreign language.

**Requirements for the Minor:**

The Department of History offers two options for students interested in the minor in History. **Option one** requires four history courses (at least 15 hours) at the 3000 and 4000 level drawn from a minimum of three of the following fields: a) Ancient; b) Medieval; c) Modern European; d) United States; e) Non-Western; Latin American, Asian, African. Students may apply 4 credit hours from a lower level sequence consisting of two courses (e.g. AMH 2010, AMH 2020) toward the option one minor. **Option two** entails a 15-hour program organized and contracted by the student and the department around the specific needs of the student's major program. In both plans, a minimum of 8 hours must be completed at the University of South Florida and the student must maintain a 2.0 GPA in the minor. Certification of the minor will be supervised by the department. Students interested in a minor in history are encouraged to see the History department adviser as early in their undergraduate program as possible.

**DIVISION OF INTERDISCIPLINARY SOCIAL SCIENCES (SSI/INT/OCT/WSP)**

The Division of Interdisciplinary Social Sciences offers two academic majors: the College major (Interdisciplinary Social Sciences) and the major in International Studies. It offers a minor in Women's Studies, a minor in International Studies, a series of interdisciplinary social science core courses, and a series of independent study courses through the Off-Campus Term Program. Requirements for the Interdisciplinary Social Science major, the International Studies' major and minor, and the minor in Women's Studies are described below.

**The College Major (SSI)**

**Requirements for the B.A. Degree:**

The college major offers students whose educational and vocational interests and objectives cross disciplinary lines an opportunity to undertake a program of study individually designed to serve those interests and objectives. That program of study must include 42 credits in courses offered in the college including STA 3122, Social Science Statistics and a minimum of six credits in Interdisciplinary Social Science courses. At least 28 of the 42 hours required must be upper level.

Within these parameters each student's program of study is to be evolved in consultation with and must be formally approved by the major adviser. The program of study must include the area of concentration of at least 15 credits in one discipline; it will normally be expected to include a second area of concentration with either a disciplinary or multidisciplinary focus. The choice of areas of concentration and of courses within them is to be directly related to the educational goals of the student such as to provide an educational experience of excellent quality.

Students choosing the SSI major may opt for a contract emphasizing one of the following interdisciplinary fields: Human Services, Urban Studies, Women's Studies or Human Services. The SSI major with emphasis in Human Services is designed around 2 core areas, one either in Anthropology, Psychology, or Sociology, and a second in Gerontology or Human Service courses. The Urban Studies emphasis is designed around the core areas of Geography and Political Science, and a cluster of urban-related courses in other social sciences. Students opting for either emphasis focusing around Women's Studies should consult with the Director of the Women's Studies Program. Each of these interdisciplinary options could lead to graduate study in fields such as Gerontology, Rehabilitation Counseling, Applied Anthropology, Urban and Regional Planning, Criminal Justice, and Social Work.

**International Studies (INT)**

**Requirements for the B.A. Degree:**

The major in International Studies is designed to enable students to undertake programs of study which will emphasize (a) preparation for careers in international activities, or (b) the study of particular international themes or topics, or (c) the study of particular regions or culture.

The program of study is developed by each student in consultation with the major adviser so as best to serve the individual's educational goals. The program is to include not less than 34 semester hours.

At least 18 of these hours (six courses) must be in the International Studies Program offerings of the Division of Interdisciplinary Social Sciences.

The six courses required are:

- SSI 2221 (3)
- SSI 4250 (3)
- SSI 3260 (3)
- SSI 4936 (3)

and 2 courses of 3 hours each chosen from upper level offerings of the department.

The additional 16 hours may be selected from course offerings of other departments, which are approved by the major adviser as having adequate international, regional or cultural content.

With the approval of the major adviser, credits earned in:

- SSI 4900 (1-3)
- SSI 3955 (1-6)
- SSI 4910 (1-3)

may be used to augment or substitute for the foregoing requirements.

**Required Supporting Courses**

One year (or equivalent proficiency) of appropriate foreign language.

Students will be provided with advice as to choices of other courses offered throughout the University which will best reinforce and complement their major program. Each student's program must be planned with the international studies adviser who is empowered to make appropriate substitutions when educationally justified.

**Minor in International Studies**

The minor in International Studies is basically a name given to a set of International Studies courses taken by a student that approximates one half of the upper division level credits required for a major. The minor consists of 18 credit hours made up of six courses as follows:

- SSI 2221 (3)
- SSI 3260 (3)
- SSI 4250 (3)
- and 3 upper level courses chosen from the International Studies Program's offerings of the Division of Interdisciplinary Social Sciences.
Each student’s program must be planned with the International Studies Program major adviser, who is empowered to approve appropriate substitutions when educationally justified.

Interdisciplinary Core Courses

These courses, taught from an interdisciplinary social science perspective, focus on contemporary social problems and issues. Included is Social Science Statistics which is required for majors in Interdisciplinary Social Sciences, Anthropology, Nursing and Sociology.

Off-Campus Term

The Off-Campus Term Program, described more in detail elsewhere in this Catalog, is a University-wide, interdisciplinary program which urges students to spend part of their time in college in pursuits that are self-designed and implemented in an environment entirely off-campus and out of the classroom. OCT provides for an “education in life” for full academic credit as an alternative to the traditional methods of learning.

Women’s Studies Program

The Women’s Studies Program offers a wide variety of courses from an interdisciplinary perspective based on the best and most current scholarship on women. Its subject is not only the evolution of historical attitudes and practices concerning women but an analysis of the present status and condition of many classes and groups of women as well. The content of the program is designed to apply to study in many disciplines. Several courses are crosslisted with those of other departments, and may be taken for major credit in either Women’s Studies or in the joint-listed department.

Women’s Studies (WST) Requirements for a B.A. in SSI with an emphasis in Women’s Studies and Human Services

Within the SSI major, students may emphasize Women’s Studies, or Women’s Studies and Human Services. The B.A. in SSI with an emphasis in Women’s Studies consists of 42 credit hours, including STA 3122 and the following core courses in Women’s Studies:

- WST 2010 (3) WST 4310 (4)
- WST 2011 (3) WST 4380 (4)
- SOP 3742 (3) POS 4693 (4)
- WST 4935 (3)

An additional 15 hours in Women’s Studies electives are required.

For a B.A. in SSI with an emphasis in Women’s Studies and Human Services:

- WST 2010 or 2011 (3)
- POS 4693 (4) SOP 3742 (3)
- WST 4935 (3) WST 4309 (3)
- WST 4380 (4) AFA 4335 (3)

An additional 15 hours in an allied Social Science discipline are required.

The contract for an SSI major with an emphasis in Women’s Studies is designed to provide a well-rounded liberal arts education based on the new knowledge about women in many disciplines. Such training could also serve as a pre-professional degree, e.g., as a background for application to law school, for graduate study in Social Work or Rehabilitation Counseling, or for study in specific disciplines in which students wish to focus their research on women.

The SSI major with an emphasis in Women’s Studies and Human Services is appropriate for those who wish to work in the helping professions and whose training would benefit from a close scrutiny of some of the major issues and problems faced by women today. This B.A. could serve as a pre-professional degree for students who wish to pursue graduate study in a variety of fields, e.g., Urban or Medical Anthropology, Criminal Justice, Gerontology, Public Administration, Counselor Education.

Minor in Women’s Studies

A student wishing to minor in Women’s Studies will be required to take five courses:

- WST 2010 or WST 2011 (Introduction to Women's Studies I or II)

Two Women's Studies courses at the 3000 level.

Two Women's Studies courses at the 4000 level, no more than three credits of which may be satisfied by WST 4900 (Directed Readings) or 4910 (Directed Research).

Students interested in minorin Women’s Studies must be certified by the Program Coordinator.

POLITICAL SCIENCE (POL)

Requirements for the B.A. Degree

The undergraduate program leading to the B.A. degree in political science offers a general purpose degree, and a number of more specialized alternatives. These include the pre-professional plan in political science. The program is designed for students interested in and seeking to understand political problems and issues, and the nature of the political process, as well as the philosophical and legal basis of political structures and processes at local, state, national, and international levels. Satisfying the degree requirements prepares students for positions in the public and private sectors, for law school, for graduate work in political science, international relations, public administration, and related disciplines, for positions in education, and, for applied political activity.

A minimum of 38 credit hours is required to satisfy the requirements of the major. Students must take the seven credit hours which make up the core curriculum, and in addition, a total of 31 credit hours in political science, of which at least 16 credit hours must be in courses at or above the 4000 level. For instructional purposes, the political science curriculum is divided into seven fields. However, there are no field requirements. Students are free to select courses from any and all fields within the curriculum.

Students transferring credit hours towards a major in political science must complete a minimum of 20 credit hours within the Department, regardless of the number of credits transferred, in order to satisfy the requirements of the major.

The undergraduate curriculum in political science is composed of the following:

- Required Core Courses (7 cr. hrs.)
  - POS 2041 (3) POS 3712 (4)
- Electives from the seven fields (31 cr. hrs.)

Field I Political Theory

- POS 4204 (4) POT 4054 (4)
- POS 5734 (4) POT 4064 (4)
- POS 5764 (4) POT 4204 (4)
- POS 3003 (4) POT 5626 (4)
- POS 3013 (4)

Field II Comparative Government and Politics

- CPO 3002 (4) CPO 4930 (4)
- CPO 4034 (4) CPO 5934 (4)

Field III International Relations

- INR 3002 (4) INR 4403 (4)
- INR 3102 (4) INR 4502 (4)
- INR 4035 (4) INR 5086 (4)
- INR 4334 (4)

Field IV American National and State Governments

- POS 2041 (3) POS 3453 (4)
- POS 2112 (3) POS 4413 (4)
- POS 3173 (4) POS 4424 (4)
- POS 3182 (4) POS 5094 (4)
- POS 3273 (4)

Field V Urban Government and Politics

- POS 3142 (4) POS 5155 (4)
- POS 3154 (4) PUP 4534 (4)
- POS 4165 (4) URP 4050 (4)

Field VI Public Policy

- INR 3102 (4) PUP 5607 (4)
- INR 4334 (4) URP 5131 (4)
- POS 3145 (4) PUP 4534 (4)

Field VII Law and Politics

- INR 4403 (4) POS 4614 (4)
- POS 3283 (4) POS 4624 (4)
- POS 3691 (4) POS 4693 (4)
The following courses are not included within any of the seven fields, but may still be used as elective hours:

- PAD 3003 (3) POS 4941 (4)
- PAD 4204 (3) POS 4970 (4)
- POS 3930 (1-4) POS 4910 (1-6)
- POS 4905 (1-4) POS 4936 (4)

**Requirements for a Minor in Political Science**

A minor in political science consists of a minimum of 18 credit hours, made up of POS 2041 (3 credit hours) and an additional 16 credit hours of courses from the seven subfields in political science: Political Theory, Comparative Government and Politics, International Relations, American National and State Governments, Urban Government and Politics, Public Policy, and Law and Politics. At least 8 credit hours must be in courses at the 4000/5000 level. No more than 4 credit hours can be taken from POS 4910, POS 4941, POS 4970, and POS 4905. A GPA of 2.0 is required. Subject to these limitations, students may take an undergraduate course offered in political science. There are no field or sequence requirements.

**Field Work**

The Department of Political Science has a field work program which provides students with part-time internships with state and local government and with political parties at the state and local level. Academic credit is available for such internships. For further information, contact the Department of Political Science.

**Honors in Political Science**

Honors in political science is designed for the outstanding undergraduate who seeks an intensive program plus academic recognition during the senior year. Admission to the honors sequence, which is available to all undergraduate majors, will be controlled by grade point average, personal interviews and close scrutiny of the student's program and record. Students admitted will write an honors thesis, POS (4).

**Pre-professional Plan in Political Science**

This plan is designed for students seeking an intensive undergraduate concentration in political science. Typically, students electing this plan will be oriented towards graduate work in political science or other social sciences. A minimum of 39 credit hours is required. Students must take seven credit hours or required courses:

- POS 2041 (3)
- POS 3713 (4)

Eight additional courses in political science (32 cr. hrs.) must be taken, of which at least five must be above the 3000 level. Concentration within fields will be encouraged.

**Requirements for the Pre-Law Plan in Political Science**

The Department of Political Science offers a pre-law plan designed for the undergraduate considering a career related to law; Field VII of the undergraduate curriculum (Law and Politics). The courses making up the Field are of particular interest to law-oriented students, but may be taken by others as well. The department seeks to guide majors to those courses which develop skills and provide information needed for good performance in the study of law. The department also seeks to give students the skills and information needed for entry into a number of law-related positions in business and government. An integral part of this plan is a high degree of student access to the department's pre-law advisor.

Prior to admission to law school, a student must take the Law School Admission Test (LSAT). This test is given by the Educational Testing Service of Princeton, New Jersey.

The Law School Admission Test is given simultaneously several times each year at the University of South Florida and numerous other testing centers throughout the state. Students should plan to take the test at least one year prior to planned enrollment in law school. Additional information is available from the Department of Political Science, University of South Florida.

(Pre-law is not a prescribed program of study. No specific college major is required for admission to law school. Those students intending to pursue the study of law must obtain a Bachelor of Arts degree in an area of personal choice. It is generally agreed that knowledge and understanding of the political, economic, and social context within which legal problems arise facilitate a career in law.)

**International Affairs Focus in Political Science**

The Department of Political Science offers a number of courses that prepare students for graduate study in International Relations and career opportunities in private or public transnational organizations.

Basic courses in the area include:

- Introduction to International Relations (INR 3002)
- Introduction to Comparative Politics (CPO 3002)
- American Foreign Policy (INR 3102)

In addition, the Department offers the following upper-level courses:

- Politics of Developing Areas (CPO 4034)
- Comparative Politics of Selected Areas (CPO 4930)
- Defense Policy (INR 4334)
- International Policy Economy (INR 4035)
- International Law (INR 4403)
- International Organizations (INR 4502)
- Issues in Comparative Politics (CPO 5934)
- Issues in International Relations (INR 5086)

Students desiring careers in international affairs or international administration are encouraged to supplement these courses with courses offered in the Departments of International Studies, Management, Economics, Business Administration, and Foreign Languages.

**PSYCHOLOGY (PSY)**

The undergraduate program in Psychology offers the student a well-rounded Liberal Arts education, together with the opportunity to gain a special acquaintance with issues such as those concerning people's role in modern society, tactics of social change, personal adjustment, and the individual in the workplace. In addition, the program provides excellent background training for qualified students who wish to pursue graduate work in disciplines such as clinical, experimental, or industrial psychology, education, gerontology, counseling, women's studies, black studies, or community relations.

The graduate faculty of the Psychology Department is divided into three broad program areas: Clinical-Community, Experimental, and Industrial-Organizational. Each of these program areas offers Ph.D. level training as well as introductory instruction at the undergraduate level. Members of the graduate Clinical-Community faculty offer coursework and training in the areas of abnormal psychology, developmental psychology, behavioral modification, psychotherapy, personality, psychological assessment, and community psychology. Members of the graduate Experimental faculty provide research experience in the areas of comparative psychology, electrophysiology, learning and conditioning, psychology of language, sensation, human memory, perception, and information processing. Members of the graduate Industrial-Organizational faculty offer instruction in training and evaluation of employees, job motivation and satisfaction, small group analysis, social psychology, organizational theory, human factors, organizational change, and evaluation.

**Requirements for the B.A. Degree**

 Majors must complete at least 34 semester hours in the field. All majors must complete:

I. 2000/3000 Level Requirement (6 semester hours)
   Successful completion of: PSY 3013 (3 semester hours) and one of the following:
   - INP 3101
   - PSY 3022
   - SOP 3742
   - PSY 2012

II. Methods Course Requirement (7 semester hours)
   Successful completion of: PSY 3213 and one of the following:
   - CLP 4433
   - PSY 4205
   or another methods course approved by the undergraduate advisor in Psychology.

III. 4000 Level Requirement (21 semester hours)
   Successful completion of 7 additional courses numbered at the 4000 level selected as follows:
   At least two courses from each of the two groups below:

**Group I**

- EXP 4204C
- EXP 4523C

**Group II**

- CLP 4143
- DEP 4005
- and 3 additional courses numbered at the 4000 level.
Note: No more than a total of 3 hours of the following course may count toward the major:
PSY 4913 Directed research
PSY 4205 (3) is strongly recommended for students planning graduate training. Functional mathematics and biological science are recommended. Otherwise, students majoring in psychology are encouraged to complete a varied undergraduate program.

Requirements for the Minor in Psychology
A minor in Psychology consists of a minimum of 15 credit hours, comprising PSY 2012, PSY 3013, and any three 4000 level psychology courses except PSY 4913. A GPA of 2.0 or better in the minor is required for certification. The purpose of the minor is to help students majoring in other disciplines to obtain an appropriate psychology background that will complement their work in their major. See the Psychology Department Undergraduate Advisor for suggested minor programs for students majoring in various fields.

Psychology Honors Program
The purpose of the Honors Program is to provide a select group of undergraduate Psychology majors an opportunity to undertake an intensive individualized research experience. The culmination of the Honors Program is the completion and defense of an honors thesis. Application for the program will take place during the second semester of the student's junior year, or prior to completion of 90 semester credits. Admission to the program is competitive and based on the student's overall academic record, performance in psychology courses and a letter of recommendation from a member of the Psychology Department faculty. Successful completion of the program requires a GPA of 3.5 in major coursework, an overall GPA of 3.0 at USF and completion of PSY 4913 (3), PSY 4932 (6), and PSY 4970 (3). See the Psychology Department Undergraduate Advisor for details of the program and application form.

PUBLIC ADMINISTRATION (PAD)

The Public Administration Program offers courses which serve as electives for undergraduate students. Completion of these courses will benefit those students preparing for a career in local, state, or federal agencies of government, non-profit organizations, and special service districts and/or graduate work in public administration and related fields. The courses listed below may be taken for undergraduate credit. Please note that the 5000-level courses listed are available to seniors and graduate students only.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAD 3003</td>
<td>Introduction to Public Administration</td>
</tr>
<tr>
<td>PAD 4204</td>
<td>Public Financial Administration</td>
</tr>
<tr>
<td>PAD 5035</td>
<td>Issues in Public Administration and Public Policy</td>
</tr>
<tr>
<td>PAD 5333</td>
<td>Concepts and Issues in Public Planning</td>
</tr>
<tr>
<td>PAD 5605</td>
<td>Administrative Law</td>
</tr>
<tr>
<td>PAD 5612</td>
<td>Administration Regulation</td>
</tr>
<tr>
<td>PAD 5807</td>
<td>Administration of Urban Affairs</td>
</tr>
<tr>
<td>PAD 5836</td>
<td>Comparative Public Administration</td>
</tr>
<tr>
<td>*URP 5131</td>
<td>Implementation Measures in Urban/Regional Planning</td>
</tr>
</tbody>
</table>

For further information, please contact the Public Administration Program.

*Cross-listed with Department of Political Science.

REHABILITATION COUNSELING (REF)

The Department of Rehabilitation Counseling does not offer an undergraduate degree. A five-year program (REF) is available for select undergraduates. Five-year students may earn a combined baccalaureate degree in another major and a M.A. degree in Rehabilitation Counseling.

Students admitted through the five-year program must have completed 90 semester hours of work and all General Distribution requirements. Minimum admission requirements include a total Quantitative-Verbal score of at least 1000 on the GRE or a B average on all work beyond 60 semester hours. A detailed description of the M.A. program in Rehabilitation Counseling may be found in the Graduate Catalog. Undergraduate students interested in the five-year program should contact the department during their sophomore or junior years.

SOCIAL WORK (SOK)

Undergraduate Study

The University of South Florida offers a program leading to a Bachel­lor of Social Work (B.S.W.) degree in the Department of Social Work, College of Social and Behavioral Sciences. This program has been deve­loped in accordance with the guidelines set forth by the Council on Social Work Education, the national accrediting body for social work education programs, and in accordance with the recommendations of the National Association of Social Workers. The B.S.W. program is fully accredited by the Council on Social Work Education.

The primary objective of the B.S.W. program is the preparation of the graduate for beginning level professional practice as a social work generalist.

The secondary objectives of the B.S.W. program are:
1. to provide for the social work human resources needs of the University service district (the central Florida west coast area), the State of Florida, and the Southeast Region;
2. to prepare graduates for additional professional training at the graduate level in social work or in related human service professions;
3. to provide an exposure to social work as a profession and to contemporary issues in the social welfare field to non-social work majors and others in the community.

In preparation for the B.S.W. graduate for beginning professional practice, the curriculum provides the student with an opportunity to develop a knowledge base and skill base as a "generalist" practitioner. The student will develop an understanding of various interventive methods, and skill in their application to a variety of client systems. For example, interventive methods may take the form of individual and group counseling, resource development, consultation, teaching, advocacy, etc. Client systems may be individuals, families, groups, community groups, organizations, social welfare organizations, etc. The student will develop an understanding of the dynamics of human behavior in individual, group and organizational contexts and the influences of the sociocultural environment upon those behaviors. The student will learn about the development of social welfare systems and institutions and the social, economic, and political processes affecting policy development and program implementation. The student will develop an understanding of the utilization of basic social research skills particularly related to the processes of problem-solving, planning, and evaluation.

The student will also become aware of the value base of the profession and engage in a self-examination process as it relates to the development and reflection of ethical and effective professional practice. The B.S.W. program, as any professional program, provides any profession with legitimacy.

Enrollment in the B.S.W. program is limited. Unlike many academic programs where the student may declare a major, the B.S.W. program is a limited access program. Students may apply for admission to the program after having satisfied the admission criteria described below. However, the completion of the prerequisites does not guarantee the student's admission to the program. Limited state funding places constraints on the size of the social work faculty and in order to maintain a high quality of instruction it is necessary to achieve an appropriate faculty-student ratio. This means that it may be necessary to deny admission to the B.S.W. program solely on the basis of no available space. Any student filing intent to seek admission or actually applying for admission to the program should be aware of this possibility.

Additionally, any student who does not maintain a GPA of at least 2.75 in social work courses while enrolled in the B.S.W. program or who clearly does not exhibit responsible professional behavior, may be subject to dismissal from the program. A social work major receiving a grade of less than "C" in a core course will be required to repeat the course.

Admission to the B.S.W. program is a two-stage process. Any student that holds a minimum of Sophomore standing may declare a pre-social work major. This is done by filing a declaration of major form with the College of Social and Behavioral Science, Records and Advising Office and a similar form with the Department of Social Work. All pre-majors will be assigned an advisor within the Department who will assist the student in selecting pre-core courses (listing of pre-core courses.) Many students will have already taken most of the pre-core courses as part of general distribution at USF or in their course of study at a community college. After completing the pre-core courses a student will be ready to
apply for admission to the B.S. W. program as a full major. It is necessary to be admitted as a major before taking core social work courses. Admission requirements for the social work major are as follows:

1. A student must have completed a minimum of one semester as a pre-social work major;
2. A student must have completed required pre-core courses (see listing);
3. A student must have a minimal grade point average of 2.75 for all U.S.F. work completed;
4. A student must complete an application for admission and file it with the Department of Social Work at the beginning of the Semester in which admission is sought;
5. A student must complete an admission interview with a favorable action from the Admissions Committee.

Any of the foregoing admission criteria may be waived by the Department where unusual circumstances and compelling merit are clearly demonstrated.

Pre-Core Courses

1. A student must complete one course in each of the following cognate areas.
   - Biology
     - Environment
     - Food and Drugs
     - Sex, Reproduction and Population
   - Fundamentals of Biology
   - Economics
     - Principals of Economics
     - Microeconomics
   - Political Science
     - American National Government
     - State and Local Government
     - Florida Politics and Government
   - Psychology
     - Introduction to Contemporary Psychology
     - Contemporary Problems in Psychology
   - General Psychology
   - Sociology
     - Introduction to Sociology
     - Contemporary Social Problems
     - Social Psychology
   2. A student must complete one of the following cross-cultural courses.
      - African and Afro-American Studies
      - Introduction to Afro-American Studies
      - Social Institutions and the Ghetto
      - Black Americans in the American Economic Process
      - Blacks in American Political Process
   - Anthropology
     - Introduction to Anthropology
     - Anthropological Perspective
     - Cultural Anthropology
   - History
     - Immigration History
   - Sociology
     - Racial and Ethnic Relations
     - Women's Studies
     - Introduction to Women's Studies
     - Contemporary Women in the United States
     - Psychology of Women
     - Women in Cross-Cultural Perspective
   3. A student must complete one of the following behavior courses.
      - Human Services
      - The Life Cycle
      - Psychology
      - Developmental Psychology
   4. A student must complete SOW 3203, Introduction to Social Welfare and Social Work, with a minimum grade of "B".

Requirements for the B.S.W. Degree (Core Courses)

1. Human Behavior and Social Environment Courses
   - SOW 3101 (3)
   - SOW 3102 (3)

2. Social Welfare Policy & Service Course
   - SOW 4233 (4)

3. Social Research Course
   - SOW 3403 (4)

4. Social Work Practice Courses
   - SOW 4341 (5)
   - SOW 4343 (5)

5. Directed Field Experience
   - SOW 4510 (10)

6. Additional Requirements
   - SOW 4361 (3)

Summary:

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>27 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Experience</td>
<td>10 hours</td>
</tr>
</tbody>
</table>

**SOCIOLoGY (SOC)**

The primary purpose of the major in Sociology is to contribute directly to the student's capacity for critical analysis and understanding of social phenomena and the dynamics of social structure and process. At the same time, it will prepare students for a wide range of careers such as teaching, law enforcement, personnel work, sales, research, urban planning, etc. It also provides training for advanced graduate work in sociology and social psychology and other applied areas such as gerontology, criminal justice, social work, etc.

Requirements for the Major (B.A. Degree)

The major consists of a minimum of 30 credit hours. The following courses may not be counted in the 30 hour minimum for the major but may be elected as additional courses: SYG 1010, SYG 2412, SYA 3504. No more than 3 credit hours of Individual Research (SYA 4910) may be counted as major elective credit. A model program of recommended sequences may be obtained from the Department of Sociology.

Transfer students should be aware that by University regulations, the equivalent of one academic year must be taken in "on-campus" courses. In Sociology, we require that the 30 credits needed to make up the major, no more than 9 credits earned elsewhere, including exchange program credits, can count towards the major. The purpose of this rule is to ensure that our certification that an individual who has majored in sociology genuinely reflects our understanding of sociology as a major and that there is no fundamental difference between the transfer student and those whose work was entirely or mostly completed at the University of South Florida.

For students electing a major after having successfully taken 12 upper division credits without having had a formal Introductory course, SYO 3500, Social Organization, may be substituted for SYG 2000 as a requirement. Students making this choice must take SYO 3530 to meet the additional requirement stated above.

Requirements for a Minor:

A minor consists of a total of 15 credits; SYG 2000, Introduction to Sociology (or equivalent) plus 12 semester hour credits at the 3000 level or higher. Though we do not require an adviser, feeling students to be capable of making reasonable choices, we recommend the use of an adviser to find the best set of courses fitting one's personal interests.
COURSE DESCRIPTIONS

Courses offered for credit by the University of South Florida are listed on the following pages in alphabetical order by college and subject area.

The first line of each description includes the State Common Course prefix and number (see below), title of the course, and number of credits.

Credits separated by a colon indicate concurrent lecture and laboratory courses taught as a unit:

**PHY 3040, 3040L GENERAL PHYSICS AND LABORATORY** (3:1)

Credits separated by commas indicate unified courses offered in different semesters:

**AMH 2010, 2020 AMERICAN HISTORY I, II** (4,4)

Credits separated by a hyphen indicate variable credit:

**HUM 4905 DIRECTED RESEARCH** (1-5)

The abbreviation "var." also indicates variable credit:

**MAT 7912 DIRECTED RESEARCH** (var.)

The following abbreviations are utilized in various course descriptions:

- **PR** Prerequisite
- **Cl** With the consent of the instructor
- **CC** With the consent of the chairperson of the department or program
- **CR** Corequisite
- **Lec.** Lecture
- **Lab.** Laboratory
- **Dem.** Demonstration
- **Pro.** Problem
- **Dis.** Discussion

6A Courses to satisfy Rule 6A-10.30

The University reserves the right to substitute, not offer or add courses that are listed in this catalog.

Alphabetical Listing of Departments and Programs

Course descriptions are listed by college under the following department and program headings:

<table>
<thead>
<tr>
<th>Department/Program</th>
<th>College</th>
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<tbody>
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<td>Accounting</td>
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<td>University-Wide Courses</td>
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### Cross-Listing of Departments and Programs

Alphabetically by College, Department/Program

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<td>Arts Education</td>
<td>BTE</td>
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<td>Business and Office Education</td>
<td>CAP, EDF, EDG, EME</td>
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<td>Computers in Education</td>
<td>EGC, SLS, EDE, EDG, EDM, ESE, LAE</td>
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<td>Counselor Education</td>
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<td>Curriculum and Instruction Distributive and Marketing Education</td>
<td>ARE, EDE, EDG, EDG, EDS, EEC, HLP, LAE, MAE, MUE, RED, SCE, SSE</td>
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### College of Engineering

**Basic and Interdisciplinary Engineering**
- Chemical and Mechanical Engineering
- Civil Engineering and Mechanics

**Computer Science and Engineering**

**Computer Service Courses**

**Electrical Engineering**

**Engineering Technology**

**Industrial and Management Systems**

### College of Fine Arts

**Art**
- ARH, ART

**Dance**
- DAA, DAN

**Music**
- MUC, MUG, MUH, MUL
- MUN, MVO, MUS, MUT
- MVR, MVK, MVP
- MVS, MVV, MVW

**Music Education**
- MUE

**Theatre**
- THE, TPA, TPP

### College of Medicine

**Medicine**
- BCC, BMS, GMS, HSC, MEL

**Medical Sciences**
- BMS, GMS

### College of Natural Sciences

**Astronomy**
- AST

### Cross-Listing Departments/Programs

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<td>Microbiology Courses</td>
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<td>Geology</td>
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<tr>
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<tr>
<td>Mathematics</td>
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<td>Foundation Courses in Business (Graduate), General Business Administration, Management</td>
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COURSE DESCRIPTIONS

MUH  Anthropology, Music
MUL  Music
MUN  Music
MUO  Music
MUS  Music
MUT  Music
MVB  Music
MVK  Music
MVP  Music
MVS  Music
MVV  Music
MVW  Music
NGR  Nursing, Public Health
NUR  Nursing
NUU  Nursing
OCB  Marine Science
OCC  Marine Science
OCE  Geology, Marine Science
OCG  Marine Science
OCP  Marine Science
ORI  Communication
PAD  Public Administration
PCB  Biology, Marine Science, Microbiology (Biology), Zoology (Biology)
PEL  Physical Education Elective
PEM  Physical Education Elective
PEN  Physical Education Elective
PEP  Adult Education
PEQ  Physical Education Elective, Physical Education for Teachers
PET  Physical Education Elective, Physical Education for Teachers, Adult Education
PHH  Philosophy
PHI  Linguistics, Philosophy
PHM  African and Afro-American Studies, Philosophy
PHP  Philosophy
PHS  Physics
PHY  Physics
POR  Portuguese (Language)
POS  Political Science, Women's Studies
POT  Political Science
POW  Portuguese (Language)
PPE  Psychology
PSB  Psychology
PSY  Psychology
PUP  African and Afro-American Studies, Political Science
PUR  Mass Communications
QMB  Information Systems and Decision Sciences, Management
REA  English
RED  Elementary Education, Reading Education
REE  Finance
REL  Religious Studies, Women's Studies
RMI  Mass Communications
RTV  Mass Communications
RUS  Russian (Language)
RUT  Russian (Language)
RUW  Russian (Language)
SCE  Elementary Education, Science Education
SED  Communication, Speech Communication-English Education
SLS  Counselor Education
SOP  Psychology, Women's Studies
SOW  Human Services, Social Work
SPA  Communicology
SPC  Communication
SPN  Spanish (Language)
SPS  Foundations
SPT  Spanish (Language)
SPW  Spanish (Language)
SSE  Elementary Education, Social Science Education
SSI  African and Afro-American Studies, International Studies Program, Social Sciences Interdisciplinary
STA  Mathematics, Social Sciences Interdisciplinary
SUR  Civil Engineering and Mechanics
SYA  Sociology
SYD  Sociology
SYG  Sociology
SYO  Sociology
SYP  Sociology
TAX  Accounting
THE  Theatre
TPA  Theatre
TTP  Theatre
TSL  Linguistics
TTE  Civil Engineering and Mechanics
URP  Geography, Political Sciences, Public Administration
VIC  Mass Communications
WOH  History
WST  History, International Studies Program, Women's Studies
ZOO  Biology, Marine Science, Zoology (Biology)

COURSE LEVEL DEFINITION

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UNIVERSITY-WIDE COURSES

COOPERATIVE EDUCATION

Director: G. F. Lentz; Coordinator: L. J. Berman, Associate Director: James H. Pettigrew

COE 1940 COOPERATIVE EDUCATION, 1ST TRAINING PERIOD (0)
PR: 30 hours of academic credit, acceptance in Cooperative Education Program. (S/U only.)

COE 1941 COOPERATIVE EDUCATION, 2ND TRAINING PERIOD (0)
PR: COE 1940. (S/U only.)

COE 2942 COOPERATIVE EDUCATION, 3RD TRAINING PERIOD (0)
PR: COE 1941. (S/U only.)

COE 2943 COOPERATIVE EDUCATION, 4TH TRAINING PERIOD (0)
PR: COE 2942. (S/U only.)

COE 3944 COOPERATIVE EDUCATION, 5TH TRAINING PERIOD (0)
PR: COE 2943. (S/U only.)

COE 3945 COOPERATIVE EDUCATION, 6TH TRAINING PERIOD (0)
PR: COE 3944. (S/U only.)

COE 4946 COOPERATIVE EDUCATION, 7TH TRAINING PERIOD (0)
PR: COE 3945. (S/U only.)

COE 4947 COOPERATIVE EDUCATION, 8TH TRAINING PERIOD (0)
PR: COE 4946. (S/U only.)

COE 4948 COOPERATIVE EDUCATION, 9TH TRAINING PERIOD (0)
PR: COE 4947. (S/U only.)

COE 4949 COOPERATIVE EDUCATION, 10TH TRAINING EDUCATION (0)
PR: COE 4948. (S/U only.)

AEROSPACE STUDIES


AFR 1101 THE AIR FORCE TODAY - ORGANIZATION AND DOCTRINE (1)
Introduction to the Air Force in the contemporary world through a study of its total force structure and mission.

AFR 1120 THE AIR FORCE TODAY - STRUCTURE AND ROLES (1)
A study of the strategic offensive and defensive forces, general purpose forces, and aerospace support forces that make up the Air Force of today.

AFR 2001 AIR FORCE ROTC LEADERSHIP LABORATORY (0)
The Air Force ROTC Leadership Laboratory is a one hour per week practicum in leadership and management. Leadership Laboratory allows AFROTC cadets to put to use the leadership and management theories they have learned in their AFROTC academic classes. The Leadership Laboratory is based upon an actual Air Force organization and is completely cadet organized, staffed, and managed.

AFR 2130 U.S. AIR POWER: ASCENSION TO PROMINENCE (1)
A study of air power from balloons and dirigibles through the jet age.

Emphasis is on the employment of air power in WWI and WWII and how it affected the evolution of air power concepts and doctrine.

AFR 2140 U.S. AIR POWER: KEY TO DETERRENCE (1)
A historical review of air power employment in military and non-military operations in support of national objectives. Emphasis is on the period from post WWI to present.

AFR 2150 FIELD TRAINING (0)
Field Training is offered during the summer months at selected Air Force bases throughout the United States. Students in the four-year program participate in four weeks of Field Training, usually between their sophomore and junior years. Students applying for entry into the two-year program must successfully complete six weeks of Field Training prior to enrollment in the Professional Officer Course. The major areas of study in the Field Training program include junior officer training, aircraft and aircrew orientation, career orientation, survival training, base functions and Air Force environment, and physical training.

AFR 3220 AIR FORCE MANAGEMENT AND LEADERSHIP-I (3)
An integrated management course emphasizing the individual as a manager in an Air Force milieu. The individual motivational and behavioral processes, leadership, communication, and group dynamics are covered to provide a foundation for the development of the junior officer's professional skills as an Air Force officer (officership). The basic managerial processes involving decision-making, utilization of analytic aids in planning, organizing, and controlling in a changing environment are emphasized as necessary professional concepts.

AFR 3231 AIR FORCE MANAGEMENT AND LEADERSHIP-II (3)
A continuation of the study of Air Force advancement and leadership. Concentration is on organizational and personal values, management of forces in change, organizational power, politics, and managerial strategies and tactics are discussed within the context of the military organization. Actual Air Force cases are used to enhance the learning and communication processes.

AFR 4201 NATIONAL SECURITY FORCES IN CONTEMPORARY AMERICAN SOCIETY - I (3)
A study of the Armed Forces as an integral element of society, with an emphasis on American civil-military relations and context in which U.S. defense policy is formulated and implemented. Special themes include: societal attitudes toward the military and the role of the professional military leader-manager in a democratic society. Students will be expected to prepare individual and group presentations for the class, write reports and otherwise participate in group discussions, seminars, and conferences.

AFR 4211 NATIONAL SECURITY FORCES IN CONTEMPORARY AMERICAN SOCIETY - II (3)
A continuation of the study of the Armed Forces in contemporary American society. Concentration is on the requisites for maintaining adequate national security forces; political, economic, and social constraints on the national defense structure; the impact of technological and international developments on strategic preparedness; the variables involved in the formulation and implementation of national security policy; and military justice and its relationship to civilian law. Students will be expected to prepare individual and group presentations for the class, write reports and otherwise participate in group discussions, seminars, and conferences. Proficiency in communicative skills must be demonstrated.

AFR 4110/1101/1120/2130/2140/3220/3230/4201/4211 LEADERSHIP LABORATORY (0)
Leadership Laboratory is required for each of the Aerospace Studies courses. It meets one hour per week. Instruction is conducted within the framework of an organized cadre corps with a progression of experiences designed to develop each student's leadership potential. Leadership Laboratory involves a study of Air Force customs and courtesies; drill and ceremonies; career opportunities in the Air Force; and the life and work of an Air Force junior officer. Students develop their leadership potential in a practical laboratory, which typically includes field trips to Air Force installations throughout the U.S.
HONORS PROGRAM

Director: David Schenck

IDH 2010 ACQUISITION OF KNOWLEDGE (4)
Admission into the Honors Program. An appreciation of the problems of how human understanding proceeds through operations such as perception, classification, and inference, among others, as well as the open philosophic questions behind these operations.

IDH 3100 ARTS/HUMANITIES HONORS (4)
PR: IDH 2010. An introduction to western arts and letters from the perspectives of three "period" terms (classicism, romanticism, and modernism), the relationship of ideas to art, the similarities among the arts of a given period, and important differences between periods.

IDH 3200 BIO-SCIENCES HONORS (4)
PR: IDH 2010. An exploration of current knowledge concerning fundamental principles in the Bio-Sciences, their potential for application, and attendant ethical and philosophical questions.

IDH 3300 PHYSICAL SCIENCES HONORS (4)
PR: IDH 2010. An exploration of physical entities at the macro, atomic, and subatomic levels. Designed to explore the ways scientists work through an examination of a range of topics.

IDH 3400 SOCIAL AND BEHAVIORAL SCIENCES HONORS (4)

IDH 4000 JUNIOR HONORS SEMINAR (4)

IDH 3010, 1DH 3100, IDH 3200, IDH 3300, IDH 3400. A course in problem-solving skills designed to prepare students for independent research. The class will be responsible for determining course content and requirements in close consultation with a faculty mentor.

IDH 4950 HONORS PROJECT (4)
PR: Senior Honors Standing. The development of and public presentation of a special project such as an original musical composition, dramatic piece, etc., under the direction of a mentor.

IDH 4970 HONORS THESIS (4)
PR: Senior Honors Standing. The research for and writing of a senior thesis under the direction of a mentor.

MILITARY SCIENCE

Professor: LTC John LaRoche, Jr.; Associate Professors: MAJ Kevin Keating, CPT Charles Imel; Assistant Professors: CPT Samuel Ausband, CPT John Barker, CPT Phillip Barnette, CPT Thomas Mikalauskas, CPT Patrick Simon.

MIS 1000 INTRODUCTION TO THE ARMY AS A PROFESSION (1)
Introduction to Military Science and the organizational approach to leadership. Military topics to include first aid, communication and career opportunities.

MIS 1020 ORGANIZATION OF THE ARMY AND ROTC (1)
Introduction, purpose, and organization of the Army and ROTC. Introduction to military courtesy, marksmanship, and the role of an Army officer.

MIS 1654 INTENSIFIED COURSE — BASIC SKILLS, TACTICS AND FIELD TRAINING ON CAMPUS (4)
A detailed concept of the U.S. Army's mission and roles played by newly commissioned officers in accomplishing same. Primarily leadership training incorporating military tactics and techniques, map reading, communications, weaponry.

MIS 2601 MAP READING AND LAND NAVIGATION (1)
PR: MIS 1020 or equivalent, available to non-majors. Study and application of the principles of map reading, military and topographic symbols, terrain appreciation and evaluation, map orientation, intersection and resection, use of the lensatic compass, and an introduction to land navigation.

MIS 2610 MILITARY TRAINING MANAGEMENT AND INSTRUCTION (1)
PR: MIS 2601 or equivalent; available to non-majors. Develops an understanding of the fundamental concepts involved with methods of instruction, training management, and curriculum development in the military. Actual student preparation and presentation will be an integral part of the course.

MIS 2940 BASIC FIELD INTERNSHIP (Ft. Knox) (4)
Basic Field Internship. A summer program conducted at Ft. Knox, KY designed to meet the prerequisites for the Advanced Program under the two year course of study. (S/U only.)

MIS 3300 SMALL UNIT OPERATIONS (3)
PR: MIS 2610, 2940, 1654 or equivalent. Open to ROTC Contract Cadets only. Provides training required by junior officer to direct and coordinate individual and small units in the execution of offensive and defensive tactical missions. Provides exposure to military weapons and communications systems.

MIS 3404 LEADERSHIP FUNDAMENTALS — TACTICS AND CAMP PREPARATION (3)
PR: MIS 3300 or equivalent. Open to ROTC Contract Cadets only. Improves cadet proficiency in those military subjects necessary to meet minimum standards of technical competence and self-confidence required of a junior officer in the U.S. Army. Prepares cadets for participation at Advanced Camp.

MIS 4421C SEMINAR IN LEADERSHIP AND MANAGEMENT (3)
PR: MIS 3404, CI. Obligations and responsibilities of a commissioned officer with emphasis on application of sound leadership to all situations. Uniform Code of Military Justice and its relation to Civilian law; Fundamentals of both offensive and defensive tactics and role of various branches of the Army in tactical operations. Role of the U.S. in world affairs in the 1980's.

AMERICAN STUDIES

Chairperson: J. B. Moore; Distinguished Professor: R. B. Nye; Professors: D. R. Harkness, J. B. Moore, H. M. Robertson; Associate Professor: R. E. Snyder; Assistant Professor: R. A. Banes; Other Faculty: R. C. O'Hara, J. A. Parrish, S. A. Zylstra.

AMS 3001 AMERICA AT THE TURN OF THE CENTURY —6A (4)
Integration of major aspects of American life between 1898 and 1914. Should be taken the first term a student becomes an American Studies major. Elective for non-majors.

AMS 3201 THE COLONIAL PERIOD (4)
The pattern of American culture as revealed through an examination of selected writings and pertinent slides and recordings dealing with the art, architecture and music of the colonial period. Elective for non-majors.

AMS 3210 REGIONS OF AMERICA (4)
The pattern of American culture as revealed through an examination of selected writings and other pertinent materials dealing with selected American regions. Elective for non-majors. Repeatable up to eight credit hours.
AMS 3230 AMERICA DURING THE TWENTIES AND THIRTIES (4)
Selected interdisciplinary materials are used to examine the relationships among regionalism, nationalism and internationalism during the twenties and thirties. Emphasis is placed on the measure of cultural nationalism attained by the United States during this period. Elective for non-majors.

AMS 3302 ARCHITECTURE AND THE AMERICAN ENVIRONMENT (3)
By means of slides, lectures and discussion the course examines 350 years of American architectural history. Architectural styles, aesthetics and the relation between a building and its social environment are stressed. By means of slides, lectures and discussion the course examines proper names and language prudery.

AMS 3303 THE AMERICANIZATION OF ENGLISH (3)
An overview of American attitudes toward the English language from colonization to the present. Among the topics discussed are: the American mania for correctness, the influence of the school marm, place and proper names and language prudery.

AMS 3370 SOUTHERN WOMEN: MYTH AND REALITY -6A (3)
An analysis of the myths surrounding Southern women, this course will identify these myths, discern their sources and purposes, and contrast them with history. (Also offered under Women's Studies.)

AMS 3390 SELECTED TOPICS IN AMERICAN STUDIES (1-4)
Offerings include The American Success Myth, Cultural Darwinism in America, America Through Foreign Eyes, Contemporary Topics in American Studies, Racism.

AMS 4910 INDIVIDUAL RESEARCH (1-4)
The content of the course will be governed by student demand and instructor's interest. Instructor's approval required prior to registration.

AMS 4930 SELECTED TOPICS IN AMERICAN STUDIES (1-4)
Offerings include American Painting: its social implications, Technology in the Twentieth Century America, American Environmental Problems, Popular Culture in America, American Military Experience, and Labor in America.

AMS 4935 SENIOR SEMINAR IN AMERICAN STUDIES (4)
PR Senior in American Studies or CI.

AMS 4936 SENIOR SEMINAR IN AMERICAN STUDIES (4)
PR: AMS 4935 or CI.

ANCIENT STUDIES
See Religious Studies

CLASSICS

Director: A. L. Motto; Professor: A. L. Motto; Associate Professor: J. D. Noonan.

CLA 4935 SENIOR SEMINAR (3)
PR: Senior in the Interdisciplinary Classics and the Ancient World Program. A seminar integrating disciplines involved in the study of the civilizations of the Ancient Near East, Greece and Rome.

Courses in Translation

CLT 3040 CLASSICAL WORD ROOTS IN SCIENCE (3)
A course in the Greek and Latin word elements used in science and technology.

CLT 3101 GREEK LITERATURE IN TRANSLATION -6A (4)
Reading and discussion of major works in Greek literature. Special emphasis on the Liad, the dramatists Aeschylus, Sophocles, Euripides and Aristophanes. Some attention is given to the social and political background of the works. All readings are in English.

CLT 3102 ROMAN LITERATURE IN TRANSLATION -6A (4)
Reading and discussion of major works in Roman literature. Special emphasis is placed on the Aeneid, comedy and satire. Some attention is given to the political background of the works. All readings are in English.

CLT 3370 CLASSICAL MYTHOLOGY -6A (4)
Study of Greek and Roman myths embodied in classical literature and of their impact on Western civilization. All readings are in English.

See Interdisciplinary Classics, page 54.

Greek

GREE 1100 BEGINNING CLASSICAL GREEK I (4)
An introductory course in classical Greek grammar with appropriate readings.

GREE 1101 BEGINNING CLASSICAL GREEK II (4)
PR: GRE 1100 or equivalent. An introductory course in classical Greek grammar with appropriate readings.

GRK 3110 BEGINNING MODERN GREEK I (4)
An intensive study of basic skills; pronunciation, listening comprehension, speaking and some composition.

GRK 3111 BEGINNING MODERN GREEK II (5)
PR: GRK 3110 or its equivalent. A continuation of GRK 3110. More sophisticated oral/aural skills are attained. Basic reading skills are acquired.

GRW 4905 DIRECTED READING (1-4)
Departmental approval required.

GRW 4930 SELECTED TOPICS (4)
Study of an author, movement, or theme. May be repeated.

GRW 5905 DIRECTED READING (1-4)
Departmental approval required.

Latin

LAT 1100 BEGINNING LATIN I (4)
An introductory course in Latin grammar with appropriate readings.

LAT 1101 BEGINNING LATIN II (4)
PR: LAT 1100 or equivalent. An introductory course in Latin grammar with appropriate readings.

LNW 4311 ROMAN COMEDY I: PLAUTUS (4)
PR: Basic knowledge of Latin. Readings of selected plays by Plautus; introduction to comedy—its theory and practice.

LNW 4312 ROMAN COMEDY II: TERENCE (4)
PR: Basic knowledge of Latin. Readings of selected plays by Terence.

LNW 4322 ROMAN ELEGIAIC POETS II: PROPERTIUS AND TIBULLUS (4)
PR: Basic knowledge of Latin. Readings in Propertius and Tibullus; further study of art and tradition in Roman lyric poetry.

LNW 4361 ROMAN SATIRE I (4)
PR: Basic knowledge of Latin. Readings in the Satyricon of Petronius: Introduction to the nature of satire.

LNW 4362 ROMAN SATIRE II (4)
PR: Basic knowledge of Latin. Readings in Seneca's Apocolocyntosis, the satires of Horace, and Juvenal. Introduction to the tradition and art of formal verse satire.

LNW 4381 LIVY (4)
PR: Basic knowledge of Latin. Readings in the ideas and artistry of this Roman historian.

LNW 4500 CICERO AND ROMAN PHILOSOPHY (4)
PR: Basic knowledge of Latin. Readings in the philosophic writings of Cicero, together with a consideration of eclectic thought.

LNW 4501 SENECa AND ROMAN PHILOSOPHY (4)
PR: Basic knowledge of Latin. Readings in the philosophic writings of Lucius Annaeus Seneca, together with an examination of Stoic, Epicurean, and Eclectic thought.

LNW 4660 ROMAN ELEGIAIC POETS I: CATULLUS (4)
PR: Basic knowledge of Latin. Readings in Catullus. Study of techniques and tradition in Roman lyric poetry.

LNW 4665 CICERO (4)
PR: Basic knowledge of Latin. Readings in the epistles of Cicero.

LNW 4675 HORACE (4)
PR: Basic knowledge of Latin. Readings in the Odes and Epodes of Horace; study of the Ode's tradition.

LNW 4900 DIRECTED READING (1-4)
Departmental approval required.
COMMUNICATION


**COM 3003 DIMENSIONS OF COMMUNICATION**
An introductory survey of the various perspectives for the study of human communication. An exploration of the assumptions, constructs, and explanatory paradigms associated with the study of communication in its symbolic, aesthetic, historical, critical, and pragmamatic dimensions.

**COM 3122 INTERVIEW COMMUNICATION**
A study of communication theory relative to interview situations with emphasis on the employment interview, appraisal interview, and persuasive interview.

**COM 3131 TECHNICAL COMMUNICATION**
Investigation and application of methodology and effective technical communication of effective oral presentation of technical reports.

**COM 4110 SPEECH COMMUNICATION FOR BUSINESS AND THE PROFESSIONS**
Identification of Speech Communication situations specific to business and the professions. Analysis of variables related to communication objectives and preparation of oral presentations in the form of informational reports, conference management, persuasive communications, interviews, and public hearing.

**COM 4120 INTRODUCTION TO COMMUNICATION THEORY IN ORGANIZATIONS**
PR: majors, COM 3003 or Cl. non-majors, COM 3122 or COM 4110 or Cl. A survey of communication concepts which impact upon organizational effectiveness.

**COM 4942 COMMUNICATION INTERN SEMINAR**
PR: Communication major and Cl. The Communication Intern Seminar provides students with an opportunity to put into practice concepts and skills acquired in their study of communication. Weekly seminar sessions augment intern experience. Application for seminar must be submitted one semester prior to seminar offering.

**COM 5123 COMMUNICATION ASSESSMENT IN ORGANIZATIONS**
PR (for undergraduates, COM 4120 or Cl); graduates, Cl. A study of the means by which the communication specialist intervenes in organizational behavior. An emphasis is placed on gathering and analyzing organizational communication data.

**LIN 5231 COMMUNICATION SCIENCE: THEORY AND PRACTICUM**
PR: SPC 2050 or Cl. Intensified instruction in neuroanatomy of oral-nasal cavities, ear, pharynx, larynx, and thoracic areas. Includes topics in phonological theory such as feature composition and markedness. Practice in IPA and identification of segments through Sonagram work.

**LIN 5245 EXPERIMENTAL PHONETICS**
PR: SPC 2050 or Cl. Intensified training in auditory discrimination of the sounds of American English. Detailed use of research findings, instruments, and methodologies in the laboratory study of normal speech. Development of phonetic skills of discrimination and reproduction of speech sounds.

**ORI 3000 FUNDAMENTALS OF ORAL READING**

Designed to develop proficiency in the understanding and oral communication of literary and other written materials.

**ORI 3950 ORAL INTERPRETATION PERFORMANCE**
PR: ORI 3000 or Cl. The study, rehearsal, and performance of literature for Readers Theatre and Chamber Theatre productions. May be repeated (maximum total four hours).

**ORI 4120 ORAL INTERPRETATION OF POETRY**
PR: ORI 3000 or Cl. Critical appreciation of lyric and narrative poetry and communication of that appreciation to audience. Study of poetic theory and prosodic techniques.

**ORI 4140 ORAL INTERPRETATION OF DRAMATIC LITERATURE**
PR: ORI 3000 or Cl. Critical appreciation and oral interpretation of special textual materials which are inherently dramatic in nature and poetry, narrative prose, drama, biography, and history.

**ORI 4310 GROUP PERFORMANCE OF LITERATURE**
PR: ORI 3000 or Cl. Designed to introduce the student to and give him experience in various forms of group approaches to oral interpretation.

**ORI 5145 ORAL INTERPRETATION OF DRAMATIC LITERATURE II**
PR: ORI 4140. A study of selected pre-modern dramas with special emphasis on problems of interpretation for oral performance.

**ORI 5210 ORAL INTERPRETATION OF CHILDREN'S LITERATURE**
PR: ORI 3000 or Cl. A study of the theories and practice in the oral interpretation of poetry and narrative fiction for children with special emphasis on classical and modern literature.

**SPC 2023 FUNDAMENTALS OF SPEECH COMMUNICATION**
The nature and basic principles of speech; emphasis on improving speaking and listening skills common to all forms of oral communication through a variety of experience in public discourse.

**SPC 2050 SPEECH IMPROVEMENT AND PHONETICS**
Designed to improve vocal quality and expressiveness, articulation, and pronunciation, and to give instruction and practice in using the International Phonetic Alphabet for speech improvement.

**SPC 2052 SPEECH IMPROVEMENT AND PHONETICS II**
PR: SPC 2050 or Cl. A continuation of SPC 2050. Emphasis will be upon applying listening and transcription skills to the improvement of vocal quality and effective expressions.

**SPC 3210 COMMUNICATION THEORY**
PR: Junior standing or Cl. The study of source, message, and receiver variables in human communications; communication settings, descriptive and predictive models of communication, speech communication as a process.

**SPC 3320 RHETORICAL THEORY**
This course surveys the foundations and historical evolution of major concepts, issues, theorists, and approaches to the study of rhetoric from Plato to recent contemporary theorists.

**SPC 3301 INTERPERSONAL COMMUNICATION**
PR: Junior standing or Cl. A study of interpersonal communication in informally structured settings with emphasis on the understanding, description, and analysis of human communication.

**SPC 3410 PARLIAMENTARY PROCEDURES**
Principles of parliamentary procedure and practice in conducting and participating in meetings governed by parliamentary rules.

**SPC 3441 GROUP COMMUNICATION**
PR: Junior standing or Cl. A survey of theory and research in group communication. Group discussions and communication exercises to increase awareness of the dynamics of human communication in small group settings.

**SPC 3513 ARGUMENTATION AND DEBATE**
PR: Junior standing or Cl. Study of principles of argumentation as applied in oral discourse, analysis of evidence and modes of reasoning. Practice in debate preparation and delivery.

**SPC 3594 FORENSICS**
Study, library research, practice in public speaking situations on campus and in intercollegiate forensic competition. May be repeated (maximum of four hours).

**SPC 3601 PUBLIC SPEAKING**
PR: SPC 2023 or Cl. Study and application of communication strategies in speaking extemporaneously and from manuscript. The course includes study of selected public addresses as aids to increased understanding of speaking skills.

**SPC 3633 RHETORIC OF CONFRONTATION**
PR: Junior standing or Cl. The study of rhetorical strategies and tactics of agitation and control in confrontation situations.
SPC 3641 PROPAGANDA
Study of persuasive campaigns and movements. (3)

SPC 3651 CURRENT ISSUES AND RHETORIC
Analysis of significant current speakers and issues. May be repeated. (2)

SPC 3653 POPULAR FORMS OF PUBLIC COMMUNICATION
A study of selected American realists, naturalists, and modernists between WWI and WWII. (4)

SPC 3690 DIRECTED READINGS
A study of the American novel from its beginnings through 1900, including such novelists as Cooper, Hawthorne, Melville, James, Twain, Crane, and Dreiser, among others. (1-3)

SPC 3900 DIRECTED READINGS
PR: Junior standing and CI. (1-3)

SPC 3905 UNDERGRADUATE RESEARCH
PR: Junior standing and CI. Individual investigations and faculty supervision. (1-3)

SPC 3930 SELECTED TOPICS
PR: Junior standing and CI. (1-3)

SPC 4640 THE RHETORIC OF AMERICAN DEMAGOGUES
An analysis of the communication of such 20th Century American political leaders as: Bilbo, Agnew, McCarthy, Wallace, Nixon, and Malcolm X. (3)

SPC 4680 HISTORY AND CRITICISM OF PUBLIC ADDRESS
PR: SPC 3601 or CI. The principles of rhetorical criticism applied to selected great speeches of Western Civilization. (1-3)

SPC 4900 DIRECTED READINGS
PR: Senior standing and CI. (1-3)

SPC 4905 UNDERGRADUATE RESEARCH
PR: Senior standing and CI. Individual investigations with faculty supervision. (1-3)

SPC 4906 INDEPENDENT STUDY
PR: CI. Specialized independent study determined by the student's needs and interests. May be repeated for credit. (S/U only.) (1-3)

SPC 4930 SELECTED TOPICS
PR: Senior standing and CI. (1-3)

SPC 4932 SENIOR SEMINAR IN SPEECH COMMUNICATION
PR: Senior standing. Speech Communication major. Exploration of selected topics of current significance to the several areas of speech communication through group discussion and research. (1-3)

SPC 5903 DIRECTED READINGS
PR: Senior or graduate standing and CI. (1-4)

SPC 5912 RESEARCH
PR: Senior or graduate standing and CI. (1-4)

SPC 5933 SELECTED TOPICS
PR: Senior or graduate standing and CI. (1-4)

ENGLISH

AML 3301 AMERICAN LITERATURE FROM THE BEGINNINGS TO 1860
A study of the basic elements of poetry for reader and writer. Beginning with poetic language and devices used to create forms (haiku, tanka, ballad, song), progressing to basic prosody, rhyme, and stanza pattern, the student is trained in and learns to write many different forms of poetry. (3)

AML 3311 IMAGINATIVE WRITING: POETRY
Instruction to the writing of poetry. This course introduces the student to a variety of forms and techniques in the writing of poetry. (3)

AML 4210 WORKSHOP IN FICTION
PR: CRW 3100 and CRW 3111. Study and writing of the short story and sections of the novel. Evaluation of student work in conferences, selected readings. May be taken twice for credit. (3)

AMS 2371 BLACK LITERATURE
A study of Black American literature from the nineteenth century to the present, including the works of such writers as W. E. B. Du Bois, Jean Toomer, Langston Hughes, Richard Wright, Ralph Ellison, LeRoi Jones, and Nikki Giovanni. (4)

AMS 2373 AMERICAN INDIAN LITERATURE
A survey of native American Literature from pre-Columbian religious and folk literature to the current voices in the pan-Indian movement. (4)

AMS 4101 NINETEENTH-CENTURY AMERICAN NOVEL
A study of the American novel from its beginnings through 1900, including such novelists as Cooper, Hawthorne, Melville, James, Twain, Crane, and Dreiser, among others. (4)

AMS 4123 TWENTIETH-CENTURY AMERICAN NOVEL
A study of major trends and influences in American prose fiction from 1900 to the present. Includes works by such writers as Hemingway, London, Fitzgerald, Faulkner, West, Mailer, Bellow, Ellison, Donleavy, Updike, Vonnegut, and others. (4)

AMS 2461 LITERATURE OF THE SOUTH
A study of the major writers of the "Southern Renaissance" including writers such as Faulkner, Wolfe, Caldwell, Hellman, McCullers, O'Connor, Warren, Styron, Allen Tate, and Donald Davidson. (4)

AMS 4300 MAJOR AMERICAN AUTHORS
The study of two or three related major authors in American literature, focusing on several major figures; the course may include such writers as Melville and Hawthorne, Hemingway and Faulkner, James and Twain, Pound and Eliot, Stevens and Lowell, etc. Specific topics may vary. May be repeated twice for credit with different topics. (4)

CRW 3100 NARRATION AND DESCRIPTION -6A
A study of narrative and descriptive techniques in prose. By making the student sensitive to language usage, it is designed to bridge the gap between expository writing and imaginative writing. (3)

CRW 3110 IMAGINATIVE WRITING: FICTION -6A
PR: CRW 3100. Introduction to the writing of fiction. This course will introduce students to the variety of forms and techniques in the writing of imaginative prose. (3)

CRW 3111 FORM AND TECHNIQUE OF FICTION -6A
PR: CRW 3100. A study of short narrative forms such as the anecdote, tale, character sketch, incident, monologue, epistolary story, and short story as they have been used in the development of fiction and as they exist today. (3)

CRW 3300 FORM AND TECHNIQUE OF POETRY
Study of the basic elements of poetry for reader and writer. Beginning with poetic language and devices used to create forms (haiku, tanka, ballad, song), progressing to basic prosody, rhyme, and stanza pattern, the student is trained in and learns to write many different forms of poetry. (3)

CRW 3311 IMAGINATIVE WRITING: POETRY
Introduction to the writing of poetry. This course introduces the student to a variety of forms and techniques in the writing of poetry. (3)

CRW 4120 WORKSHOP IN FICTION
PR: CRW 3100 and CRW 3111. Study and writing of the short story and sections of the novel. Evaluation of student work in conferences, selected readings. May be taken twice for credit. (3)

CRW 4320 WORKSHOP IN POETRY
PR: LIT 3716, CRW 3300, and CRW 3311. Self-expression in traditional and contemporary forms. Student-teacher conferences and classroom discussion, selected readings. May be taken twice for credit. (3)

ENC 1101, 1104 FRESHMAN
ENGLISH -6A
Instruction and practice in the skills of writing and reading. Courses must be taken in numerical sequence. (3)

ENC 3210 BASIC TECHNICAL WRITING -6A
Effective presentation of technical and semi-technical information. May be repeated once for credit. (3)

ENC 3310 EXPOSITORY WRITING -6A
A course teaching the techniques for writing effective prose, excluding fiction, in which student essays are extensively criticized, edited, and discussed in individual sessions with the instructor. (3)

ENC 4260 TECHNICAL WRITING II
PR: ENC 3210, or ENC 3310, or GEB 3211, or CI. Technical Writing II (3)
is a course designed to develop writing skills of a high order: technical exposition; technical narration, description, and argumentation; graphics; proposals; progress reports; physical research reports; and feasibility reports.

**ENG 3105 MODERN LITERATURE, FILM, AND THE POPULAR ARTS**
A study of particular films and novels that shows us how such popular arts as the detective story, westerns, science fiction, spy stories, and musical comedy have changed; tells us something about why important changes took place; and explores how and why many serious writers and filmmakers today use techniques, ideas and situations drawn from the popular arts.

**ENG 3114 MODERN DRAMA**
A study of such modern and contemporary dramatists as Ibsen, Strindberg, Chekhov, Pirandello, Shaw, O'Neill, Pinter, Stoppard, Brecht, Beckett, and Ionesco.

**ENG 4013 LITERARY CRITICISM**
A study of the works of major literary critics from Aristotle to the present, with emphasis on their meaning, their implied world view, and their significance for our own time and literature.

**ENG 4090 INDIVIDUAL RESEARCH**
Directed study in special projects. Special permission of chairperson required.

**ENG 4907 DIRECTED READING**
Readings in special topics.

**ENL 3015 BRITISH LITERATURE TO 1616**
A survey of representative prose, poetry, and drama from its beginnings through the Renaissance, including such poems and figures as Beowulf, Chaucer, Malory, More, Hooker, Skelton, Wyatt, Sidney, Spenser, Shakespeare, Donne, and Jonson.

**ENL 3230 BRITISH LITERATURE 1616-1780**
A survey of 17th Century and Neoclassical Literature, including such figures as Donne, Herbert, Crashaw, Vaughan, Marvell, Milton, Pope, Swift, Johnson, Boswell, and Goldsmith.

**ENL 3250 BRITISH LITERATURE 1780-1900**
The poetry and poetics of the Romantic figures, with attention to the continuing importance of romantic thinking in contemporary affairs and letters; a survey of representative figures of the Victorian and Edwardian periods, including poetry, prose, and drama.

**ENL 3273 BRITISH LITERATURE 1900-1945**
Survey of poetry, drama, and fiction of such writers as Eliot, Yeats, Thomas, Conrad, Shaw, Joyce, Lawrence, Huxley, Woolf, Forster, Waugh, Owen, Auden, O'Casey, among others.

**ENL 3333 SHAKESPEARE**
A reading of from ten to twelve representative plays with special attention to developing the student's ability to read, visualize, and interpret the text.

**ENL 3334 SHAKESPEARE: TEXTS AND FILMS**
An introduction to the art of William Shakespeare through a comparative analysis of four of his most famous dramas and modern film adaptation of them; *Hamlet*, *King Lear*, *Romeo and Juliet* and *Henry V*.

**ENL 4122 BRITISH NOVEL THROUGH HARDY**
A study of early and later British novels such as Fielding, Smollett, Sterne, Austen, Scott, Dickens, Eliot, and Hardy, among others.

**ENL 4132 BRITISH NOVEL: CONRAD TO THE PRESENT**
A critical study of British fiction from 1900 to the present, with emphasis on such writers as Conrad, Lawrence, Joyce, Woolf, Huxley, Orwell, Burgess, Murdoch, Golding, and others.

**ENL 4171 HISTORY OF BRITISH DRAMA TO 1912**
A study of the history of British Drama from its liturgical origins to the beginning of the twentieth century, exclusive of Shakespeare. Included are the mystery and morality plays, and representative works by Marlowe, Jonson, Middleton, Dryden, Congreve, Sheridan, and Wilde, among others.

**ENL 4303 MAJOR AUTHORS**
The study of two or three related major figures in English, American, or World Literature. The course may include such writers as Fielding and Austen, Keats and Yeats, Joyce and Flaubert, etc. Specific topics will vary. May be taken twice for credit with different topics.

**ENL 4311 CHAUCER**
An intensive study of The* Canterbury Tales* and major critical concerns.

**ENL 4338 SHAKESPEARE II**
PR: ENL 3333 or CI. Intensive study of selected plays of Shakespeare, with special attention to significant critical issues and to the Elizabethan and Jacobean cultural setting.

**ENL 4341 MILTON**
Study of the poetry and major prose of John Milton, with special emphasis on *Paradise Lost*.

**LIN 4100 HISTORY OF THE ENGLISH LANGUAGE**
The evolution of language from Anglo-Saxon through Middle English to Modern English. Development of the English lexicon. Changes in the pronunciation, syntactic, and semantic systems; discussion of the forms of present-day antquated and archaic English.

**LIN 4340 TRADITIONAL ENGLISH GRAMMAR**
PR: ENC 3011 or CI. A course primarily using the sentence diagram to present a detailed analysis of the parts of speech, verb tenses, sentence functions, and other basic grammatical classifications of traditional English grammar.

**LIN 4570 STRUCTURE OF AMERICAN ENGLISH**
An introductory survey of traditional, structural, and generative transformational grammars and their techniques for the analysis and description of linguistic structure in general, and contemporary American English in particular.

**LIN 5107 HISTORY OF THE ENGLISH LANGUAGE**
PR: Senior or Graduate standing. The course will trace the history of the English Language from its beginnings in Continental Europe, through the Anglo-Saxon and Middle English periods, the Renaissance, and the Nineteenth Century, to the present day with emphasis on both the structural development of the language and the political, social, and intellectual forces that determined this development.

**LIT 2000 INTRODUCTION TO LITERATURE: 4A**
The nature and significance of literature in its various forms: fiction, drama, poetry; emphasis on the techniques of reading literature for intelligent enjoyment. Will not be counted toward the English major.

**LIT 2021 CURRENT SHORT FICTION**
Traditional and experimental short stories of this generation: such writers as Updike, Malamud, O'Connor, Roth, Barth, Ionesco, and Barthelme. Will not be counted toward the English major.

**LIT 2091 CURRENT NOVELS**
A study of major British and American novels since WW II; attention will be given to the cultural influences and recent literary trends. Will not be counted toward the English major.

**LIT 2092 DRAMA: TEXTS AND FILMS**
A study of the great works of drama, with emphasis on recent forms and themes. Films will demonstrate the possibilities of visualization. Will not be counted toward the English major.

**LIT 3022 MODERN SHORT NOVEL**
A study of the novella from the nineteenth century to the present. Writers include: James, Dostoevsky, Camus, Styron, Nabokov, Gardner, Roth, Vonnegut, and others.

**LIT 3073 CONTEMPORARY LITERATURE**
An introduction to the fiction, poetry, and drama written since 1945—American, British, Continental. Focus may be on one, two, or all three genres or on works from any combination of nationalities.

**LIT 3101 LITERATURE OF THE WESTERN WORLD THROUGH THE RENAISSANCE**
A study in English of the great works of Western Literature from its beginnings through the Renaissance, including the Bible, Homer, Sophocles, Plato, Euripides, Virgil, Cicero, Dante, Petrarch, Machiavelli, and Rabelais, among others.

**LIT 3102 LITERATURE OF THE WESTERN WORLD SINCE THE RENAISSANCE**
A study in English of the great works of Western Literature from the Neoclassic to the Modern Period, including such writers as Moliere, Racine, Voltaire, Dostoevsky, Chekhov, Ibsen, Kafka, Gide, Sartre, and Camus, among others.

**LIT 3144 MODERN EUROPEAN NOVEL**
A study of the Modern European novel in translation as it developed from the nineteenth century to the present, including such writers as Dostoevsky, Flaubert, Kafka, Hesse, Camus, and Solzhenitsyn.

**LIT 3304 TWENTIETH-CENTURY BEST SELLERS**
A study of representative best-selling novels in twentieth century America; including such popular works as *Peyton Place*, *Lady Chatterley's Lover*, *Exodus*, and *Catcher in the Rye*, which have sold in excess of five million copies and have served to portray our changing society and to reveal our changing literary taste.

**LIT 3310 FANTASY AND SCIENCE FICTION**
A survey of fantasy and science fiction in England and America from Mary Shelley to the present; includes such writers as Poe, Melville, Ray Bradbury, Arthur C. Clarke, among others.
**LIT 3374 THE BIBLE AS LITERATURE**  
Major emphasis on literary types, literary personalities of the Old and New Testaments, and Biblical archetypes of British and American literary classics.

**LIT 3383 THE IMAGE OF WOMEN IN LITERATURE**  
A survey of feminism, antifeminism, sexual identity, the feminine mystique, stereotyped and liberated female images from Sappho to the present, with special emphasis on women writers and on the emergence of the women's movement. (Also offered under Women's Studies.)

**LIT 3410 RELIGIOUS AND EXISTENTIAL THEMES**  
Theological and philosophical ideas, allusions, and symbols in the writings of Dostoevsky, Nietzsche, Mann, Joyce, Eliot, Camus, Sartre, and others.

**LIT 3451 LITERATURE AND THE OCCULT**  
An introduction to the occult tradition as a major ingredient in English, Continental, and American literature; analysis of the origins, classifications, and areas of the various magic arts from classical times through the present.

**LIT 3716 SURVEY OF POETRY**  
PR: ENC 1104. A chronological sampling of the major poems written in English from the Middle Ages to the present. Recommended as the first course in the poetry option.

**LIT 3931 SELECTED TOPICS IN ENGLISH STUDIES**  
Variety from semester to semester, the course examines in depth a predominant literary theme or the work of a select group of writers.

**LIT 4011 THEORY OF FICTION**  
Intensive study of the genres and varieties of fiction to ascertain the theoretical and technical problems involved in the work of fiction.

**LIT 4930 SELECTED TOPICS IN ENGLISH STUDIES**  
The content of the course will be governed by student demand and instructor interest. It will examine in depth a recurring literary theme or the work of a small group of writers. Special courses in writing may also be offered under this title. May be repeated for different topics.

**REA 1105 ADVANCED READING**  
Designed to help students develop maximum reading efficiency. The course includes extensive instruction and laboratory practice in the improvement of adequate rates of reading, vocabulary, and comprehension skills. An independent study approach is also available for students who prefer to assume responsibility for their own progress.

**REA 2405 SPEED READING DEVELOPMENT**  
A course designed to develop speed reading techniques on various levels of difficulty. Emphasis is placed on comprehension via numerous practice drills. Will not be counted toward the English major. (S/U only.)

**REA 3505 VOCABULARY**  
A practical course in rapid vocabulary improvement for students in all areas. Stress is on words in context. Will not be counted toward the English major.

### HUMANITIES

**Chairperson:** S. L. Gaggi; **Professors:** T. B. Hoffman, H. Juergensen, G. S. Kashdin, E. M. MacKay (Emeritus), D. Rutenberg, L. L. Shackson (Emeritus); A. J. Sparks; **Associate Professors:** C. B. Cooper, S. L. Gaggi, H. B. Gowen, S. A. Zylstra; **Assistant Professor:** J. R. Spillane. Courtesy Professors: Laszlo J. Hetenyi.

**HUM 2930 SELECTED TOPICS:**  
An introductory course dealing with a recurrent theme in the arts or focusing on a particular artistic center (a nation or city at a particular time). May be repeated for a credit with change of content. May be repeated up to 8 credit hours.

**HUM 3024 THE ARTS**  
Analyses of selected works of film, literature, music, and visual arts, including a variety of periods, nationalities and art forms, emphasizing artistic diversity. Especially recommended for students intending to take 4000 and 5000 level Humanities courses at a future date.

**HUM 3214 STUDIES IN CULTURE: THE CLASSICAL AND MEDIEVAL PERIODS**  
Analyses of selected works of classical and medieval architecture, drama, sculpture, intellectual prose, and other art forms. Typical course focus is on architecture, drama, and intellectual prose.

**HUM 3236 STUDIES IN CULTURE: THE RENAISSANCE AND THE NINETEENTH CENTURY**  
Analyses of selected works of 20th Century art, primarily emphasizing film, with secondary emphasis on painting and fiction.

**HUM 3251 STUDIES IN CULTURE: THE TWENTIETH CENTURY**  
Analyses of selected works of 20th Century art, primarily emphasizing film, with secondary emphasis on painting and fiction.

**HUM 3271, 3273 THE CULTURE OF THE EAST AND WEST**  
Masterpieces of music, visual arts, literature, and philosophy in varying cultural and historical situations.

**HUM 3580 CURRENT SCENE**  
Live performances in contemporary media will be followed by discussions. The course will emphasize recent developments in the arts with some special attention to current innovations. (S/U only.)

**HUM 4402 HUMANITIES IN THE ORIENT: INDIA**  
PR: Sophomore standing or Cl. Examples from the arts and letters of India and the relationship of these arts to the Hindu and Buddhist philosophy-religions.

**HUM 4404 HUMANITIES IN THE ORIENT: CHINA**  
PR: Sophomore standing or Cl. Examples from the arts and letters of China; their relationship to Taoism, Confucianism and other Chinese philosophies; Western influences on twentieth century Chinese arts and letters.

**HUM 4405 HUMANITIES IN THE ORIENT: JAPAN**  
PR: Sophomore standing or Cl. Examples from the arts and letters of Japan, their relationship to Zen Buddhism and other Japanese philosophy-religions; Western influences on twentieth century Japanese arts and letters.

**HUM 4433 CLASSICAL ARTS AND LETTERS**  
PR: Sophomore standing or Cl. Case studies in the arts and letters of the ancient world.

**HUM 4434 CLASSICAL ARTS AND LETTERS**  
PR: Sophomore standing or Cl. Case studies in the arts and letters of the ancient world.

**HUM 4435 MEDIEVAL ARTS AND LETTERS**  
PR: Sophomore standing or Cl. Case studies in the arts and letters of the middle ages.

**HUM 4436 MEDIEVAL ARTS AND LETTERS**  
PR: Sophomore standing or Cl. Case studies in the arts and letters of the middle ages.

**HUM 4437 RENAISSANCE ARTS AND LETTERS**  
PR: Sophomore standing or Cl. Case studies in the arts and letters of the Renaissance.

**HUM 4438 RENAISSANCE ARTS AND LETTERS**  
PR: Sophomore standing or Cl. Case studies in the arts and letters of the Renaissance.

**HUM 4440 THE ENLIGHTENMENT**  
PR: Sophomore standing or Cl. Case studies in the arts and letters of the Enlightenment.

**HUM 4442 ARTS AND LETTERS OF THE ROMANTIC PERIOD**  
PR: Sophomore standing or Cl. Case studies in the arts and letters of the romantic period.

**HUM 4444 NINETEENTH CENTURY ARTS AND LETTERS**  
PR: Sophomore standing or Cl. Case studies in the arts and letters of the nineteenth century.

**HUM 4452 HUMANITIES IN AMERICA (19th Cen.)**  
I PR: Sophomore standing or Cl. Case studies in the arts and letters of the nineteenth century, emphasizing the post-Civil War period, in order to achieve an understanding of the relationship between democratization and the search for indigenous voices in American art.

**HUM 4455 HUMANITIES IN AMERICA (19th Cen.), II**  
PR: Sophomore standing or Cl. Case studies in the arts and letters of the United States, in order to explore the diversity of American culture in the twentieth century; to examine the historical, social and economic forces that shaped the arts and letters of this period; and to show the strong interplay between fact and imagination that characterizes American Culture in our time.

**HUM 4456 LATIN AMERICAN ARTS AND LETTERS**  
PR: Sophomore standing or Cl. Analysis of selected Latin American works of art in their cultural context, with emphasis on major art forms selected from the Pre-Columbian, colonial, and contemporary periods.

**HUM 4471, 4473 TWENTIETH-CENTURY ARTS AND LETTERS**  
PR: Sophomore standing or Cl. Case studies in the arts and letters of...
the twentieth century.

**HUM 4905 DIRECTED STUDY** (1-4)
Specialized individual study determined by the student's needs and interests.

**HUM 4930 SELECTED TOPICS IN HUMANITIES** (1-4)
PR: Sophomore standing or CI. This course will deal with a recurrent theme in the arts as, for example, love or death; or will focus on artistic centers such as Renaissance Florence or Paris in the 1920's. Topics will vary; course may be repeated for credit with change of content.

**HUM 4931 SEMINAR IN HUMANITIES** (4)
PR: Humanities major or CI, Senior standing. Discussion of interdisciplinary humanities. Includes essay.

**HUM 4941 STUDY ON LOCATION** (4)
Prerequisite: None. The art of a culture will be examined during travel in groups; led by an instructor, to important cities or sites. Monuments, museums, architecture, plays, and/or concerts will be studied. Reading assignments and lectures.

**LANGUAGE**


**General Foreign Languages**

**FOL 3100 GENERAL FOREIGN LANGUAGE I** (1-4)
A general purpose course that may be used for transfer of credit, credit by examination, and similar matters; may also be used for formal courses in less commonly taught languages or in professional translation.

**FOL 4200 GENERAL FOREIGN LANGUAGE II** (1-3)
A general purpose course that may be used for transfer of credit, credit by examination, and similar matters; may also be used for formal courses in less-commonly taught languages or for workshops in professional interpreting.

**FOL 4905 DIRECTED STUDY** (1-3)
Departmental approval required.

**FOL 5906 DIRECTED STUDY** (1-3)
PR: FOL 4200 or equivalent.

**Arabic**

**ARA 3110 MODERN ARABIC I** (4)
An intensive study of basic skills: pronunciation, listening comprehension, speaking and some composition.

**ARA 3111 MODERN ARABIC II** (4)
PR: ARA 3110 or its equivalent. A continuation of ARA 3110. More sophisticated oral/aural skills are attained. Basic reading skills are acquired.

**French**

**FRE 1060 FRENCH FOR READING** (3)
Designed to provide a reading ability in French that will support research in other disciplines. Primarily for graduate students.

**FRE 1100 BEGINNING FRENCH I** (4)
The first course in the study of elementary French. Emphasis on the development of basic skills in comprehension, speaking and reading.

**FRE 1101 BEGINNING FRENCH II** (4)
PR: FRE 1100 or equivalent. A continuation of FRE 1100.

**FRE 2200 INTERMEDIATE FRENCH I** (3)
PR: FRE 1101 or equivalent. A review of the basic structure of French. May be taken concurrently with FRE 2201.

**FRE 2201 INTERMEDIATE FRENCH II** (3)
PR: FRE 1101 or equivalent. Readings in French on the intermediate level. May be taken concurrently with FRE 2200.

**FRE 3240 CONVERSATION I** (4)
PR: FRE 1101. For development of basic conversational skills.

**FRE 3420 COMPOSITION I** (3)
A fundamental composition course for students who have completed FRE 2200 or FRE 2201.

**FRE 3470 OVERSEAS STUDY** (1-6)
An intensive study-travel project in France. Prior approval and early registration required. May be repeated up to 12 credit hours.

**FRE 3500 FRENCH CIVILIZATION** (3)
Readings and discussion on the cultural history of France.

**FRE 4241 CONVERSATION II** (4)
PR: FRE 3240 or equivalent proficiency. Conversation practice with concentration on current idiomatic usage. May be repeated for a total of 8 hours.

**FRE 4421 COMPOSITION II** (3)
Continuation of French composition. This course is designed to follow FRE 3420.

**FRE 4905 DIRECTED STUDY** (1-3)
Departmental approval required.

**FRE 4930 SELECTED TOPICS** (1-3)
Study of an author, movement or theme.

**FRE 5422 ADVANCED WRITTEN EXPRESSION** (3)
PR: FRE 4421, or equivalent. Course is designed to give advanced training in free composition in French.

**FRE 5564 CONTEMPORARY FRANCE** (3)
PR: FRE 3500 or equivalent or graduate standing. An advanced course in French civilization and culture including a study of recent social, artistic and political trends as well as various current intellectual movements. Text and discussion in French.

**FRE 4100 INTRODUCTION TO FRENCH NOVEL** (3)
A study of the history of the novel from its early appearance to present times with emphasis on the 19th and 20th centuries. Authors to be studied include Chretien de Troyes, Rabelais, Balzac, Flaubert, Proust, Camus, Sartre, Robbe-Grillet, and others. Specific content may vary from year to year.

**FRE 4101 INTRODUCTION TO FRENCH DRAMA AND POETRY** (3)
A study of the history of drama and poetry. Will include medieval drama, Racine, Corneille, Molieres, Anouilh, Sartre, Ionesco and others. Will also include Villon, Ronsard, DuBellay, Lamartine, Hugo, Vigny, Musset, Baudelaire, Mallarme, Rimbaud, Valery, Peguy, Eliard, Apollinaire, Char, and others. Course content may vary from year to year.

**FRE 5221 CLASSICAL PROSE AND POETRY** (3)
PR: FRW 4100. Emphasis on Malherbe, La Fontaine, Boileau, Descartes, and Pascal.

**FRE 5226 20TH CENTURY POETRY AND THEATRE** (3)

**FRE 5283 THE 20TH CENTURY NOVEL** (3)
PR: FRE 4100. Proust, Gide, Mauriac, Malraux, Camus, Robbe-Grillet.

**FRE 5310 CLASSICAL DRAMA** (3)
PR: FRE 4101. Corneille, Molieres, and Racine.

**FRE 5415 LITERATURE OF THE MIDDLE AGES** (3)
PR: FRE 4100 or 4101. Major genres, including epics, Arthurian romances, drama and lyric poetry. Readings in modern French translation.

**FRE 5420 LITERATURE OF THE RENAISSANCE** (3)
PR: FRE 4100 or 4101. A study of Renaissance French humanism including Rabelais, Montaigne, and Pleide poets.

**FRE 5440 18TH CENTURY LITERATURE** (3)
PR: FRE 4100. The classical tradition and the new currents of thought in the Age of Enlightenment.

**FRE 5530 PRE-ROMANTICISM** (3)

**FRE 5535 ROMANTICISM AND EARLY REALISM** (3)
PR: FRE 4101. A study of the romantic and early realistic movements with emphasis on Lamartine, Vigny, Musset, Hugo and Balzac.

**FRE 5556 NATURALISM AND REALISM** (3)
PR: FRE 4100 or 4101. A detailed study of realism and naturalism.
GEW 5934 SELECTED TOPICS (1-3)
PR: Upper-level or graduate standing. Study of an author, movement or theme.

Hebrew

HBR 3110 MODERN HEBREW I (4)
An intensive study of basic skills: pronunciation, listening comprehension, speaking, and some composition.
PR: HBR 3110 or equivalent. A continuation of HBR 3110. More sophisticated oral/aural skills are attained. Basic reading skills are acquired.

Italian

ITA 1101 BEGINNING ITALIAN I (4)
The first course in the study of elementary Italian. Emphasis is on the development of basic skills in comprehension, speaking, and reading.
PR: ITA 1101 or equivalent. Readings in Italian on the elementary level. May be taken concurrently with ITA 2200.

ITA 1101 BEGINNING ITALIAN II (4)
The second course in the study of elementary Italian. Emphasis is on the development of basic skills in comprehension, speaking and reading.
PR: ITA 1101 or equivalent. Readings in Italian on the intermediate level. May be taken concurrently with ITA 2200.

ITA 3420 ITALIAN CONVERSATION I (4)
To develop fluency and correctness in spoken Italian. Intensive study for conversational skill based particularly upon the current Italian idiom. Syntax is intensified and the vocabulary and idiomatic expressions expanded.

ITA 3420 CONVERSATION II (3)
A parallel study of fiction and film from post-war Neo-realism to the present time. This course will be conducted in English with film viewing and lectures.

ITA 4241 ITALIAN CONVERSATION II (4)
To assist students who have already made a start in speaking Italian, who have not had the advantages of travel or who have non-Italian speaking parents, to improve their skill in speaking Italian. Current events; literary discussions; free conversation; prepared speeches. Differences of media, syntactical signal.

ITA 4930 SELECTED TOPICS (1-3)
Study of an author, movement or theme.

Portuguese

POR 3210 INTENSIVE PORTUGUESE (4)
PR: 2 years of another Romance language or Latin, or C1. An accelerated study of the fundamentals of listening, speaking, reading, and writing.

POR 3470 OVERSEAS STUDY (1-6)
PR: POR 3210. An intensive study-travel program in a Portuguese-
speaking country. Prior department approval and early registration are required.

**RUT 3110 RUSSIAN CLASSICS IN TRANSLATION**  
(3)  
Masterpieces of 19th century Russian literature in English. The major works of Pushkin, Lermontov, Gogol, Turgenev, Dostoevsky, Tolstoy, and Chekhov. Elective for all students in all departments.

**RUT 3111 TWENTIETH-CENTURY RUSSIAN LITERATURE IN TRANSLATION**  
(3)  
Masterpieces of 20th century Soviet literature in English. The major works of Bely, Olesha, Babel, Zamyatin, Bulgakov, Pasternak, and Solzhenitsyn. Elective for all students in all departments.

**RUS 1100 BEGINNING RUSSIAN I**  
(4)  
The first course in the study of elementary Russian. Emphasis on the development of basic skills in comprehension, speaking and reading.

**RUS 1101 BEGINNING RUSSIAN II**  
(4)  
PR: RUS 1100 or CI. The second course in the study of elementary Russian. Emphasis on the development of basic skills in comprehension, speaking and reading.

**RUS 3400 CONVERSATION AND COMPOSITION I**  
(4)  
PR: First year Russian or equivalent. Development of basic skills in conversation, composition, and reading.

**RUS 3500 RUSSIAN CIVILIZATION**  
(3)  
A survey of the cultural and historical development of Russia.

**RUS 4401 CONVERSATION AND COMPOSITION II**  
(4)  
PR: RUS 3400 or equivalent. Continued development of skills in conversation, composition, and reading.

**RUS 4900 SELECTED TOPICS**  
(1-3)  
Study of an author, movement or theme.

**RUS 4905 DIRECTED STUDY**  
(1-3)  
Departmental approval required.

**RUT 3110 RUSSIAN CLASSICS IN TRANSLATION** (3)  
An introduction to the culture and civilization of Portugal and Brazil.

**POW 4905**  
(1-3)  
Departmental approval required. May be repeated.

**Russian**

**Courses in Translation**

**SPN 3520 SPANISH AMERICAN CIVILIZATION**  
(3)  
Readings and discussions on the culture and civilization of Spanish America. For majors and non-majors.

**SPN 4301 EXPOSITORY WRITING**  
(4)  
PR: SPN 3300. Practical training in contemporary Spanish structure, usage and stylistic devices.

**SPN 4410 ADVANCED CONVERSATION**  
(3)  
PR: SPN 3241 or equivalent. Intensive practice in the formulation and expression of ideas in standard Spanish.

**SPN 5567 CONTEMPORARY SPAIN**  
(3)  
PR: SPN 3500 or equivalent or graduate standing. Advanced readings and discussions dealing with contemporary Spanish civilization and culture, including a study of recent social, artistic and political trends. Texts and discussions in Spanish.

**SPN 5790 PHONOLOGY AND PHONETICS**  
(3)  
PR: SPN 3300. A study of the Spanish sound system.

**SPN 5845 HISTORY OF THE SPANISH LANGUAGE**  
(3)  
Traces the development of Spanish from its Latin origins to the present.

**SPW 3200 INTRODUCTION TO HISPANIC LITERATURE**  
(3)  
PR: SPN 2201 or equivalent. Prose fiction, drama, poetry, and essay; techniques of literary analysis.

**SPW 4100 SURVEY OF SPANISH LITERATURE I**  
(3)  
PR: SPW 3200 or equivalent. A study of Spanish literature from its origins through the 17th century.

**SPW 4101 SURVEY OF SPANISH LITERATURE II**  
(3)  
PR: SPW 3200 or equivalent. A study of the later periods of Spanish literature.

**SPW 4130 SURVEY OF SPANISH-AMERICAN LITERATURE I**  
(3)  
PR: SPW 3200 or equivalent. An introduction to the study of Colonial Spanish-American literature from the Discovery to modernism.

**SPW 5245 THE PICARESQUE NOVEL**  
(3)  
Realistic prose-fiction of the Renaissance and Golden Age.

**SPW 5313 GOLDEN AGE DRAMA**  
(3)  
PR: SPW 4100. Lope de Vega, Alarcon, Tirso, Calderon, and others.

**SPW 5400 MEDIEVAL LITERATURE**  
(3)  
PR: Spanish. A study of the literature of the Middle Ages.

**SPW 5482 POST CIVIL WAR LITERATURE**  
(3)  
PR: SPW 4101. The drama and novel since 1936.

**SPW 5535 ROMANTICISM**  
(3)  
PR: Spanish. Poetry and drama of the first half of the 19th century.

**SPW 5555 REALISM**  
(3)  

**SPW 5605 DON QUIJOTE**  
(3)  
Cervantes’ masterpiece Don Quijote de la Mancha.

**SPW 5725 GENERATION OF 1898**  
(3)  
PR: Spanish. The major figures of the period and their main followers.

**SPW 5726 GENERATION OF 1927**  
(3)  

**SPW 5755 MEXICAN LITERATURE**  
(3)  
PR: SPW 4130. Major writers of all genres. Emphasis on modern writers.

**SPW 5765 LITERATURE OF ARGENTINA AND URUGUAY**  
(3)  
PR: SPW 4131. Emphasis on the gaucho theme and contemporary prose fiction.

**SPW 5775 CARIBBEAN LITERATURE**  
(3)  
PR: SPW 4130. Emphasis on contemporary Cuban and Puerto Rican literature.

**SPW 5934 SELECTED TOPICS**  
(3)  
PR: Upper-level or graduate standing. Study of an author, movement or theme.

**Spanish**

**SPN 1100 BEGINNING SPANISH I**  
(4)  
Development of basic skills in listening and reading comprehension, speaking and writing of Spanish.

**SPN 1101 BEGINNING SPANISH II**  
(4)  
PR: SPN 1100 or equivalent. Continued development of basic skills in listening and reading comprehension, speaking and writing of Spanish.

**SPN 2200 INTERMEDIATE SPANISH I**  
(3)  
PR: SPN 1101 or equivalent. A review of the basic structure of spoken and written Spanish. May be taken concurrently with SPN 2201.

**SPN 2201 INTERMEDIATE SPANISH II**  
(3)  
PR: SPN 1101 or equivalent. Readings in Spanish on the intermediate level. May be taken concurrently with SPN 2200.

**SPN 2240 CONVERSATION I**  
(3)  
PR: SPN 1101. For development of basic conversational skills.

**SPN 3241 CONVERSATION II**  
(3)  
PR: SPN 2240 or equivalent. To improve fluency in spoken Spanish.

**SPN 3300 COMPOSITION**  
(4)  
PR: SPN 2200-2201. A study of syntax, grammar and writing.

**SPN 3470 OVERSEAS STUDY**  
(1-6)  
PR: SPN 1101. An intensive study-travel program in a Spanish-speaking country. Prior departmental approval and early registration are required.

**SPN 3500 SPANISH CIVILIZATION**  
(3)  
PR: SPN 1101. The culture and civilization of Spain.
IDS 3300 STRUCTURES OF KNOWLEDGE AND KNOWING (4)
Distinguishing the modalities of human knowledge and awareness as reflected in the classic distinctions: sensory/motor/emotive; normative/descriptive/non-rational; logical/mathematical; ethical/physical/moral; qualitative/quantitative; mind/will/body; substance and function.

IDS 3310 PROGRESS AND UTOPIA (4)
Examination of the modern backgrounds of contemporary awareness: particularly the development of historical awareness of ourselves as scientifically, technologically, and socially "progressive"—in relation to both utopic and non-utopic futures.

IDS 3320 FREEDOM AND THE SELF (4)
Analysis of the idea of freedom in relation to the idea of self, involving comparative treatment of the variety of standpoints of conceiving the individual personality in relation to the social context.

IDS 4344 SEMINAR: MAN AND NATURE (3)
PR: Senior standing or CI. Examination of aspects of contemporary theories of nature and man deriving in the liberal arts, to the purpose of developing a general assessment of contemporary knowledge and speaking skills.

IDS 4930 SELECTED TOPICS (1-4)
Course content determined by students' and instructor's interests and needs.

LINGUISTICS

ESL 1383 ENGLISH FOR FOREIGN STUDENTS I (3)
A special course for students learning English as a second language. Intensive study and drill in American English pronunciation and listening comprehension.

ESL 1384 ENGLISH FOR FOREIGN STUDENTS II (3)
PR: ESL 1383 or CI. Intensive study and drill in American English pronunciation and listening comprehension. Emphasis on diction and speaking skills.

LIN 3010 INTRODUCTION TO LINGUISTICS (3)
Introduction to the basic principles of linguistic science; phonological and grammatical analysis and description; language change and genetic relationships.

LIN 3801 LANGUAGE AND MEANING -6A (3)
A survey introduction for non-specialists to the basic principles of semantics and the ways language conveys ideas. This course is also available on WUSF/TV Channel 16 by the O.U. Program.

LIN 4040 DESCRIPTIVE LINGUISTICS (3)
PR: LIN 3100 or CI. Introduction to the basic techniques of formalizing linguistic descriptions through elementary phonological, morphological, and syntactic data solution-problems drawn from a variety of languages. Both taxonomic and generative analysis and descriptions will be developed and compared.

LIN 4377 LANGUAGE TYPES OF THE WORLD (3)
An introduction to linguistic typology consisting in a systematic comparison of characteristic representatives of the various language types, such as Vietnamese, Malay, Hungarian, Swahili, Sanskrit, Hebrew, and others. No knowledge of any of these languages on the part of the student is presumed.

LIN 4600 LANGUAGE AND SOCIETY (3)
PR: LIN 3100. An analysis of the interrelation of a language and the structure of the society using it. The linguistic behavior patterns characteristic of particular social, political, economic, educational, and racial groups. Problems in communication between strata.

LIN 4701 PSYCHOLINGUISTICS (3)
PR: LIN 3100. The nature of linguistic structure and its correlates in behavior and perception. Examination of the hypotheses of Whorf, Chomsky, and others.

LIN 4710 LANGUAGE AND COMMUNICATION: ACQUISITION AND DEVELOPMENT (3)
PR: LIN 3100. A survey of current research and theory in the processes of normal acquisition and development of language and communica-
FIL 4206 ADVANCED FILM LIGHTING  (3)  
PR: FIL 4205. Advanced lighting of studio and location sets stressing professional procedures and standards from preproduction to post-production.

FIL 4207 SENSITOMETRY AND PHOTOMETRICS  (3)  
PR: FIL 3044. The materials and processes of cinema photo; response of materials to development and exposure.

FIL 4300 THE DOCUMENTARY FILM  (3)  
PR: Sophomore standing. The development of the documentary movement; earliest newsreels; Flaherty, Grierson and the GPO Unit. U.S. Government-sponsored films, the Canadian Film board, Cinema Verite; study of about 60 fact-films from some 20 countries. Stresses subjective criteria, critical analysis.

FIL 4404 SOCIAL HISTORY OF THE FILM, 1945 TO THE PRESENT  (3)  
PR: MMC 3100 and MMC 3602. A continuation of FIL 4403. Covering the development of the film from 1945 to the present. (FIL 4403 is not a prerequisite.)

JOU 3006 MAGAZINES IN SOCIETY  (3)  
PR: MMC 3100 and MMC 3602. A study of the development of various types of magazines in America, and a critical analysis of current problems and performances of periodicals along with changes indicated for the future.

JOU 3100 BEGINNING REPORTING  (3)  
PR: MMC 3100 and MMC 3602. Basic instruction in news judgment, sources of news, gathering, and newswriting techniques. Typing ability is required.

JOU 3101 ADVANCED REPORTING  (3)  
PR: POS 2041, JOU 3100, or RTV 3300 (RTV majors only), JOU 4200, and PHI 1103. Getting information and writing the more complex and specialized story, techniques of investigative and analytical reporting, including ethical and legal considerations.

JOU 3205 TYPOGRAPHY I  (3)  
PR: MMC 3100 and MMC 3602. The history and design of type, major classifications of type faces, typographic nomenclature, printer's measurements, and the science of type design and identification. Laboratory work.

JOU 3300 MAGAZINE ARTICLE AND FEATURE WRITING  (3)  
PR: CRW 3100, JOU 3100. Planning, researching, writing, and marketing articles for general and special interest magazines and newspaper magazine supplements; experiences in developing article idea; inductive analysis of contemporary magazine articles.

JOU 3306 CRITICAL WRITING: EDITORIALS, REVIEWS, COLUMNS  (3)  
PR: JOU 3101, JOU 4200. Interpretive and opinion writing for the mass media. Analysis and discussion of current events as a basis for critical thinking and editorial writing; evaluation of editorial pages of leading newspapers. Study of journalistic techniques involved in writing art, drama, music and book reviews and satire, sports, or personal columns.

JOU 3940 REPORTING PRACTICUM  (1)  
PR: JOU 4104 and CI. For selected News-Editorial Sequence majors. Practical experience outside the classroom in a live newspaper reporting situation where the student works for academic credit under tutelage of a professional practitioner. (S/U only.)

JOU 4104 PUBLIC AFFAIRS REPORTING  (3)  
PR: JOU 3101, POS 2041 and POS 3142. Covering city council meetings, courthouse, city hall, courts, society, and other special assignments. Emphasis is on coverage of major governmental units of all levels of government, including examination and interpretation of public documents and records.

JOU 4200 NEWS EDITING I  (3)  
PR: ECO 2013, JOU 3100, and SYG 1010. Evaluating news and its display; editing and rewriting copy for the mass media, with emphasis on the daily newspaper; news judgment, headlines, makeup; ethical problems.

JOU 4202 NEWS EDITING II  (3)  
PR: JOU 4200, POS 2041. Continuation of JOU 4200, with more intensive practice on the copydesk in evaluating, processing, editing, and headlining live wire copy and local copy; experimental makeup; managing the copy desk. Current events and analysis of selected daily newspapers.

JOU 4206 NEWSPAPER DESIGN AND TYPOGRAPHY  (3)  
PR: JOU 3205 and JOU 4200 or CI. Theoretical and practical applications of newspaper design; problems in newspaper layout; the research of newspaper typography and design and its application; redesign of contemporary newspapers.

JOU 4208 MAGAZINE EDITING AND PRODUCTION  (3)  
PR: JOU 3300, JOU 4200. A study of magazines in America: preparation of copy, photographs and art for printing; issue planning and design; examination of production methods, including printing typography and mechanics. Preparation of a detailed proposal and comprehensive plan for a hypothetical magazine.

JOU 4500 NEWSPAPER ORGANIZATION AND MANAGEMENT  (3)  

JOU 4800 MASS MEDIA STUDIES  (3)  
PR: Junior standing. JOU 3100, MMC 3602. Intensive review of mass communications theory, practice, and content as they relate to teaching mass media in secondary schools, with some emphasis also on supervision of school publications. Not open to Mass Communications majors.

JOU 4941 EDITING PRACTICUM  (1)  
PR: Senior standing JOU 4202 and CI. For selected News-Editorial Sequence majors Practical experience outside the classroom at a daily newspaper copydesk, where the student works for academic credit under the tutelage of a professional news editor. (S/U only.)

JOU 4944 MAGAZINE PRACTICUM  (1)  
PR: Senior standing and CI. For selected Magazine Sequence majors. Practical experience outside the classroom in a live magazine or industrial publication situation where the student works for academic credit under the tutelage of a professional practitioner. (S/U only.)

MMC 3000 SURVEY OF MASS COMMUNICATIONS  (2)  
The function of agencies of mass communications and their impact upon society; critical analysis of press performance in relation to current events; evaluation of press through a study of its history. Not open for credit to Mass Communications majors.

MMC 3100 WRITING FOR THE MASS MEDIA  (3)  
PR: Sophomore standing; 2.7 GPR; grade of "C" in ENC 1101, ENC 1104, typing proficiency, and passing score on English Diagnostic Test. An introduction to the basic skills of writing for the mass media with practice in library research, persuasive writing, and informational writing.

MMC 3602 MASS COMMUNICATIONS AND SOCIETY  (3)  

MMC 3700 THE POPULAR ARTS IN AMERICA  (3)  
A survey of the growth of the popular arts (motion pictures, radio, television, art best sellers, jazz and other forms of music, the comics, etc.) as mirrors, transmitters and transformers of American cultural values.

MMC 3936 SELECTED TOPICS IN MASS COMMUNICATIONS STUDIES  (1-3)  
Courses designed to meet current or specific topics of interest to the instructor and students.

MMC 4123 MEDIA SCRIPT WRITING  (3)  

MMC 4200 HISTORY AND PRINCIPLES OF COMMUNICATIONS LAW  (3)  
PR: MMC 3100 and MMC 3602. Historic and Constitutional backgrounds of freedom and control of expression, statutory enactments, major Supreme Court cases, court decisions and administrative rulings which have shaped legal control of communications.

MMC 4201 GOVERNMENT AND THE MEDIA  (3)  
PR: MMC 4200. The relationships between government and the media, with emphasis on current activities of such regulatory agencies as the Federal Communications Commission, the Federal Trade Commission and other commissions; the courts, the Congress and the Executive; examination of the media and industry codes and standards.

MMC 4300 INTERNATIONAL COMMUNICATION  (3)  
Mass communications as an internal and international systems; flow of the news; international news communications network; satellite communications, overseas activities of American media interests; international media organizations and their activities.
### COMMUNICATIONS PR: RTV

- **RTV 3940 RADIO**: Communication techniques; ethical standards of practice, and relationships of the practice to the public media and other modes of contemporary communication. (3)
- **RTV 4001 ADVANCED PUBLIC RELATIONS**: As final course in PR sequence; it involves intensive study of counseling and problem-solving techniques used in professional practice. Analysis of case studies and preparation of complete PR program. Extensive reading in the literature of contemporary practice. (3)
- **RTV 4100 WRITING FOR PUBLIC RELATIONS**: Persuasive writing techniques unique to the practice of public relations; application of principles and ethical practices to problem-solving situations drawn from case studies; writing formats used in promotional and publicity literature. (3)
- **RTV 4205 ADVANCED TV PRODUCTION AND DIRECTION**: Intensive study and practice of the techniques of TV production and direction with emphasis on both creative and experimental aspects of TV programming. (3)
- **RTV 4220 TV PRODUCTION AND DIRECTION**: Basic course in the techniques of producing and directing TV programs. (3)

### PUR 4601 ADVANCED PUBLIC RELATIONS PRACTICUM**: For selected Public Relations Sequence majors. Practicial experience outside the classroom in a professional public relations situation where the student works for academic credit under the tutelage of a professional practitioner. (1)

### MMC 4901 INDIVIDUAL RESEARCH IN MASS COMMUNICATIONS**: PR: CC and CI. The course provides means for a student to do independent study in an area not covered by a numbered course. (1-3)

### MMC 4936 SELECTED TOPICS IN MASS COMMUNICATIONS STUDIES**: PR: Junior standing. Courses designed to meet current or specific topics of interest to instructors and students. (1-3)

### MMC 4945 MEDIA INTERNSHIP—SEMINAR**: PR: CI and 15 hours in Mass Com. courses and completion of an 8-12 week media internship with newspaper, broadcast station, or other media-related agency approved by the department and paid by the sponsor. Reports on experiences for discussion and evaluation. (S/U only.) (3)

### PUR 3000 PRINCIPLES OF PUBLIC RELATIONS**: PR: ECO 2013, ECO 2023, MAN 3025, MMC 3100 and MMC 3602. The functions of public relations within corporate and institutional structures; ethical standards of practice, and relationships of the practice to the public media and other modes of contemporary communication. (3)

### PUR 4001 ADVANCED PUBLIC RELATIONS**: PR: PUR 3000, PUR 4100 and MMC 4420. (3)

### PUR 4100 WRITING FOR PUBLIC RELATIONS**: PR: JOU 3100, PUR 3000. Development of knowledge and skills of color photography for publication and presentation. Emphasis is on the use of transparency and negative color materials in their application to the media. Laboratory required. (3)

### VIC 3943 VISUAL COMMUNICATION PRACTICUM**: PR: Senior standing and CI. For selected Visual Communications sequence majors. Practical experience outside the classroom in a professional environment where the student works for academic credit under the tutelage of a professional practitioner. (S/U only.) (3)

### PHH 3000 INTRODUCTION TO PHILOSOPHICAL TRADITIONS -6A**: An historical introduction to selected philosophical traditions through readings from representative thinkers. (3)

### PHH 3100 ANCIENT AND MEDIEVAL PHILOSOPHY**: A survey of philosophy from the pre-Socratics through Plotinus. (3)

### PHH 3420 MODERN PHILOSOPHY**: A survey of Western philosophy from Descartes through Thomas Reid. (3)

### PHH 3440 RECENT PHILOSOPHY**: A survey of philosophy from Kant through nineteenth century philosophy. (3)

### PHH 4600 CONTEMPORARY PHILOSOPHY -6A**: Selected schools of twentieth century thought such as idealism, positivism, pragmatism, realism, and existentialism. (3)
PHI 4700 AMERICAN PHILOSOPHY -6A (3)
Major traditions in American thought—Puritanism, the Enlightenment, Transcendentalism, Idealism, Pragmatism, and Analytic Philosophy—in relation to American culture.

PHI 1000 GREAT PHILOSOPHERS OF THE WESTERN WORLD (2)
Lectures and discussions of the great philosophers since Plato, focusing on particular problems.

PHI 1010 PHILOSOPHICAL CONTROVERSIES (2)
A discussion of central controversies in philosophy such as the nature of love, violence, freedom, truth, morality, etc.

PHI 1103 PRACTICAL LOGIC -6A (2)
Elementary theory and application of logical fallacies, deductive and inductive logic. Not for majors.

PHI 3011 INTRODUCTION TO PHILOSOPHICAL PROBLEMS -6A (3)
An introduction to major philosophical problems through readings from representative thinkers.

PHI 3100 LOGIC -6A (4)
Language analysis and classical modern formal logic, including the logic of classes and propositions, and discussion of philosophical issues.

PHI 3404 SCIENTIFIC METHOD (3)
Probability, inductive inference, the hypothetico-deductive method, experimentation, and selected topics in the philosophy of science.

PHI 3600 ETHICS (3)
An examination of the writing of the philosophers: Plato, Aristotle, Kant, Sartre, etc., about moral problems and principles.

PHI 3601 CONTEMPORARY MORAL ISSUES (3)
Open to all students—A study of contemporary moral issues concerning racism, sex, sexism, abortion, poverty, crime, war, suicide, and human rights in general.

PHI 3700 PHILOSOPHY OF RELIGION -6A (3)
Analysis of religious experience and activity and examination of principal religious ideas in light of modern philosophy.

PHI 3905 DIRECTED STUDY (1-4)
PR: CI. Individual study directed by a faculty member. Approval slip from instructor required.

PHI 3930 SELECTED TOPICS (1-4)
PR: CI. Selected topics according to the needs of the student.

PHI 4320 PHILOSOPHY OF MIND -6A (3)
A study of historical and current issues in philosophy of mind, including the nature and status of mind, mind/body dualism, the relationship of mind and body, the problems of other minds, the physical basis for intelligence, etc.

PHI 4360 THEORY OF KNOWLEDGE -6A (3)
An examination of human knowledge; its scope and limits, and an evaluation of evidence, criteria of truth, the nature of belief, conditions for meaningfulness, theories of perception, and a study of memory and sense perception in the four major fields of nature, history, personal experience, and the a priori.

PHI 4800 AESTHETICS -6A (3)
A study of traditional and contemporary aesthetic theories with emphasis on creative process, the nature of the art work, the aesthetic response, expressiveness, form and content as well as art and morality.

PHI 4905 DIRECTED STUDY (1-4)
PR: CI. Individual study directed by a faculty member. Approval slip from instructor required.

PHI 4930 SELECTED TOPICS (1-3)
PR: CI. Selected topics according to the needs of the senior students. Approval slip from instructor required.

PHI 5135 SYMBOLIC LOGIC (3)
PR: PHI 3100 or CI. Mathematical treatment of formal logic, including methods of proof, quantification, the logic of relations and an introduction to properties of deductive systems.

PHI 5225 PHILOSOPHY OF LANGUAGE (3)
PR: Eight hours of philosophy, major in linguistics, or CI. An examination of semantic, syntactical, and functional theories of language, with special attention given to the meaning of meaning, linguistic reference, syntactical form, and the relations between scientific languages and ordinary linguistic usage. Seminar format.

PHI 5913 RESEARCH (1-4)
PR: CI. Individual research supervised by a faculty member. Approval slip from instructor required.

PHI 5934 SELECTED TOPICS (1-3)
PR: CI. Selected topics according to the needs of the student. Approval slip from instructor required.

PHM 3021 PHILOSOPHIES OF LOVE AND SEX (3)
Discussion of Philosophies of Love/Sex of Plato, Aristotle, Epicurus, Aquinas, Hume, Kant, Schopenhauer, Russell, Sartre, Marx, etc.

PHM 3100 SOCIAL PHILOSOPHY -6A (3)
An analysis of rival theories of social order and their philosophical foundations.

PHM 3222 PHILOSOPHIES OF THE CITY (3)
A study of the current issues in the philosophy of the city including the nature of community, alienation and the city, art and the city, political philosophy of the city, the city and business, nature versus the city, the city and beauty, etc.

PHM 3400 INTRODUCTION TO PHILOSOPHY OF LAW (3)
A study of the fundamental concepts of law from a philosophical standpoint—including crime, justice, punishment, free speech, insanity, etc.

PHM 4322 ANCIENT AND MEDIEVAL POLITICAL PHILOSOPHY -6A (3)
A survey of political philosophy from 6 B.C. until 1600 A.D., including an examination of the ethical, metaphysical, and epistemological bases of these philosophies.

PHM 4331 MODERN POLITICAL PHILOSOPHY -6A (3)
A survey of political philosophy from 1600 A.D. until 1900 A.D., including an examination of the ethical, metaphysical, and epistemological bases of these philosophies.

PHM 4340 CONTEMPORARY POLITICAL PHILOSOPHY -6A (3)
A survey of political philosophy in the twentieth century, including an examination of the ethical, metaphysical and epistemological bases of these philosophies.

PHP 3786 EXISTENTIALISM -6A (3)
A study of the religious and atheistic existentialists and the bearing of their views on religion, ethics, metaphysics, and theory of knowledge.

PHP 4000 PLATO -6A (3)
The examination of Plato will include the dialogues Protagoras, Georgias, Meno, Republic, etc.

PHP 4010 ARISTOTLE -6A (3)
Study of Aristotle's philosophy.

PHP 4410 KANT (3)
Lecture and discussion of Kant's philosophy, especially The Critique of Pure Reason.

PHP 4740 RATIONALISM -6A (3)
A careful study of the epistemologies of Descartes, Spinoza, Leibniz, and Malebranche.

PHP 4745 EMPIRICISM -6A (3)
A careful study of epistemologies of Locke, Berkeley, Hume, and Thomas Reid.

PHP 4784 ANALYTICAL PHILOSOPHY -6A (3)
A study of the method devoted to clarifying philosophical problems through analysis of the language in which these problems are stated.

PHP 4788 PHILOSOPHY OF MARXISM -6A (3)
A critical survey of Marxist philosophy from Marx and Engels to Mao Tse-Tung and Herbert Marcuse. Hegelian foundations of Marxist philosophy analyzed in detail.

RELIGIOUS STUDIES


GRE 3040 NEW TESTAMENT GREEK I (3)

GRE 3041 NEW TESTAMENT GREEK II (3)

REL 3000 INTRODUCTION TO RELIGION (3)
This course examines the phenomenon of religion to answer the ques-
The study and comparison of Theravada and Mahayana Buddhism in their philosophical and psychological dimensions. Christianity, Islam from the Near East and Hinduism, Taoism, Confucianism and an analysis of the Yogas, and a study of the Hindu holy men and their spirituality. Judeo-Christian tradition. Contemporary issues of feminist theology, and the controversies surrounding them. (May also be taken for credit in Women's Studies.)

Religious studies of Sufism, Shinto, and Western cultures, and the critical problems raised by the emergence of modern, secularized civilization. Open to majors and non-majors.

A course designed to acquaint the student with the nature of mystical experience, and some of the varieties of mystical experience recorded in the writings of the mystics. An exploration of the way in which religion and technology have interacted in Western civilization so as to both express and transform human values and identity. Special emphasis will be given to the value questions raised by modern technology. Open to majors and non-majors.

An introduction to Jewish religious history and practice up to the end of the fourth century and the controversies surrounding them. An introduction to Judaism: its religious tenets; its codes of ethics; its historical and psychological dimensions. A study of Jewish life in the West since 1789, emphasizing Jewish beliefs, practices, and institutions. A course designed to acquaint the student to survey the wide spectrum of contemporary sects and cults and learn what motivates their development.

A critical study of the books written in the Bible without the canonical role in history with respect to the ancient Hebrews. Special attention will be paid to the period from the Hebrew Conquest to the time of Jesus. An introduction to the critical study of the Hebrew Scriptures against the background of the ancient Near East, with attention to the history and religion of the Hebrew people. REL 3210 and REL 4221 may not both be credited toward the major.

An introduction to the critical study of the New Testament in context of Christian beginnings in the first century A.D. REL 3243 and REL 4244 may not both be credited toward the major. An examination of the Pentateuch (Torah) from the point of view of its literary development, religious traditions, historical background, law, covenant theology, and the history of the religion of Israel.

A study of the evolution of the religion of ancient Israel from the second millennium B.C.E. to the end of the second century of our era, seen against the background of its historical, geographical, political, social and spiritual setting. A study of the history of Judaism and the Jews from the third century of our era through the Middle Ages to the Massacre of the Jews in 1391. Taking History of Judaism I first is advantageous. A study of Jewish life in the West since 1789, emphasizing Jewish beliefs, practices, and institutions. A course designed to acquaint the student with the nature of mystical experience, and some of the varieties of mystical experience recorded in the writings of the mystics. An exploration of the way in which religion and technology have interacted in Western civilization so as to both express and transform human values and identity. Special emphasis will be given to the value questions raised by modern technology. Open to majors and non-majors.

The course will explore the religious roots of science and the history of its emancipation. Special emphasis will be given to the interaction of religion and science in contemporary society. Open to majors and non-majors. The course will explore the religious roots of science and the history of its emancipation. Special emphasis will be given to the interaction of religion and science in contemporary society. Open to majors and non-majors.

An introduction to the critical study of the Hebrew Scriptures against the background of the ancient Near East, with attention to the history and religion of the Hebrew people. REL 3210 and REL 4221 may not both be credited toward the major. An introduction to the critical study of the New Testament in context of Christian beginnings in the first century A.D. REL 3243 and REL 4244 may not both be credited toward the major. An examination of the Pentateuch (Torah) from the point of view of its literary development, religious traditions, historical background, law, covenant theology, and the history of the religion of Israel.

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An introduction to the critical study of the Hebrew Scriptures against the background of the ancient Near East, with attention to the history and religion of the Hebrew people. REL 3210 and REL 4221 may not both be credited toward the major. An introduction to the critical study of the New Testament in context of Christian beginnings in the first century A.D. REL 3243 and REL 4244 may not both be credited toward the major. An examination of the Pentateuch (Torah) from the point of view of its literary development, religious traditions, historical background, law, covenant theology, and the history of the religion of Israel.
influences, many of which continue to be evident in the traditional Roman and Eastern Orthodox churches.

REL 4670 JUDAISM AND CHRISTIANITY AFTER THE HOLOCAUST
(4)
This course will explore the impact of the Holocaust on Jewish and Christian thought and identity in the light of the history of religious and cultural anti-semitism in Western civilization. Open to majors and non-majors.

REL 4910 UNDERGRADUATE RESEARCH
(1-4)
PR: Junior standing and Cl. Individual investigations with faculty supervision.

REL 4931 SEMINAR IN RELIGION
(3)
A course designed for persons, especially Religious Studies majors, whose prior religious studies have prepared them for a cooperative creative and/or research effort in the area of religion.

REL 4936 SELECTED TOPICS
(1-4)
PR: Junior standing and Cl. Individual investigations with faculty supervision.

REL 4939 THE DEVELOPMENT OF RELIGIOUS STUDIES
(3)
Course designed for senior majors (and minors) in religious studies to complement REL 4931 (Senior Seminar). Discussion of key figures and methodological advances in the development of the field from the 18th century to present, with readings of classics in the development.

REL 5937 SELECTED TOPICS
(1-4)
PR: Senior standing and Cl. Course contents depend on students' needs.

Ancient Studies Sequence

CLA 3000 ANCIENT CIVILIZATIONS
(4)
Study of the character, ideas, and cultural achievements of the peoples of the Ancient Middle East and Mediterranean and their relevance for modern Western civilization.

CLA 3801 HISTORY OF THE ALPHABET
(2)
Study, in reasonable detail, of the evolution of our 'Roman' alphabet, as well as of other ancient and modern alphabets, from the writing system of ancient Egypt.

CLA 4100 GREEK CIVILIZATION
(4)
Detailed study of the Aegean and Greek civilizations from their beginning in Crete and Myceneae to the Roman period. Greek discoveries, explorations, and colonization. (Alternate years.)

CLA 4120 ROMAN CIVILIZATION
(4)
Prehistoric Italy and Etruscan civilization. History of the civilization of Rome and the Empire with emphasis on the Etruscan, Greek, Carthaginian, and Mid-Eastern influences. (Alternate years.)

COLLEGE OF BUSINESS ADMINISTRATION

ACCOUNTING/LAW


ACG 2001 FINANCIAL AND MANAGERIAL ACCOUNTING I
(3)
Study of basic accounting principles including the recording and reporting of financial activity. The preparation and interpretation of financial statements.

ACG 2011 FINANCIAL AND MANAGERIAL ACCOUNTING II
(3)
PR: ACG 2001. (1) A continuation of financial accounting topics from Elementary Accounting I concerning the preparation and interpretation of financial statements; (2) A study of the role of the accountant in majors assisting management in the planning and controlling of only.

ACG 3361 COST ACCOUNTING AND CONTROL I
(3)
PR: FIN 3403, GEB 3121. Deals with relevant costs for decision making, measurement theory and methodology underlying income measurement and reporting of financial position. The study of standards and compound interest fundamentals, cash, temporary investment, receivables, order costing, flexible budgeting direct and absorption costing, property and equipment, intangibles, and long term investments.

ACG 3112 INTERMEDIATE ACCOUNTING II
(4)
PR: ACG 3102. Continuation of theory and principles underlying regression financial statements; current and long term liabilities, analysis of stockholders' equity, earnings-per-share, income taxes, pensions, leases, and decision models.

ACG 3401 ACCOUNTING INFORMATION SYSTEMS
(3)
PR: ACG 3102, and COC 2201. Manual and computer-based accounting systems, including order processing, accounts receivable, inventory management,开and of the uses of accounting data internally by and responsibility accounting systems. Emphasis on internal control, efficiency, and controlling the affairs of organization and provision of useful data as well as not-for-profit oriented entities. Non-Accounting information.

ACG 3930 SELECTED TOPICS IN ACCOUNTING
(1-4)
Course description will vary with the topics included.
ACG 4651 AUDITING
PR: ACG 3112, ACG 3401 and GEB 3121. Principles and procedures of internal and public auditing. The ethics, responsibilities, standards, and reports of professional auditing.

ACG 4901 INDEPENDENT STUDY
(1-3)
PR: Cl. Specialized independent study determined by the students' needs and interests. May be repeated up to 6 credit hours. (S/ U only.)

ACG 4911 INDEPENDENT RESEARCH
(1-4)
PR: Cl. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor. May be repeated up to 8 hours.

ACG 4931 SELECTED TOPICS IN ACCOUNTING
(1-4)
PR: Cl. The course content will depend on student demand and instructor's interest.

TAX 4001 FEDERAL TAXES I
(3)
PR: ACG 2011. An introduction to the federal income tax structure. Use of tax services and the concept of taxable income primarily applicable to individuals.

ACG 5205 ADVANCED ACCOUNTING
(4)
PR: ACG 3112. Accounting for business combinations, preparation of consolidated financial statements, home office and branch operations, accounting for international operations and partnership.

ACG 5325 FINANCIAL/managerial ACCOUNTING
This course provides students in the M.S. degree in Management with a basic knowledge of financial and managerial accounting in both the public and private sectors. The course concentrates on the uses and limitations of accounting data for planning, control, and other decision making activities.

ACG 5505 NONPROFIT ORGANIZATION ACCOUNTING
(3)

ACG 5805 CONTEMPORARY ACCOUNTING THOUGHT
(3)
PR: Intermediate Accounting II or equivalent. An in-depth coverage of selected topics in accounting. Emphasis is placed on current significant developments and concepts that have taken place in the profession which the student should have for a well-rounded background in accounting but has not been exposed to in previous courses. Available to majors and non-majors.

ACG 5935 SELECTED TOPICS IN ACCOUNTING
(1-4)
PR: Cl. To allow advanced undergraduate students and graduate students to research and study contemporary and emerging topics in the field. May be repeated up to 6 credit hours.

ACG 5015 FEDERAL TAXES II
(3)
PR: TAX 4001. Advanced study of the federal income tax structure. Special topics and the concept of taxable income as it applies primarily to business enterprises.

ECONOMICS


ECO 2013 ECONOMIC PRINCIPLES (MACROECONOMICS)
(3)
PR: ECO 2023. Introduction to the theory of income determination with emphasis on applications of monetary and fiscal policies. Topics discussed are: objectives of full employment, price stability, economic growth, and balance of payments stability.

ECO 2023 ECONOMIC PRINCIPLES (MICROECONOMICS)
(3)
Fundamental economic concept of scarcity, and the problem of choice. How an economy decides what to produce, how to produce and how to distribute goods and services to participants in the economy. Attention is focused on factors affecting consumer wants and on the determination of prices in markets.

ECO 3101 INTERMEDIATE PRICE THEORY
(3)
PR: ECO 2023. Analysis of supply and demand as related to product and resource pricing under the various market structures.

ECO 3203 INTERMEDIATE INCOME & MONETARY ANALYSIS
(3)
PR: ECO 2013 and ECO 3101. Analysis of the determination of income, employment, prices, and interest rates. Emphasis is placed on the interaction of aggregate demand and aggregate supply.

ECO 3622 AMERICAN ECONOMIC HISTORY
(3)
PR: ECO 2023. The growth and evolution of American economic institutions from Colonial times to the present.

ECO 3703 INTERNATIONAL ECONOMICS
(3)

ECO 4213 MONETARY THEORY
(3)
PR: ECO 3203. Examination of the impact of the financial sector on real and nominal economic magnitudes. The course approaches its subject matter through the theory of portfolio and capital adjustments.

ECO 4264 THEORY OF ECONOMIC DYNAMICS
(3)
PR: ECO 3203. Examination of macroeconomic processes as they occur through time. The determination and characteristics of long run growth paths based upon both Keynesian and Neoclassical models are discussed. Empirical studies, forecasting, and policy issues are also considered.

ECO 4803 HISTORY OF ECONOMIC THOUGHT
(3)
PR: ECO 3101, or Cl. The development of economic schools of thought, from Plato to Marshall, are traced and analyzed. The impact of historical and political conditions will be stressed.

ECO 4823 MARXIST POLITICAL ECONOMY
(3)
PR: ECO 2013, or Cl. An examination of the Marxist school of thought in economics. Application of Marxist economic theory to problems of advanced capitalist and socialist societies.

ECO 4401 INTRODUCTION TO MATHEMATICAL ECONOMICS
(3)
PR: ECO 2013, and GEB 3121, MAC 2243 or Cl. Economic processes expressed as equations and economic systems as mathematical models. Investigation of static and dynamics properties by mathematical analysis and computer simulation.

ECO 4504 PUBLIC FINANCE
(3)

ECO 4713 INTERNATIONAL MONETARY RELATIONS
(3)

ECO 4723 INTERNATIONAL COMMERCIAL POLICIES
(3)
PR: ECO 3101. Advanced analysis of international trade theory and commercial policy, international economic integration, and multinational enterprise.

ECO 4905 INDEPENDENT STUDY
(1-3)
PR: Cl. Specialized independent study determined by the student's needs and interests. May be repeated up to 6 credit hours. (S/ U only.)

ECO 4914 INDEPENDENT RESEARCH
(1-3)
PR: Cl. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor. May be repeated up to 6 hours.

ECO 4935 SELECTED TOPICS IN ECONOMICS
(1-3)
PR: Cl. Topics to be selected by the instructor or instructors on pertinent economic issues.

ECO 5404 ECONOMIC PROGRAMMING AND CONTROL
(3)

ECO 5424 ECONOMETRICS I
(3)
PR: ECO 3203 or GEB 6717 and GEB 3121 or GEB 6756, or Cl. Theory and use of multiple regression to estimate relationships in causal mod-
els, to analyze economic behavior and to forecast the outcome of economic disturbances. Use of standard software packages. Estimation and interpretation of regression equations.

**ECO 5425 ECONOMETRICS II** (3)  
PR: ECO 5424. Advanced econometric techniques; model building, estimation and forecasting; design and execution of individual research projects.

**ECP 3003 BUSINESS-GOVERNMENT RELATIONSHIPS** (3)  
PR: ECO 2023. Analysis of the three public policy approaches: competitive, regulatory, and ownership; in terms of ability to bring about economically desirable price-cost relationships, reductions in cost, invention and innovation and an optimal allocation of resources.

**ECP 3203 LABOR ECONOMICS** (3)  
PR: ECO 3101 or Cl. History of the trade union movement; economic analysis of trade union philosophies and practices; examination of basic influences affecting labor force, real wages, and employment; collective bargaining and labor law.

**ECP 3433 ECONOMICS OF TRANSPORTATION** (3)  
PR: ECO 2013 and ECO 2023. Functions of transporting agencies, rate structure of transportation companies, problems of state and federal regulations and coordination of transportation facilities.

**ECP 3613 ECONOMICS OF THE URBAN ENVIRONMENT** (3)  
PR: ECO 2013 and ECO 2023. Economic analysis of the phenomena of cities as well as urban social problems including poverty, discrimination, housing, transportation, pollution, crime and fiscal considerations.

**ECP 4232 COLLECTIVE BARGAINING AND PUBLIC POLICY** (3)  
PR: ECO 2023 or Cl. Administration of labor management agreements, etc. Impact of the government role in collective bargaining and labor relations will be examined in light of current labor laws and judicial interpretations.

**ECP 5403 INDUSTRIAL ORGANIZATION** (3)  
PR: ECO 3101 or GE 6716. The economics of industrial organization. The study of the behavior of firms and the implications of such behavior on economic performance. The relationship between structure of industry and performance.

**ECP 5404 SEMINAR IN INDUSTRIAL ORGANIZATION** (3)  
PR: ECP 5403. Contemporary industrial organization problems will be discussed in a seminar format.

**ECP 5614 URBAN ECONOMICS** (3)  
PR: ECO 3101 or GEB 6716. The economics of urban areas including analysis of their growth and development as well as intraurban location patterns. Advanced economic analysis of urban problems.

**ECP 5624 REGIONAL ECONOMICS** (3)  
PR: ECO 3101 or GEB 6716. Economic analysis of the geographical allocation of scarce resources within and among regions. Topics discussed are: location of households and firms, interregional migration of labor and capital, regional growth and development, methods of regional analysis, and regional policy.

**ECS 3013 ECONOMIC DEVELOPMENT** (3)  
PR: ECO 2013 or Cl. Problems, policies, and dynamics of economic development in emerging nations. Benefits and relevance of theories of economic development are examined within the context of the social and political milieu of today's underdeveloped areas.

**ECS 4003 COMPARATIVE ECONOMIC SYSTEMS** (3)  
PR: ECO 2013 or Cl. Analysis of the major types of economic systems: traditional, capitalism, democratic socialism, communism and fascism. The methodology of Max Weber will be stressed.

**GEB 2111 BUSINESS AND ECONOMIC STATISTICS I - 6A** (3)  
PR: MAC 2243. Description of sample data; calculation of probabilities, frequency functions of random variables; the binomial and normal distributions; sampling theory and estimation; test of hypotheses; elements of Bayesian decision theory.

**GEB 3121 BUSINESS AND ECONOMIC STATISTICS II** (3)  
PR: MAC 2243, GEB 2111. Theory and use of statistical inference. Point and interval estimation; criteria for choosing estimators and decision rules; hypotheses tests; analysis of variance, correlation and regression.

**FINANCE**


**FIN 2100 PERSONAL FINANCE** (3)  
Survey of the problems and techniques of personal financial planning. Includes consumer credit, insurance, home ownership, and personal investing, with attention given to current economic and legal constraints. Not available for credit to upper level students who have been admitted to the College of Business Administration.

**FIN 2105 INTRODUCTION TO INVESTMENTS** (3)  
Emphasizes the operations of the security markets in the U.S. and the risks and returns of alternative investment media. Designed for non-business administration students. Not available for credit to upper level students who have been admitted to the College of Business Administration.

**FIN 3233 MONEY AND BANKING** (3)  
PR: ECO 2013. Examines the structure and operations of our monetary system, commercial banking, central banking, money, and capital markets, and provides an introduction to monetary theory and policy.

**FIN 3403 PRINCIPLES OF FINANCE** (3)  
PR: ACG 2011 and ECO 2023. Study of the processes, decisions, structures, and institutional arrangements concerned with the use and acquisition of funds by a firm. Includes the management of the asset and liability structure of the firm under certain and risky situations. The financial decision process will include and recognize the international as well as domestic aspects of financial management.

**FIN 3604 INTERNATIONAL FINANCE** (3)  
PR: ECO 2013 or Cl. Study of factors affecting international business, assessment of risks, international managerial finance; institutions and instruments of international business finance.

**FIN 3605 FINANCIAL INSTITUTIONS** (3)  
PR: FIN 3233. A study of financial institutions and their roles in the capital market includes the savings allocation, investment, and financial decision making processes.

**FIN 4414 ADVANCED CORPORATION FINANCE** (3)  
PR: FIN 3403. An examination of the financial policies of corporations, with special reference to dividend policy, financial structure, capital expenditures, acquisitions, mergers, and reorganization.

**FIN 4443 FINANCIAL POLICIES AND STRATEGIES** (3)  
PR: FIN 4414. A senior seminar for majors in Finance. Primarily a case course examining financial policies and the application of financial analysis to alternative strategies.

**FIN 4504 PRINCIPLES OF INVESTMENTS** (3)  
PR: ECO 2013 and FIN 3403. Survey of the risks and returns of investment media in relation to the investment objectives of individual and institutional investors. Includes an examination of the capital markets, information flows, and analytical techniques in terms of their impact upon the valuation process.

**FIN 4524 ADVANCED INVESTMENT ANALYSIS AND MANAGEMENT** (3)  
PR: FIN 4504. A comprehensive survey of security analysis and portfolio management. The course will utilize a quantitative approach to investment selection and management.

**FIN 4834 FEDERAL RESERVE SYSTEM AND MONETARY POLICY** (3)  
PR: FIN 3233 or Cl. An analysis of the Federal Reserve System, with special emphasis on monetary theory and the formulation and administration of monetary policy.

**FIN 4905 INDEPENDENT STUDY** (1-3)  
PR: Cl. Specialized independent study determined by the students' needs and interests. May be repeated up to six credit hours. (S/U only.)

**FIN 4915 INDEPENDENT RESEARCH** (1-3)  
PR: Cl. Individual study contract with instructor and department chairperson. The research project will be mutually determined by the student and instructor. May be repeated up to 6 hours.

**FIN 4934 SELECTED TOPICS IN FINANCE** (1-3)  
PR: Cl. Topics to be selected by instructor and department chairperson on pertinent Finance issues.

**REE 3040 PRINCIPLES OF REAL ESTATE** (3)  
Economics of urban land utilization and the nature of property rights. Problems of urban development and the valuation of real property in
terms of the structure and operations of the real estate market.

REE 4100 REAL ESTATE APPRAISAL
Comprehensive coverage of the basic concepts and principles of real estate appraisal. Emphasis placed on the use of valuation tools for the appraisal of real estate with emphasis on residential property.

REE 4204 REAL ESTATE FINANCE
PR: REE 4310. A comprehensive analysis of the institutional and legal framework of real estate financing with an introduction to the financing techniques which are traditionally utilized to finance real estate. Includes methods of raising debt and equity funds. Analysis of real property for financing purposes is stressed in a decision-making context and how that decision affects the real estate investment.

REE 4310 REAL ESTATE INVESTMENT ANALYSIS
PR: FIN 3403, REE 3040. A comprehensive study of the determinants of the market and financial feasibility of the real estate investment decision. The development of market and site analyses, theories or urban development patterns, and the role of taxation will be studied along with the application of analytical techniques for decision making. The course is not restricted to Finance majors.

RMI 3010 PRINCIPLES OF INSURANCE
Analysis of insurable risks of both business and individuals. An examination of the characteristics of those areas of risk and uncertainty where the mechanisms of insurance are effective alternatives. The concept, contracts, and institutions involved in insurance are examined in relationship to the socio-economic environment.

RMI 4110 LIFE, HEALTH, AND DISABILITY INSURANCE
PR: GEB 3121, RMI 3010. The course will analyze the use of life, health, and disability insurance contracts as a method of dealing with the risks of death, sickness, and disability. It will also include an analysis of cost determination of the various types of coverage.

RMI 4113 CASUALTY INSURANCE
PR: RMI 3010. Course dealing with recognition of personal and business casualty risks and coverages which may be used in dealing with these risks. Considers the underwriting, marketing, and social problems associated with these coverages. Topics include workmen's compensation, public liability, auto liability, suretyship and crime insurance. Not limited to Finance majors.

RMI 4210 PROPERTY INSURANCE
PR: RMI 3010. Course dealing with recognition of personal and business property risks, and coverages which may be used in dealing with these risks. Considers the underwriting, marketing, and social problems associated with these coverages. Topics include commercial and residential fire insurance, inland marine and transportation coverages, and multiperil contracts. Not limited to Finance majors.

GENERAL BUSINESS ADMINISTRATION

BUL 2111 LAW AND THE INDIVIDUAL
A study of the nature, functions, sources, formulation, and administration of law with the special emphasis on the practical aspects of criminal, tort, estate, divorce, property, business, constitutional, and other areas of law. Not available for credit to students who have been admitted to the College of Business. (No credit for students with credit in BUL 3112.)

BUL 3112 BUSINESS LAW I
The nature of legal institutions, essentials of binding contract, remedies granted in event of breach of contract, and rights acquired by assignment of contracts.

BUL 3122 BUSINESS LAW II
PR: BUL 3112. Legal problems in marketing of goods, nature of property, sales of personal property, securing of credit granted, nature and use of negotiable instruments.

BUL 3659 THE LAW OF BUSINESS ASSOCIATIONS
PR: BUL 3112. A study of the law of corporations, the law of partnerships, and the law of other business associations.

BUL 5665 LAW AND THE ACCOUNTANT
PR: BUL 3112 or CI. A comprehensive study of commercial law as it affects the practice of accounting.

COC 2201 COMPUTERS IN BUSINESS
A study of the use and impact of computers in all areas of business organizations. Course includes hands-on experience and the use of software packages for business use.
MANAGEMENT


MAN 2932 SELECTED TOPICS IN MANAGEMENT (1-4)
PR: CI. Topics to be selected by department chairman. May be repeated if topics vary. Not available for credit to upper-level students who have been admitted to the College of Business Administration. May be repeated up to 8 credit hours.

MAN 3025 PRINCIPLES OF MANAGEMENT (3)
Study of the fundamentals of management. It treats topics in organizational theory, organizational behavior, and interpersonal relations which are relevant to effective management performance.

MAN 3150 ORGANIZATIONAL BEHAVIOR ANALYSIS (3)
PR: MAN 3010. The course covers research literature relevant to organizational functioning including behavioral effects of power and authority, formal organization, structural variation, leadership, motivation, and communication.

MAN 3301 PERSONNEL MANAGEMENT (3)
To develop a broad exposure to new approaches, techniques, and future trends in the management of personnel. A study of the major functions in personnel including job analysis, manpower planning, selection, performance evaluation, training, and wage and salary administration.

MAN 3401 INDUSTRIAL RELATIONS (3)
A conceptualization of the administrative problems arising from unionization. Emphasis on the relationship between management and employee representatives in private and public employment. Required course for Management majors.

MAN 3810 INTRODUCTION TO MANAGEMENT SCIENCE (3)
A survey of management science techniques and their application to problem solving and decision making. Competency in college algebra is necessary. Required course for all business majors.

MAN 4120L MANAGERIAL BEHAVIORAL LABORATORY (3)
PR: MAN 3150 or equivalent. Development of direct understanding of personal, interpersonal, and intergroup factors present in organizational interaction. Stress is on a series of experiential exercises and role playing situations written adaptation of laboratory setting.

MAN 4281 ORGANIZATIONAL ASSESSMENT (3)
PR: MAN 3150. The analysis and measurement of factors which influence organizational effectiveness and the quality of work life. Data based cases will be used by students to assess managerial and supervisory skills and to measure organizational functioning and work design.

MAN 4210 ORGANIZATIONAL DEVELOPMENT AND CHANGE (3)
PR: MAN 3150 or CI. This course should be taken simultaneously with or after MAN 4201. A lab course where students experimentally apply behavioral science techniques in an "action-research" framework to the cycle of planned change so as to build a more effective organization.

MAN 4400 THEORY AND PRACTICE OF MANAGEMENT SKILLS (3)
PR: MAN 3150. This course involves the transferece of management theories into practice. It requires the active involvement of students in developing and practicing the skills needed to be a successful manager.

MAN 4410 EMPLOYMENT LAWS (3)
Federal and state regulation of the employment relationship, including wage and hour laws; EEO; affirmative action programs; employee benefits; insurance; workers' compensation, safety, health, employee's personal rights; collective bargaining legislation.

MAN 4430 SEMINAR IN NEGOTIATIONS AND ADMINISTRATION OF LABOR AGREEMENTS (3)
Case studies in contract negotiation, administration, grievance settlement, and arbitration. Assumes familiarity with industrial relations system.

MAN 4802 ENTREPRENEURSHIP AND SMALL BUSINESS MANAGEMENT (3)
PR: ACC 2001, ACC 2021, MAR 3023, or CI. Study of the factors involved in starting and managing a small to medium-sized business. Emphasis on conduct of pre-business feasibility study, start-up of business, successful management of the firm, and options for succession or termination.

MAN 4804 SMALL BUSINESS MANAGEMENT COUNSELING (3)
PR: MAN 4802 or CI. Field application in small business settings by (a) analyzing an on-going small business and developing recommendations for making improvements; or (b) conducting a feasibility study for a new enterprise and developing a strategy for implementation if favorable.

MAN 4905 INDEPENDENT STUDY (1-3)
PR: CI. Specialized independent study determined by the students needs and interests. May be repeated up to 8 credit hours. (S/U only.)

MAN 4930 SELECTED TOPICS IN MANAGEMENT (1-3)
PR: CI. Topics to be selected by instructor and department chairperson for pertinent Management issues.

MAN 4931 INDEPENDENT RESEARCH (1-4)
PR: CI. Individual study contract with instructor and department chairperson.
Chairperson required. The research project will be mutually determined by the student and instructor. May be repeated up to 8 hours.

**MAN 5714 URBAN MANAGEMENT**

(3)
The applicability of business management theories and practices to problem solving in the public sector. A formal theory of organization is used to compare and contrast private and public sector decision environments.

**QMB 4600 QUANTITATIVE APPROACH FOR BUSINESS DECISIONS**

(3)
PR: MNA 3810. The use of systematic approaches and management science tools for decision making and problem solving in an organizational setting. Emphasis is on quantitative approaches for problem identification, analysis, choice and implementation.

**QMB 4703 SIMULATION AND MODELING TECHNIQUES**

(3)
PR: MNA 3810 or CI. A study of manual and computer simulation techniques and their application to problem solving in management (behavioral and quantitative). Knowledge of a computer language and the basic tools and techniques of management science is advised.

### MARKETING

**Chairperson:** T. E. Ness; **Professors:** R. L. Anderson, D. C. Sleeper; **Associate Professors:** S. A. Baumgarten, W. A. DeBord, J. S. Hensel, J. Steven Kelly, D. J. Ortinau, T. E. Ness, M. T. Stith, H. H. Towery; **Assistant Professors:** E. W. Boatwright, M. B. Stamps; **Instructor:** K. C. MacConnel; **Lecturers:** W. E. Cook, C. E. Vincent, D. E. Wise; **Other Faculty:** J. D. Carmichael, L. J. Deadman, R. L. Leeds, H. A. Lipson, D. E. Wise.

**MAR 2931 SELECTED TOPICS IN MARKETING**

(1-4)
PR: CI. Topics to be selected by department chairman. May be repeated if topics vary. Not available for credit to upper-level students who have been admitted to the College of Business Administration. May be repeated up to 8 credit hours.

**MAR 3023 BASIC MARKETING**

(3)
PR: AAC 2001, ECO 2013, ECO 2023, or CI. Survey of the marketing of goods and services within the economy. The integration of functional, commodity, and institutional approaches from the consumer and managerial viewpoints.

**MAR 3613 MARKETING RESEARCH**

(3)
PR: GEB 3121, MAR 3023. A study of research methods and techniques applicable to problem solving in marketing. Attention is also given to defining information needs, determining the value of information, interpreting and reporting information for use in marketing decision making.

**MAR 3722 MARKETING MANAGEMENT**

(3)
PR: MAR 3023. An applications oriented study of the marketing function at an intermediate level. Emphasis upon techniques for analysis and problem-solving. This course builds upon the principles and concepts learned in MAR 3023, and provides a strong foundation for the remaining courses in the marketing curriculum.

**MAR 4153 RETAILING MANAGEMENT**

(3)
PR: MAR 3023. A comprehensive study of the retailing structure, institutions, and environment. Includes pertinent management theories and practices in analyzing, organizing, planning and controlling retail operations, both large and small.

**MAR 4203 CHANNELS MANAGEMENT**

(3)
PR: MAR 3722. A detailed study of marketing channels as a functional area of marketing management responsibility and as a part of marketing strategy. Attention is given to wholesaling and retailing and their structural, dynamic interrelationships including distribution logistics.

**MAR 4213 LOGISTICS AND PHYSICAL DISTRIBUTION MANAGEMENT**

(3)
PR: MAR 3722, MAN 3810, GEB 3121. A study of logistics in the marketing of goods and services. Includes a description and analysis of the logistics environment as well as components of the physical distribution system with emphasis on information flows and the application of quantitative techniques used in establishing and controlling customer service levels.

**MAR 4243 INTERNATIONAL MARKETING**

(3)
PR: MAR 3722. A study of the procedures and problems associated with establishing marketing operations in foreign countries. Includes the institutions, principles and methods involved in the solution of these business problems as well as the effects of national differences on business practices and buyer behavior.

**MAR 4343 PROMOTION MANAGEMENT**

(3)
PR: MAR 3722 or CI. A study of the role of promotion in the marketing program of the firm, including the promotional tools available to the marketing manager and the various types of decisions made in the promotional area. The decision making process in development of a promotional program is emphasized.

**MAR 4403 SALES MANAGEMENT**

(3)
PR: MAR 3722 or CI. A study of sales management and strategy as a subset of marketing management. Emphasis is placed on developing the problem-solving and decision-making skills required of the sales manager in the modern market-oriented company.

**MAR 4453 INDUSTRIAL MARKETING**

(3)
PR: MAR 3722. A study of the marketing of goods and services to the industrial and institutional sectors. Includes characteristics of the markets and channels of distribution sales, management, research and promotional practices, marketing policies and strategies.

**MAR 4503 BUYER BEHAVIOR**

(3)
PR: MAR 3613, MAR 3722. A study of the basic concepts and research procedures utilized in investigating pre- and post-purchase buyer behavioral patterns, with emphasis on the impact of various behavioral factors on a buyer's decision-making process. Includes managerial applications in a variety of marketing situations.

**MAR 4713 MARKETING MANAGEMENT PROBLEMS**

(3)
PR: MAR 3722, MAR 3613 and two other 4000 level marketing courses or CI. The integration of marketing knowledge applied to decision roles in managing the total marketing effort of firms, and coordination with other major functional areas on specific problems.

**MAR 4903 INDEPENDENT RESEARCH**

(1-3)
PR: CI. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor. May be repeated up to 6 credit hours.

**MAR 4905 INDEPENDENT STUDY**

(1-3)
PR: CI. Specialized independent study determined by the students' needs and interests. May be repeated up to 6 credit hours. (S/U only)

**MAR 4933 SELECTED TOPICS IN MARKETING**

(1-3)
PR: CI. Topics to be selected by instructor and department chairperson.

## COLLEGE OF EDUCATION

### ADULT AND VOCATIONAL EDUCATION

**Chairperson:** R. Hill; **Professors:** W. P. Danenberg, F. F. Johnson; **Associate Professors:** W. E. Blank, W. G. Brady, C. H. Collier, M. W. Durso, R. Hill, W. B. James, R. E. Palmer, G. E. Patterson, C. Welter; **Assistant Professor:** M. Manthri; **Visiting Associate Professor:** R. Cantor; **Visiting Assistant Professor:** J. T. Bullock, R. E. Johnson, H. G. Linder, J. Long, A. J. Lowe, L. McClellan, D. D. Neville; **Associate Professors:** G. B. Barkholz (also in Library, Media and Information Studies), S. Forseth, H. G. Banks, R. S. Goforth, P. Hanley, J. Clapback, L. King, K. Mann, J. P. Plotz, J. T. Politto, E. F. Sears, C. Spillman, G. M. Towery; **Visiting Assistants:** B. K. Clarke, S. Homan, W. Kasten, J. P. Klesius, J. Perez, C. J. Schwartz, J. Swarzmann; **Instructors:** W. E. Pearcey.

### CHILDHOOD/LANGUAGE ARTS/READING EDUCATION

**Chairperson:** L. C. Greabell; **Professors:** J. A. Chambers, L. C. Greabell.

### CONTENT SPECIALIZATIONS

**Chairperson:** J. T. Bullock; **Professors:** J. T. Bullock, R. E. Johnson, H. G. Karl, J. B. Kase-Pollinis, B. K. Lichtenberg, D. R. Lichtenberg, R. L.
EDUCATIONAL LEADERSHIP


EDUCATIONAL MEASUREMENT AND RESEARCH


LIBRARY, MEDIA, AND INFORMATION STUDIES


MUSIC EDUCATION

Chairperson: V. Jennings (acting); Professors: V. A. Bridges, V. Jennings; Assistant Professor: C. Doane, S. Hodge.

PHYSICAL EDUCATION


PSYCHOLOGICAL AND SOCIAL FOUNDATIONS


SPECIAL EDUCATION


ADULT EDUCATION

ADE 4360 METHODS OF TEACHING: ADULT EDUCATION

Methods, techniques, and materials for instruction. (3)

ADE 4361 SPECIAL TEACHING METHODS: ADULT EDUCATION

EDUCATION

Methods, techniques, and materials for skill development. (4)

ADE 4945 SUPERVISED FIELD EXPERIENCE:

ADULT EDUCATION

(1-6)

PR: CI. Planned supervised functions in the area of specialization and coordinated with selected schools, government, offices, social agencies, businesses and industries on site.

ADE 5160 PROGRAM MANAGEMENT: ADULT EDUCATION

This course examines the establishment of organizational climate and structure, assessing needs and interest, designing, operating and evaluating cooperative adult programs. (4)

ADE 5161 CURRICULUM CONSTRUCTION: ADULT EDUCATION

Curriculum scope, the process of planning and organizing instructional programs with emphasis on task analysis and process evaluation. (4)

ADE 5385 THE ADULT LEARNER

The physiological and psychological changes in the adult life span and the implications which these changes have for adult learning capabilities. Significant research in adult learning is identified and analyzed. (4)

PET 5387 (formerly PET 5379) EXERCISE STRESS TESTING AND ELECTROCARDIOGRAPHY

PR: CI. Planned supervised functions in the area of specialization and media exploration in art education and to further enable the student to understand stages of young people, three to eighteen. (3)

ARE 3044 EXPERIMENTAL BASIS OF ARTISTIC MIND

PR: Admission to College of Education. Designed to help the individual student discover and develop meanings and values in art and education with emphasis on communicative skills, both verbal and visual. Focus will be on the individual and potential alternatives in the teaching of art. (3)

ARE 3354 ART TEACHING STRATEGIES I

PR: Admission to College of Education and ARE 3044. A combination of theory, philosophy and practice in both public and private learning centers to provide the student with a variety of teaching concepts and media exploration in art education and to further enable the student to understand stages of young people, three to eighteen. (3)

ARE 4112 EDUCATION THROUGH CRAFTS

An in-depth study of arts and craft media for children. Emphasis will be placed on innovative use of new materials. (3)

ARE 4260 SEMINAR IN ART EDUCATION CLASSROOM MANAGEMENT

PR: Admission to College of Education and ARE 3044. The concepts and areas of skill essential to successful practice in art education management. To include understanding of how art programs are funded, art facility planning, art curriculum development, art exhibition techniques, public relations promotion and supply and equipment requirements. (1)

ARE 4440 ART TEACHING STRATEGIES II

Media and the learning process will be explored through photographic arts, cinematography and video systems. Teaching strategies and media criticism for application at elementary and secondary levels. (3)

ARE 4443 CRAFTS WORKSHOP IN ART EDUCATION

PR: Admission to College of Education and ARE 3044. The study of processes and media involved in the expression of individual ideas through crafts. Emphasis placed on crafts in a contemporary society with skills in metals, weaving, fibers, and ceramics and their application in a public school curriculum. (3)

ARE 4642 URBAN ENVIRONMENT ARTS WORKSHOP

PR: Admission to College of Education and ARE 3044. Identification, exploration, a. experiment with unique urban spaces and populations as potential new environments for teaching and learning in arts. (3)

ARE 4905 INDEPENDENT STUDY: ART EDUCATION

PR: CI. Specialized independent study determined by the student's needs and interests. May be repeated when subjects vary. (S/U only.) (1-4)

ARE 4909 DIRECTED STUDY: ART EDUCATION

PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class. (1-3)
The document contains a list of course descriptions for the Department of Business Education and Office Education. Here is a structured representation of the content:

**BUSINESS AND OFFICE EDUCATION**

- **BTE 2060 BASIC TECHWRITING** (3) PR: BTE 2060 or equivalent competencies. Advanced keyboarding. Study of the methods and psychological principles appropriate to the teaching of basic typing courses.

- **BTE 3031 OFFICE INFORMATION PROCESSING** (3) PR: BTE 2060 or equivalent competencies. Application of concepts and technology of information processing to office operations. Review of the grammar, punctuation, and transcription skills needed for editing in word processing operations. Available to majors and non-majors.

- **BTE 3032 OFFICE INFORMATION PROCESSING II** (3) PR: BTE 3031. Programming word and information processing equipment; special applications of word and information processing functions to solve field-based problems. Available to majors; others only with CI.

- **BTE 3061 TECHWRITING APPLICATIONS** (3) PR: BTE 2060 or equivalent competencies. Advanced keyboarding applications; study of the methods and psychological principles appropriate to the teaching of advanced typing courses.

- **BTE 3363 BUSINESS AND OFFICE MACHINES** (3) Instruction and practice on selected business and office machines to acquaint students with capabilities and limitations of the machines.

- **BTE 3365 ADMINISTRATIVE OFFICE MANAGEMENT** (3) Functions of the business office to include systems and procedures, communications, records, management, office employee behavior, controlling the work of the office, and principles of office organization. Also includes the methodology necessary for teaching these areas in either separate courses or integrated block programs.

- **BTE 4063 PRINCIPLES OF SHORTHAND** (4) PR: Completion of upper level competency test or CI. Relation of shorthand to the teaching of basic principles of response and temporal contiguity as related to basic shorthand theory. Includes concurrent lab.

- **BTE 4064 INTERMEDIATE SHORTHAND** (3) PR: BTE 4063 or equivalent competency to include teaching strategies for theory sequencing. Advanced course in theoretical applications with emphasis on teaching techniques for development of speed, kinesiologic chained response, and specialized pre-transcription techniques. Includes concurrent lab.

**COMPUTERS IN EDUCATION**

- **BTE 4151 SHORTHAND DICTATION & TRANSCRIPTION** (3) PR: BTE 4064 or equivalent competency levels. Comparative symbol shorthand systems and teaching methodology in developing advanced dictation and transcription skills within a selected symbol system. Emphasis on teaching shorthand as a language tool, development of decision making skills, and factors which affect production rate. Includes concurrent lab.

- **BTE 4360 METHODS OF TEACHING: BUSINESS EDUCATION** (4) PR: Introduction to Computers I or equivalent. Satisfactory competencies in Office Administration Courses, or CI. Methods, techniques, and materials for instruction.

- **BTE 4364 SPECIAL TEACHING METHODS: BUSINESS EDUCATION** (4) PR: BTE 4064 or equivalent competency levels. Comparative symbol shorthand systems and teaching methodology in developing advanced dictation and transcription skills within a selected symbol system. Emphasis on teaching shorthand as a language tool, development of decision making skills, and factors which affect production rate. Includes concurrent lab.

- **BTE 4905 INDEPENDENT STUDY: BUSINESS EDUCATION** (1-4) PR: CI. Specialized independent study determined by the student's needs and interests. May be repeated when subjects vary. (S/U only.)

- **BTE 4909 DIRECTED STUDY: BUSINESS EDUCATION** (1-3) PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class.

- **BTE 4936 SENIOR SEMINAR IN BUSINESS AND OFFICE EDUCATION** (2) PR: Senior standing. Synthesis of teacher candidate's courses in complete college program. Required concurrently with internship.

- **BTE 4940 INTERNSHIP: BUSINESS EDUCATION** (1-12) One full semester of internship in a public or private school. Intern takes Senior Seminar in Business Education concurrently. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9 to 12 semester hours. (S/U only.)

- **BTE 4945 SUPERVISED FIELD EXPERIENCE: BUSINESS EDUCATION** (1-6) PR: CI. Planned supervised functions in the area of specialization and co-ordinated with selected schools, government, offices, social agencies, businesses and industries on site. (S/U only.)

- **BTE 4948 FIELD-BASED SEMINAR IN BUSINESS EDUCATION** (3) CR: BTE 4360 and BTE 4364. Supervised field experience and orientation to broad field business education. Specifically designed to be preparatory for the internship which occurs the following term. (S/U only.)

- **BTE 5171 CURRICULUM CONSTRUCTION: BUSINESS EDUCATION** (3) Curriculum scope, the process of planning and organizing instructional programs with emphasis in task analysis and process evaluation.

- **BTE 5245 PROGRAM MANAGEMENT: BUSINESS EDUCATION** (3) Organization, coordination, and budgeting of adult, cooperative, and special programs.

**EME 4402 INTRODUCTION TO COMPUTERS IN EDUCATION** (2) Overview of the Microcomputer in Education. Basic computer terminology; major components of educational microcomputer systems; the design and application of instruction-learning programs; hands-on experience with various microcomputers.

**EME 5403 MICROCOMPUTERS IN EDUCATION** (3) PR: CAP 4100 or CI. Application of computers in education, selection and evaluation of software and hardware, types of CAL, networking, computing resources. Advanced BASIC programming, including random and sequential files, sort routines, advanced graphics.
COUNSELOR EDUCATION

EGC 4001 INTRODUCTION TO GUIDANCE PROCESSES (3)
PR: Upper level standing. An introduction to the role and function of guidance, school psychology, social work and other pupil personnel services. Opportunities for increasing self awareness.

EGC 4053 INTRODUCTION TO STUDENT PERSONNEL WORK IN HIGHER EDUCATION (2)
PR: CI. Study of student personnel services in institutions of higher education. Identification of the needs of students and of the ways to respond to meet these needs. Survey of service units on a campus in terms of structure, organization, funding, etc.

EGC 4905 INDEPENDENT STUDY: GUIDANCE AND COUNSELING EDUCATION (1-4)
PR: CI. Specialized independent study determined by the student’s needs and interests. May be repeated when subjects vary. (S/U only.)

EGC 5101 HUMAN RELATIONS SKILLS IN GUIDANCE (4)
Introduction to the theory of human relations dynamics and development of skills required for effective interpersonal relations. Lecture sessions and laboratory training.

SLS 1101 THE UNIVERSITY EXPERIENCE (2)
An extended introduction and orientation to USF. Topics include purposes of higher education, structure and function of USF, overview of the processes of career planning and selecting a major, study skills, and managing out-of-class time. (S/U only.)

SLS 2401 CAREER DEVELOPMENT PROCESS (2)
Students will study vocational choice theories and participate in career decision processes. Development of self-awareness and knowledge of career opportunities and requirements necessary for decision making. Available to lower level majors or non-majors.

CURRICULUM AND INSTRUCTION

EDG 1300 INTRODUCTION TO TEACHING (3)
PR: Freshman only or CI. The people with whom teachers work, the types of tasks they perform and the challenges they can anticipate. Observation of teaching at several grade levels.

EDG 4620 CURRICULUM AND INSTRUCTION (3)
An introduction to the field of curriculum and instruction. Emphasis is placed on identifying educational goals and objectives and applying instructional principles.

EDG 4901 DIRECTED READINGS (1-3) May be repeated for a total of 3 semester hours.

EDG 4905 INDEPENDENT STUDY (1-4)
PR: CI. Specialized independent study determined by the student’s needs and interests. May be repeated when subjects vary. (S/U only.)

EDG 4909 DIRECTED STUDY (1-3)
PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class.

EDG 4910 INDIVIDUAL RESEARCH (1-3)
PR: Senior standing and consent of program coordinator.

EDG 4936 SENIOR SEMINAR IN EDUCATION (2)
PR: Senior standing. Synthesis of teacher candidate’s courses in complete college program. Required concurrently with internship.

EDG 4940 INTERNSHIP (1-12) One full semester of internship in a public or private school. Intern takes Senior Seminar in Education concurrently. In special programs where the internship is distributed over two or more semesters students will be registered for credit. Required concurrently with internship.

EDG 4941 DIRECTED STUDY: DISTRIBUTIVE EDUCATION (1-6)
PR: CI. Planned supervised functions in the area of specialization and coordinated with selected schools, government offices, social agencies, businesses and industries on site.

DEC 4174 PROGRAM MANAGEMENT OF DISTRIBUTIVE AND MARKETING EDUCATION (3)
The study of the purposes, processes, organization, planning, directing, coordinating and evaluation of Distributive and Marketing Education Cooperative Programs.

DEC 4362 SPECIAL TEACHING METHODS: DISTRIBUTIVE EDUCATION (4)
Methods, techniques, and materials for skill development.

DEC 4382 METHODS OF TEACHING: DISTRIBUTIVE EDUCATION (3)
Methods, techniques, and materials for instruction.

DEC 4905 INDEPENDENT STUDY: DISTRIBUTIVE AND MARKETING EDUCATION (1-4)
PR: CI. Specialized independent study determined by the student’s needs and interests. May be repeated when subjects vary. (S/U only.)

DEC 4909 DIRECTED STUDY: DISTRIBUTIVE AND MARKETING EDUCATION (1-3)
PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class.

DEC 4936 SENIOR SEMINAR IN DISTRIBUTIVE AND MARKETING EDUCATION (2)
PR: Senior standing. Synthesis of teacher candidate’s courses in complete college program. Required concurrently with internship.

DEC 4940 INTERNSHIP: DISTRIBUTIVE AND MARKETING EDUCATION (1-12) One full semester of internship in a public or private school. Intern takes Senior Seminar in Distributive and Marketing Education concurrently. In special programs where the intern experience is distributed over two or more semesters students will be registered for credit which accumulates from 9 to 12 semester hours. (S/U only.)

DEC 4941 DIRECTED STUDY: DISTRIBUTIVE EDUCATION (1-6)
PR: CI. Planned supervised functions in the area of specialization and coordinated with selected schools, government offices, social agencies, businesses and industries on site.

DEC 4945 PROGRAM MANAGEMENT: DISTRIBUTIVE EDUCATION (3)
Organization, coordination, and budgeting of adult, cooperative, and special programs.

DEC 5185 CURRICULUM CONSTRUCTION: DISTRIBUTIVE EDUCATION (3)
Curriculum scope, the process of planning and organizing instructional programs with emphasis on task analysis and process evaluation.

ELEMENTARY EDUCATION

ARE 4313 ART FOR THE CHILD AND YOU (3)
PR: Admission to College of Education. Art and the intellectual, creative, emotional, and aesthetic growth of children.

EDE 4301 TEACHING METHODS IN THE ELEMENTARY SCHOOL (4)
PR: EDE 4941 and EDG 4200. Techniques and strategies appropriate to instruction of children in educational settings.

EDE 4905 INDEPENDENT STUDY: ELEMENTARY EDUCATION (1-4)
PR: CI. Specialized independent study determined by the student’s needs and interests. May be repeated when subjects vary. (S/U only.)

EDE 4909 DIRECTED STUDY: ELEMENTARY EDUCATION (1-3)
PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class.

EDE 4936 SENIOR SEMINAR IN ELEMENTARY EDUCATION (2)
PR: Senior standing. Synthesis of teacher candidate’s courses in complete college program. Required concurrently with internship.

EDE 4940 INTERNSHIP: ELEMENTARY EDUCATION (10)
PR: EDE 4941 and EDE 4942. Teacher candidate is required to demonstrate professional competencies during one semester of full-day
internship in a public or private elementary school. Concurrent enrollment in EDE 4936. (S/U only.)

**EDE 4941 CHILDHOOD EDUCATION INTERNSHIP LEVEL I (4)**
PR: Application for admission to the Elementary or Early Childhood programs. Students spend six hours per week in a supervised classroom setting and attend a weekly seminar. Concurrent enrollment in EDG 4200-Elementary section. (S/U only.)

**EDE 4942 CHILDHOOD EDUCATION INTERNSHIP LEVEL II (6)**
PR: EDE 4941. Students spend 12 hours per week in a supervised internship experience in classroom settings and attend a weekly seminar.

**EEC 2003 INTRODUCTION TO EARLY CHILDHOOD EDUCATION (3)**
An overview of early childhood education with emphasis on its historical development, current theories, and practices.

**EEC 4203 PROGRAMS IN EARLY CHILDHOOD EDUCATION (4)**
PR: Admission to College of Education. A study of school programs for children age 3-8. Analysis and evaluation of these programs in the light of the most effective current classroom practices. Observation and participation included.

**EEC 4303 CREATIVE EXPERIENCES IN EARLY CHILDHOOD EDUCATION (3)**
PR: Admission to College of Education. The development of the child's creative expression through art, music, dance, play, and drama; included are the materials, content, and teaching techniques.

**ECC 4706 LANGUAGE AND LEARNING IN EARLY CHILDHOOD (3)**
PR: Admission to College of Education. The study of the acquisition of language in young children and the development of basic communication skills in the Language Arts Curriculum, infancy through age 8 years.

**ECC 4905 INDEPENDENT STUDY: ELEMENTARY-EARLY CHILDHOOD EDUCATION (1-4)**
PR: CI. Specialized independent study determined by the student's needs and interests. May be repeated when subjects vary. (S/U only.)

**ECC 4909 DIRECTED STUDY: ELEMENTARY-EARLY CHILDHOOD EDUCATION (1-3)**
PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class.

**ECC 4936 SENIOR SEMINAR IN ELEMENTARY-EARLY CHILDHOOD EDUCATION (2)**

**ECC 4940 INTERNSHIP: ELEMENTARY-EARLY CHILDHOOD (10)**
Teacher candidate is required to demonstrate professional competencies during one semester of full-day internship in a public or private elementary school. Concurrent enrollment in ECC 4936. (S/U only.)

**ECC 5406 SOCIAL GROWTH IN CHILDHOOD (3)**
PR: Admission to College of Education. A study of the principal factors which influence the social development of young children with particular emphasis upon those cultural influences which affect both child development and the educational programs for the young child.

**ECC 5785 INTELLECTUAL GROWTH IN CHILDHOOD (3)**
PR: Senior standing. Intellect development of the normal child with particular emphasis on the studies of Jean Piaget and how they relate to curriculum for children, ages 0-8. Child study through observation required.

**ECC 5926 WORKSHOP IN EARLY CHILDHOOD EDUCATION (3)**
PR: Admission to College of Education. Individual problems and innovations related to methods and materials of instruction in the early childhood grades.

**HLP 4460 HEALTH AND PHYSICAL EDUCATION FOR THE CHILD (3)**
PR: Admission to the College of Education. A study of the importance of movement competency and its contribution to the development of a positive self-concept in children; content and methodology for developing appropriate movement experiences for children; content and methodology for teaching elementary health science.

**LAE 4314 LANGUAGE ARTS IN CHILDHOOD EDUCATION (3)**
PR: Admission to the College of Education. The exploration of the content, organization and instruction of oral communication and written expression in Childhood Education.

**LAE 4414 LITERATURE IN CHILDHOOD EDUCATION (3)**
PR: Admission to College of Education. The selection, evaluation and use of fiction, nonfiction and poetry for instructional, informational, and recreational purposes in Childhood Education.

**MAE 4310 TEACHING ELEMENTARY SCHOOL MATHEMATICS I (3)**
PR: Admission to College of Education, Number Systems, Basic Algebraic Concepts, Informal Geometry, or equivalent, and a passing score on the College of Education Test of Mathematical Competencies. Methods for teaching number ideas, computation skills, and mathematical reasoning.

**MAE 4311 TEACHING ELEMENTARY SCHOOL MATHEMATICS II (2)**
PR: MAE 4310. Methods for teaching informal geometry, measurement, and probability and statistics.

**MAE 4545 DIAGNOSIS AND TREATMENT OF LEARNING DISABILITIES IN SCHOOL MATHEMATICS (3)**
PR: MAE 4310 or equivalent. Presentation and analysis of teaching methods and models appropriate for use with students experiencing learning disabilities in mathematics; supervised conduct of a case study.

**MUE 4210 MUSIC FOR THE CHILD (3)**
PR: Admission to College of Education. Music fundamentals, the development of music skills and knowledge of music materials and teaching strategies for presenting music to children in the elementary school.

**RED 4310 READING FOR THE CHILD (3)**
PR: Admission to College of Education. Prereading, word recognition, comprehension and basic study skills and various reading approaches and reading interests.

**SCE 4310 TEACHING ELEMENTARY SCHOOL SCIENCE (3)**
PR: Admission to College of Education and completion of General Distribution Requirements in the Natural Science area. Techniques and materials for teaching science in the elementary school.

**SSE 4313 TEACHING ELEMENTARY SCHOOL SOCIAL STUDIES (3)**
PR: Admission to College of Education or CI. Methods of planning and teaching subjects related to the study of people and their relationships with other people and their environment.

**ENGLISH EDUCATION**

**LAE 4335 METHODS OF TEACHING ENGLISH — LITERATURE AND READING (3)**
PR or CR: EDG 4200. A survey of materials available to adolescent readers plus an overview of organizational strategies for teaching literature and reading.

**LAE 4530 READING SKILLS IN ENGLISH EDUCATION (2)**
PR: RED 4360 or CC. Methods of dealing with reading problems and application of general reading concepts in English Education. (S/U only.)

**LAE 4642 CURRENT TEACHING OF ENGLISH LANGUAGE AND MEDIA (3)**
CR: EDG 4200 and LAE 4335. Methods of teaching language and media. Includes current findings on teaching usage, dialect, grammar, and semantics, as well as approaches to media in English.

**LAE 4905 INDEPENDENT STUDY: ENGLISH EDUCATION (1-4)**
PR: CI. Specialized independent study determined by the student's needs and interests. May be repeated when subjects vary. (S/U only.)

**LAE 4909 DIRECTED STUDY: ENGLISH EDUCATION (1-3)**
PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class.

**LAE 4936 SENIOR SEMINAR IN ENGLISH EDUCATION (2)**

**LAE 4940 INTERNSHIP: ENGLISH EDUCATION (1-12)**
One full semester of internship in a public or private school. Intern takes Senior Seminar in Education concurrently. In special programs where the intern experience is distributed over two or more semesters, student will be registered for credit which accumulates from 9 to 12 semester hours. (S/U only.)
EDF 3220 BEHAVIOR MANAGEMENT IN ELEMENTARY SCHOOLS
PR: EDF 3122. The application of theory and basic principles of learning design to enhance classroom instruction and child management procedures. Basic concepts of applied behavior analysis including the accurate measurement of child and teacher behavior in the ongoing instructional setting.

EDF 3234 BEHAVIOR MODIFICATION TECHNIQUES
PR: EDF 3214. Special techniques in behavior modification for children with learning difficulties. Minimum of two hours field experience per week required in addition to regular class hours.

EDF 3542 PHILOSOPHY OF EDUCATION
PR: Upper level standing. A study of philosophy of education with an emphasis on aspects that are relevant to an understanding of the issues and problems of teaching.

EDF 3554 VALUES CLARIFICATION FOR TEACHERS
PR: Upper level standing recommended. Techniques for teachers in identifying and analyzing values and value orientations of individuals and groups of students in the school.

EDF 3604 SOCIAL FOUNDATIONS OF EDUCATION
PR: Admission to College of Education. Social, economic and political context within which schools function and the values which provide direction for our schools; the culture as a motivating influence in instruction. Should not be taken concurrently with EDF 3214.

EDF 3710 COMPARATIVE EDUCATION
PR: Upper level standing. A comparison of contemporary educational systems of selected countries with that of the United States.

EDF 4090 INDEPENDENT STUDY: EDUCATIONAL FOUNDATIONS
PR: CI. Specialized independent study determined by the student’s needs and interests. May be repeated when subjects vary. (S/U only.)

EDF 4909 DIRECTED STUDY: FOREIGN LANGUAGE EDUCATION
PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class.

EDF 4936 SENIOR SEMINAR IN FOREIGN LANGUAGE EDUCATION
PR: Senior standing. Synthesis of teacher candidate’s courses in complete college program. Required concurrently with internship.

EDF 4940 INTERNSHIP: FOREIGN LANGUAGE EDUCATION
One full semester of internship in a public or private school. Intern takes Senior Seminar in Education concurrently. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9 to 12 semester hours. (S/U only.)

HEALTH EDUCATION

HES 2000 CONTEMPORARY HEALTH SCIENCE
A comprehensive approach to health concerns and problems in contemporary society, including methods of assessing individual health needs.

HES 3122 HUMAN STRUCTURE AND FUNCTION
PR: Fundamentals of Biology/lab, admission to the program or CI. Major concepts of the structure and function of the human body systems and methods by which these concepts may be taught. Lab included.

HES 3140 CHILD HEALTH
PR: Admission to the Health Education Program or CI. Development or curricula, health services, health assessment procedures, and health education programs for children.

HES 3141 PUBESCENT AND ADOLESCENT HEALTH
PR: Admission to the program and HES 3140 or CI. Health education content and programs relating to pubescents and adolescents.

HES 3244 HEALTH COUNSELING
PR: Admission to the Health Education Program or CI. A study and application of theory and methods of health counseling.

FOUNDATIONS EDUCATION

EDF 3122 LEARNING AND THE DEVELOPING CHILD
PR: General Psychology and admission to College of Education. Preschool child growth and development, learning theory, and behavioral analysis applied to instruction and to the organization and management of classroom.

EDF 3210 EDUCATIONAL PSYCHOLOGY
PR: Upper level standing. The application of behavioral principles to human behavior in educational institutions, home and community settings. May not be counted for EDF 3214. (For non-education majors only.)

EDF 3214 HUMAN DEVELOPMENT AND LEARNING
PR: General Psychology and admission to College of Education. Application of respondent and operant learning principles to classroom learning, teaching models for different instructional goals, analysis of teacher behavior, micro-teaching.

EDF 4095 INDEPENDENT STUDY: FOREIGN LANGUAGE EDUCATION
PR: CI. Specialized independent study determined by the student’s needs and interests. May be repeated when subjects vary. (S/U only.)
HES 3300 PROCESSES AND PROGRAMS IN HEALTH EDUCATION
(3)
PR: Admission to the Health Education Program or CI. Survey of programs in health education in the school and community. Processes in programs and curriculum development will also be emphasized.

HES 3510 CONSUMER HEALTH
(3)
PR: Admission to the Health Education Program or CI. An investigation of advertising and consumer practices in relation to health care.
(S/U only.)

HES 4143 ADULT HEALTH
(4)
PR: Admission to the Health Education Program and HES 3141 or CI. Health problems, services, and education of the adult population.

HES 4144 MEDICAL LANGUAGE FOR THE HEALTH PROFESSIONS
(2)
Basic preparatory course for all the health professions. Provides both a basic medical vocabulary and wordbuilding skills for ease of terminology acquisition.

HES 4276 HEALTH CARE DELIVERY SYSTEMS
(3)
PR: Admission to the Health Education Program or CI. An investigative study and evaluation of health care delivery systems in the U.S. and other countries.

HES 4700 ORGANIZATION AND ADMINISTRATION OF COMMUNITY HEALTH
(3)
Organization and administration of community health programs. A written program plan is required.

HES 4722 CURRENT PROBLEMS IN HEALTH
(3)
PR: Admission to the Health Education Program or CI. An investigation of current health problems, programs, and research methods.

HES 4750 RESEARCH IN HEALTH EDUCATION
(3)
PR: Admission to the Health Education Program and concurrent enrollment in HES 4943. Students are expected to complete a research project for a health agency.

HES 4905 INDEPENDENT STUDY: HEALTH EDUCATION
(1-4)
PR: CI. Specialized independent study determined by the student's needs and interests. Repeatable.

HES 4909 DIRECTED STUDY: HEALTH EDUCATION
(1-3)
PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class.

HES 4940L INTERNSHIP: HEALTH EDUCATION
(1-12)
PR: Admission to the Health Education Program. Supervised internship in the schools with scheduled seminars. (S/U only).

HES 4942 FIELD EXPERIENCE IN HEALTH AGENCIES
(3)
PR: Admission to the Health Education Program or CI. A field based introduction to the role and responsibilities of a health educator in a community health agency. (S/U only.)

HES 4943 FIELD EXPERIENCE IN HEALTH AGENCIES
(8)
PR: Admission to the Health Education Program, HES 4143, HES 4700 (for Non-Cert), or CI. To be taken concurrently with HES 4750. Supervised field experience in selected health agency programs. (S/U only.)

HES 5328C HEALTH PROBLEMS OF SCHOOL AGE POPULATION
(3)
A study of health problems and needs of school age students, including a health status screening laboratory.

HSC 4304 METHODS AND MATERIALS FOR HEALTH EDUCATION
(3)
PR: Admission to the program will be CI. Study and application of methods and resource materials for teaching health education in the secondary schools and community agencies.

HUMANITIES EDUCATION

HUM 4870 CURRENT TRENDS IN THE TEACHING OF HUMANITIES
(3)
Curricular patterns, materials, and instructional practices in the teaching of humanities.

HUM 4909 DIRECTED STUDY: HUMANITIES EDUCATION
(1-3)
PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class.

HUM 4936 SENIOR SEMINAR IN HUMANITIES EDUCATION
(2)
PR: Senior standing. Synthesis of teacher candidate's courses in comprehensive college program and internships.

HUM 4940 INTERNSHIP: HUMANITIES EDUCATION
(1-12)
One full semester of internship in a public or private school. Intern takes Senior Seminar in Education concurrently. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9 to 12 semester hours. (S/U only.)

INDUSTRIAL AND TECHNICAL EDUCATION

EIA 4360 SPECIAL TEACHING METHODS:
INDUSTRIAL ARTS
(3)
PR: EVT 4364 or CI. Equips Industrial Arts instructors with professional competencies for classroom and laboratory settings. Includes the selection of appropriate methods, planning, and delivery of instruction, along with supervision of students in laboratory areas.

EIV 4314 METHODS OF TEACHING: DIVERSIFIED COOPERATIVE TRAINING
(3)
Methods, techniques, and materials for instruction. This course specializes in Diversified Cooperative Training.

EIV 5315 PROGRAM MANAGEMENT: DIVERSIFIED COOPERATIVE TRAINING
(3)
Organization, coordination, and budgeting of adult, cooperative, and special programs.

EVT 3063 THE TEACHER IN THE WORLD OF WORK
(3)
A study of educational efforts in preparing people for work, the relationship of a job to a man's life style, and the concept of education as a life-long process.

EVT 4061C TEACHING IN INDUSTRIAL-TECHNICAL EDUCATION
(1-3)
An overview of the ITE instructor's roles and responsibilities concerning students, the school and the community and a look at the organization of vocational education, liability, and professionalism.

EVT 4065 HISTORY AND PRINCIPLES OF VOCATIONAL EDUCATION
(4)
An overview of current policies and principles in vocational education including their historical, sociological, and philosophical bases. Open to majors and non-majors.

EVT 4084C PROFESSIONAL DEVELOPMENT IN INDUSTRIAL-TECHNICAL EDUCATION
(1-3)
Designed for the ITE teachers in forming plans of professional development. Competencies include the development of a personal education philosophy; attributes in creating harmonious school-community relationships; and desirable staff and teacher associations.

EVT 4176 CURRICULUM CONSTRUCTION:
INDUSTRIAL-TECHNICAL EDUCATION
(4)
PR: EVT 4364 or CI. Design, development, implementation and evaluation of effective curricular materials in industrial, technical and health related occupations; includes individualized and self-paced materials. Open to majors and non-majors.

EVT 4254 PROGRAM MANAGEMENT: INDUSTRIAL-TECHNICAL EDUCATION
(4)
PR: CI. Planning, organizing, motivating and controlling of the learning environment in Industrial-Technical Education Classroom and Laboratories. Program standards for OSHA, program review, record keeping, and budgeting will be examined.

EVT 4263 ORGANIZATION AND ADMINISTRATION OF STUDENT VOCATIONAL ORGANIZATIONS
(1-4)
Includes the organization and administration of the local student vocational organization in industrial, health occupations, business and distributive education.

EVT 4311 TEACHING METHODS: HEALTH OCCUPATIONS
(4)
PR: EVT 4364 or CI. Equips health occupations instructors with professional competencies for classroom, laboratory and clinical settings. Includes selection of appropriate methods, planning and delivery of effective demonstrations, use of media and supervision of students in clinical areas.
EVT 4364 BASIC TEACHING METHODS IN VOCATIONAL EDUCATION
(4)
Examines the role of the vocational instructor in the teaching-learning process; looks at factors that promote and inhibit learning particularly for adults. Reviews a wide variety of instructional approaches, techniques, and applications and selection of techniques for situations.

EVT 4365 SPECIAL TEACHING METHODS: INDUSTRIAL-TECHNICAL EDUCATION
(4)
PR: EVT 4364 or Cl. Instructional techniques in industrial-technical education. Vocational Industrial Clubs of America activities may be included.

EVT 4367 ASSESSING STUDENT SKILL IN INDUSTRIAL-TECHNICAL EDUCATION
(4)
Techniques for assessing student's mastery of skills in industrial-technical education. Focuses on specific competencies including developing and administering performance tests, monitoring student process, and others. Open to majors and non-majors.

EVT 4540 READING SKILLS IN ADULT AND VOCATIONAL EDUCATION
(2)
PR: RED 4360, or CR in RED 4360. Students will study reading and communication skills as they relate to their specific content areas in Adult and Vocational Technical Education. This course, along with RED 4360, satisfies State certification requirement pertaining to secondary reading.

EVT 4815 FACILITY DESIGN AND MANAGEMENT
(3)
Design and develop instructional facility floor plans consistent with modern and efficient methods of instruction as well as evaluate existing classrooms, laboratories, and shops. Selection and location of equipment. Review and prepare operational plans for the management of equipment, furniture, tools, and supplies as they relate to effective student learning.

EVT 4905 INDEPENDENT STUDY: INDUSTRIAL-TECHNICAL EDUCATION
(1-4)
PR: Cl. Specialized independent study determined by the student's needs and interests. May be repeated when subjects vary. (S/U only.)

EVT 4909 DIRECTED STUDY: INDUSTRIAL-TECHNICAL EDUCATION
(1-3)
PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class.

EVT 4936 SENIOR SEMINAR IN INDUSTRIAL-TECHNICAL EDUCATION
(2)

EVT 4940 INTERNSHIP: INDUSTRIAL-TECHNICAL EDUCATION
(1-12)
One full semester of internship in a public or private school. Intern takes Senior Seminar in Education concurrently. In special programs where the internship experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9-12 semester hours. (S/U only.)

EVT 4946 SUPERVISED FIELD EXPERIENCE: INDUSTRIAL-TECHNICAL EDUCATION
(1-6)
PR: Cl. Planned supervised functions in the area of specialization and co-ordinated with selected schools, government, offices, social agencies, businesses and industries on site. (S/U only.)

EVT 5190 SCHOOL COMMUNITY DEVELOPMENT
(4)
This course is an approach to identifying, assessing, and analyzing, individual, institutional and community needs for the purpose of cooperative program planning, community involvement and public support.

EVT 5280 OCCUPATIONAL SAFETY AND HEALTH (OSHA)
(3)
Planning and organizing safety and health course content to be included in occupational education programs in Florida. Content to be identified in and selected from Federal Registers, Department of Labor, Occupational Safety and Health Standards.

EVT 5366 PREPARATION AND DEVELOPMENT FOR TEACHING
(4)
The development of selected instructional materials, use of new educational media, performance evaluation instruments, and counseling techniques.

LIBRARY, MEDIA, AND INFORMATION STUDIES

LIS 2001 USE OF THE LIBRARY
(2)
An introduction to the resources of the University of South Florida Library. Emphasis will be placed on library materials germane to the course work of the undergraduate. (S/U only.)

LIS 4302 PRODUCING AUDIOVISUAL MATERIALS
(2)
PR: Upper level standing or Cl. Basic skills in designing and preparing audiovisual materials for wide variety of instructional and communicative purposes.

LIS 4503 INSTRUCTIONAL TECHNOLOGY
(3)
PR: Upper level standing or Cl. Provides basic skills in selecting, utilizing, presenting, and evaluating: 1) various types of audio-visual media and 2) computers and computer software for use with students in a variety of classroom and learning situations.

LIS 5315 INSTRUCTIONAL GRAPHICS
(3)
PR: Cl. Theoretical aspects, planning and production of instructional graphic material. The Theory of graphic communications. Interpreting needs for instructional materials appropriate for given behavioral objectives.

LIS 5321 PREPARING SINGLE CONCEPT FILMS
(3)
PR: Cl. Techniques and procedures in the preparation of educational films. Ascertaining concepts, script writing, graphics, lighting, filming, editing.

LIS 5333 TV IN SCHOOL AND LIBRARIES
(3)
Small format video tape recordings and the utilization of open and closed broadcasts in schools and libraries.

LIS 5404 FOUNDATIONS OF LIBRARIANSHIP
(3)
Overview of the introduction to the study of library service; history; organization; specialized literature; outstanding leaders; current trends, issues, and problems. Place of the library in society with its contributions to that society.

LIS 5434 COMMUNITY COLLEGE LIBRARIANSHIP
(3)
Introduction to the community college concept, examination of the basic elements, functions, purposes, directions, programs, etc., inherent in both the community college and the library resources center which serves it.

LIS 5537 SELECTED TOPICS IN LIBRARY STUDIES
(1-4)
PR: Cl. Covers a variety of topics in such areas as collection development, reference services, technical services, and administration.

MATHEMATICS EDUCATION

CAP 4100 COMPUTING DEVICES IN THE EDUCATIONAL PROCESS
(3)
PR: Cl. This course will explore the use of minicomputers, programmable calculators, and microcomputers. Characteristics of computing devices, flow charting, programming, classroom management techniques, teaching materials, and applications will be discussed.

MAE 4320 TEACHING JUNIOR HIGH SCHOOL MATHEMATICS
(3)
PR: 18 semester hours of mathematics or CC. Techniques and materials of instruction in junior high school mathematics.

MAE 4330 TEACHING SENIOR HIGH SCHOOL MATHEMATICS
(3)
PR: EDG 4200 or CR in EDG 4200 and admission to teacher education program in mathematics. Techniques and materials of instruction in mathematics.

MAE 4885 READING THE LANGUAGE OF MATHEMATICS
(2)
PR or CR: Reading in Secondary Content Areas, Teaching Senior High School Mathematics. Methods of teaching students to read the language of mathematics.

MAE 4905 INDEPENDENT STUDY: MATHEMATICS EDUCATION
(1-4)
PR: Senior Standing. To extend competency in teaching field. Offered only as a scheduled class.

MAE 4909 DIRECTED STUDY: MATHEMATICS EDUCATION
(1-3)
PR: Senior Standing. To extend competency in teaching field. Offered only as a scheduled class.
MEASUREMENT AND RESEARCH

EDF 4430 MEASUREMENT FOR TEACHERS (3)
PR: Upper level standing. Concepts and skills related to planning, developing, administering, and interpreting classroom tests; interpreting standardized tests; and evaluating and reporting student progress.

MUSIC EDUCATION

MUE 2090 THEORETICAL BASES OF MUSIC EDUCATION (1)
The course is designed to investigate music education practices in schools. It provides the student with experiences and information early in his academic career which will enable him to determine his commitment to professional music education.

MUE 3421 CHORAL MATERIALS PRACTICUM (1)
PR: CI. A study of choral materials in a laboratory setting, appropriate to elementary and secondary school music programs. Course content will change each semester. May be repeated for a total of 2 credit hours.

MUE 3423 ORCHESTRA MATERIALS PRACTICUM (1)
PR: CI. A study of orchestra materials in a laboratory setting, appropriate for elementary and secondary school music programs. Course content will change each semester. May be repeated for a total of 2 credit hours.

MUE 4352 FOUNDATIONS OF INSTRUMENTAL MUSIC (3)
PR: CI. Junior standing. Introduction to the foundations of instrumental music instruction in the elementary and middle school.

MUE 4330 CLASSROOM MUSIC IN THE SECONDARY SCHOOL (3)
PR: CI. Development and implementation of methods and techniques for teaching music to the student not participating in secondary school music performing groups.

MUE 4331 CHORAL METHODS IN THE SECONDARY SCHOOL (3)

MUE 4332 INSTRUMENTAL MUSIC IN THE SECONDARY SCHOOL (3)

MUE 4480 BAND PAGEANTRY (1)
This course is designed as an elective offering for instrumental music majors who expect to direct band activities in a secondary school. It will provide the student with skills in creating half-time shows, an integral part of the band teacher's responsibilities.

MUE 4905 INDEPENDENT STUDY: MUSIC EDUCATION (1-4)
PR: CI. Specialized independent study determined by the student's needs and interests. May be repeated when subjects vary. (S/U only.)
PET 2202 GYMNASTICS II
Continuation of PET 1201. Extended opportunities to master the various gymnastics events. Competition and individual routines. (S /U only.)

PET 2376 BACKPACKING
Introductory experiences designed to develop the physical skills and the mental attitude necessary to travel safely, efficiently, and considerately in the wilderness setting. (S /U only.)

PET 2441 KARATE
Introductory experiences in the sport of Karate. Fundamental skills, strategy, information, and participation. (S /U only.)

PET 2930 SELECTED TOPICS (1-2)
Topics offered are selected to reflect student need and faculty interest. May be repeated up to 6 credit hours. (S /U only.)

PET 1121 SWIMMING I
Development and refinement of the essential skills and information necessary for enjoying swimming. Emphasis on personal safety. (S /U only.)

PET 2113 LIFE SAVING
PR: PEN 2122 or equivalent. Knowledge and skills necessary for saving one's self or others in the event of aquatic emergency. (S /U only.)

PET 2172 SWIMMING II
PR: PEN 1121 or equivalent. Continuation of PET 1121. Special emphasis on development of endurance and efficient stroking. (S /U only.)

PET 2136 SKIN & SCUBA DIVING
PR: PEN 2122 or equivalent. Development of the essential skills and knowledge necessary for enjoying the sport of Skin & Scuba Diving. Correct utilization and care of equipment; emphasis on personal safety. (S /U only.)

PET 2551 CANOEING
PR: PEN 1121 or equivalent. Development and refinement of the skills necessary for enjoying canoeing. Skills, safety techniques and trips. (S /U only.)

PEQ 3115 WATER SAFETY INSTRUCTION
PR: PEN 2113. Examination of the various swimming strokes leading to identification of appropriate methods and techniques for instructing others. ARC certification offered. (S /U only.)

PET 2336C HUMAN KINESIOLOGY I
An introduction to the structure and function of the skeletal and neuromuscular systems in reference to their support of vigorous human movement. (S /U only.)

PET 2340C HUMAN KINESIOLOGY II
PR: PET 2330. An introduction to the mechanical principles which govern human movement. (S /U only.)

PET 2382 INTRODUCTION TO EXERCISE THEORY
An introduction to the basic principles underlying exercise techniques for improving cardiovascular endurance, strength, flexibility, and weight control. Examination and critique of popular fitness programs, fads and fallacies.

PET 3931 SELECTED TOPICS (1-3)
Topics offered are selected to reflect student need and faculty interest. May be repeated up to 9 credit hours.

PET 4622 ATHLETIC TRAINING
Principles and techniques of conditioning athletes for competition; prevention and care of injuries in physical education and athletic activities.

PHYSICAL EDUCATION FOR TEACHERS

PET 2000 INTRODUCTION TO PHYSICAL EDUCATION IN TODAY'S SOCIETY (3)
PR: CI. An overview of the field of physical education, including the role of the physical education teacher and non-teaching career options. The role of play, sport, and physical education in today's society is emphasized and the competencies necessary to careers in physical education. (S /U only.)

HES 2400 FIRST AID (2)
Meets the American Red Cross certification requirements in standard and advanced first aid.

LEI 4007 COMMUNITY RECREATION (3)
Introduction to recreational outlets in the community and the administrative problems confronting recreational playground leaders and directors of community recreational programs. Offered on Independent Study basis only.

PEQ 3101 AQUATICS (2)
PR: Red Cross beginning swimmer's skills, or equivalent. Includes analysis of swimming skills, teaching methodology, conducting class activities, and organizing and conducting aquatic programs.

PET 301IC INDIVIDUAL ASSESSMENT (2)
A personal evaluation of various factors related to the effective teaching of physical education. An individual profile that can be used for counseling purposes will be the final product of this course.

PET 3312 HUMAN KINETICS I (6)
The structure and function of the skeletal, muscular, and nervous systems of the human body related to developmental movement and to impairments. The mechanical laws of physics as they contribute to those movements within the body which result in efficient running, jumping, throwing, catching, striking and kicking.

PET 3313 HUMAN KINETICS II (6)
PR: PET 3312. An application of anatomy and physiology related to physical activity. Emphasis is placed on the acute and chronic adaptation of the body activity as reflected at cellular level. The special needs of physical education in working with different ages, sexes, and atypical persons are considered.

PET 3461 MOVEMENT EDUCATION THEORY AND APPLICATION I (3)
A two course sequence emphasizing movement experiences appropriate for elementary school children. The philosophy, objectives, and analytical framework of movement education are studied relative to basic movement concepts.

PET 3434C MOVEMENT EDUCATION THEORY AND APPLICATION II (3)
PR: PET 3461. A two course sequence emphasizing movement experiences appropriate for elementary school children. The philosophy, objectives, and analytical framework of movement education are studied relative to basic movement concepts.

PET 3943C SEMINAR AND INTERNSHIP I (5)
Elephantine school physical education teaching experiences are provided for students with added focus on the primary elementary grades. Seminars emphasize planning and teaching methodology. Health and recreation as they relate to elementary school children are studied.

PET 3944C SEMINAR AND INTERNSHIP II (5)
Physical education teaching experience is provided at various grade levels. Seminars are concerned with organization, evaluation, and extra-class activities. Individual teaching is analyzed and programmed.

PET 4092 APPLIED HUMAN KINETICS II (4)
The biomechanical analysis of movement, principles of psychomotor learning, teaching methodologies and teaching competencies in individual and team sports and in teaching specialized health-related topics such as weight control and individual assessment techniques.

PET 4304 PRINCIPLES AND ISSUES IN COACHING (4)
The application of principles from philosophy, psychology, sociology, and physiology to competitive athletics and coaching.

PET 4381C APPLIED HUMAN KINETICS I (4)
The focus is on the biomechanical analysis of movement in dance and selected sports, physical fitness, and exercise principles as related to teaching. Emphasis is directed to developing competency in teaching all aspects of individual and team sports and in teaching specialized health-related topics such as weight control and individual fitness assessment techniques.

PET 4624C ATHLETIC TRAINING PRACTICUM (2)
PR: PET 4622. A ten-week training room practicum on skills in preventive strapping and review first aid and rehabilitation techniques, followed by a five-week practicum with local high schools or professional teams.

PET 4905 INDEPENDENT STUDY: PROFESSIONAL PHYSICAL EDUCATION (1-4)
PR: CI. Specialized independent study determined by the student's needs and interests. May be repeated when subjects vary. (S /U only.)

PET 4909 DIRECTED STUDY: PROFESSIONAL PHYSICAL EDUCATION (1-3)
PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class.

PET 4943C SEMINAR AND INTERNSHIP III (5)
Supervised teaching experiences in physical education at the secondary school level. On-campus seminars emphasize the influence of various teaching styles on the learning process; the process of individualizing learning experiences in the psychomotor, cognitive, and affective domain.

**PET 4944C SEMINAR AND INTERNSHIP IV**
Supervised internship in physical education in the public schools or allied community-based programs. On-campus seminars explore relevant issues in the physical education profession.

**READING EDUCATION**

**RED 4310 READING FOR THE CHILD**
PR: Admission to college of Education. Prereading, word recognition, comprehension and basic study skills and various reading approaches and reading interests.

**RED 4377 READING IN THE SECONDARY SCHOOL**
Basic course in Reading for Secondary school personnel.

**RED 4360 READING IN SECONDARY CONTENT AREAS**
Provides basic instruction on phonics, word recognition, readability, interests, corrective procedures, reading behaviors, comprehension, etc. Offered only in conjunction with special content reading courses.

**RED 4515 CORRECTIVE READING FOR THE CHILD**
PR: RED 4310 or equivalent. Procedures for meeting individual differences through diagnosis of needs, differentiated instruction, selected use of materials, and classroom organization.

**SCIENCE EDUCATION**

**SCE 4305 COMMUNICATION SKILLS IN THE SCIENCE CLASSROOM**
PR: RED 4360 or CR in RED 4360. Reading and communication skills important in understanding scientific literature and communicating findings to others.

**SCE 4320 TEACHING METHODS FOR JUNIOR HIGH SCHOOL SCIENCE**
PR: Completion of 25 semester hours of Science or CC. Survey techniques and materials unique to science, grades 7-9. Not designed for high school certification purposes.

**SCE 4330 TEACHING METHODS IN THE SECONDARY SCHOOL-SCIENCES**
PR: Completion of 26 hours in approved science areas, EDG 4200 (or CR), and CC. Techniques and materials of instruction in secondary school sciences.

**SCE 4630 NEW TRENDS IN TEACHING THE PHYSICAL SCIENCES**
Physical Science Study Committee Physics, Chemical Education Materials Study, and other new approaches to the teaching of the physical sciences. Recommended for teachers of Physics, Chemistry, and Earth Sciences.

**SCE 4631 NEW TRENDS IN TEACHING BIOLOGY**
Recent developments in curriculum materials and in strategies for teaching biological sciences, grades 7-12. Recommended for pre-service teachers of secondary school biology.

**SCE 4905 INDEPENDENT STUDY: SCIENCE EDUCATION**
PR: CI. Specialized independent study determined by the student's needs and interests. May be repeated when subjects vary. (S/U only.)

**SCE 4909 DIRECTED STUDY: SCIENCE EDUCATION**
PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class.

**SCE 4936 SENIOR SEMINAR IN SCIENCE EDUCATION**

**SCE 4940 INTERNSHIP: SCIENCE EDUCATION**
One full semester of internship in a public or private school. Intern takes Senior Seminar in Education concurrently. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9 to 12 semester hours. (S/U only.)

**SCE 5937 SELECTED TOPICS IN SCIENCE EDUCATION**
May be repeated when topics are not duplicated.

**SOCIAL SCIENCE EDUCATION**

**SSE 4333 INTRODUCTION TO TEACHING SECONDARY SOCIAL SCIENCE EDUCATION**
This introductory course is concerned with the identification of the major content areas selected from the various social sciences. Topics related to selecting, organizing, and sequencing teaching materials and methods related to the unique problems of teaching teenage youth are studied.

**SSE 4334 SECONDARY SOCIAL SCIENCE EDUCATION TEACHING METHODS**
PR: SSE 4333. This course is designed to identify and study selected techniques and strategies used in social science education instruction. Emphasis is placed upon the learner's ability to demonstrate skill in selecting methods, techniques, materials, and evaluative forms. Field work is a requirement.

**SSE 4640 COMMUNICATION SKILLS IN THE SOCIAL STUDIES**
PR: CC. Specialized independent study determined by the student's needs and interests. May be repeated when subjects vary. (S/U only.)

**SSE 4905 INDEPENDENT STUDY: SOCIAL SCIENCE EDUCATION**
PR: CI. Specialized independent study determined by the student's needs and interests. May be repeated when subjects vary. (S/U only.)

**SSE 4909 DIRECTED STUDY: SOCIAL SCIENCE EDUCATION**
PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class.

**SSE 4936 SENIOR SEMINAR IN SOCIAL SCIENCE EDUCATION**
One full semester of internship in a public or private school. Intern takes Senior Seminar in Education concurrently. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulated from 9 to 12 semester hours. (S/U only.)

**SPECIAL EDUCATION**

**EED 4011 INTRODUCTION TO BEHAVIOR DISORDERS**
PR: EEX 3010, or equivalent or CI. Survey of emotional and social disorders in children and youth. History of the field, definitions, classifications, theoretical approaches, intervention techniques, classroom management, service delivery models, trends and issues.

**EED 4321 EDUCATIONAL PROCEDURES FOR STUDENTS WITH BEHAVIOR DISORDERS**
PR: EEX 3010, EED 4011, or equivalent or CI. Methods, instructional techniques; development and implementation of individualized education programs; classroom organization and curriculum for students with behavior disorders.

**EED 4905 INDEPENDENT STUDY: BEHAVIOR DISORDERS**
PR: CI. Specialized independent study determined by the student's needs and interests. May be repeated up to 3 credit hours when subjects vary. (S/U only.)

**EED 4909 DIRECTED STUDY: BEHAVIOR DISORDERS**
PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class.

**EED 4941 UNDERGRADUATE SUPERVISED PRACTICUM IN BEHAVIOR DISORDERS**
PR: CI. Field experience in classroom management, behavior modification, precision teaching, and educational programming in behavior disorders. (S/U only.) Repeatable up to 6 credit hours.
EEX 3010 INTRODUCTION TO SPECIAL EDUCATION (3)

EEX 4286 INTEGRATING EXCEPTIONAL STUDENTS IN THE REGULAR CLASSROOM (2-3)
Designed for non-special education majors. Includes basic identification techniques and strategies to promote academic and social integration and interaction of “mainstreamed” exceptional students. Concurrent field experience projects are included. No credit for department majors.

EEX 4221 EDUCATIONAL ASSESSMENT OF EXCEPTIONAL STUDENTS (3)
PR: EDF 3214, EEX 3010, EMR 3011, EED 4011, or ELD 4011, and an Exceptional Child Education major. Introduction to and familiarization with formal and informal techniques used to measure and evaluate all exceptional students. The interpretation of information so derived for utilization in educational programming and individualization of instruction. Lec.-Lab.

EEX 4243 EDUCATION OF THE EXCEPTIONAL ADOLESCENT AND ADULT (3)
PR: EEX 3010 or equivalent or Cl. Procedures for implementing educational programs for exceptional adolescents and adults. Topics include service delivery, curriculum, academic remediation, advocacy, utilization of ancillary services, alternative programs, and community resources. Practicum/field experience linkage.

EEX 4905 INDEPENDENT STUDY: EXCEPTIONAL STUDENT EDUCATION (1-3)
PR: Cl. Specialized independent study determined by the student’s needs and interests. May be repeated up to 3 credit hours when subjects vary. (S/U only.)

EEX 4909 DIRECTED STUDY: EXCEPTIONAL STUDENT EDUCATION (1-3)
PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class. Repeatable up to 3 credit hours.

EEX 4936 SENIOR SEMINAR IN EXCEPTIONAL STUDENT EDUCATION (2)
PR: Senior standing. Synthesis of teacher candidate’s courses in complete college program. Required concurrently with internship.

EEX 4940 INTERNSHIP: EXCEPTIONAL STUDENT EDUCATION (1-10)
One full semester of internship in an accredited public or private school. Intern takes Senior Seminar in Education concurrently. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 6 to 12 semester hours. (S/U only.)

EGI 3011 INTRODUCTION TO GIFTED AND TALENTED (3)
PR: Junior class standing. Diagnosis, characteristics, and educational provision of the gifted and talented.

EGI 4941 UNDERGRADUATE SUPERVISED PRACTICUM IN GIFTED STUDENT EDUCATION (1-6)
Organized, supervised experiences with gifted children. Specific experiences may be either a combination of observation and assistance with gifted children or individualized projects. (S/U only.)

EGI 5051 NATURE AND NEEDS OF THE GIFTED (3)
Characteristics and educational needs of gifted children and youth. Emphasis is on five types of giftedness as defined by National Department of Education (1) intellectual giftedness, (2) specific academic aptitude, (3) visual and performing arts, (4) leadership and (5) kinesthetic.

EGI 5325 CREATIVE PROBLEM SOLVING FOR THE CHILD (3)
Exploration of the concept of creativity, its factors, measurement, and application to education. Opportunities are given to work with children in a laboratory setting and to prepare materials to be used with small groups of children.

ELD 4011 INTRODUCTION TO SPECIFIC LEARNING DISABILITIES (3)
PR: EEX 3010 or Cl. Characteristics, needs and abilities of children with specific learning disabilities. Emphasis is on theories, issues, trends, and philosophy of problems for such children.

ELD 4110 EDUCATIONAL PROCEDURES FOR SPECIFIC LEARNING DISABILITIES (3)
PR: ELD 4011, EEX 4221, or Cl. Curriculum organization, materials selection/design based on diagnostic findings for students with specific learning disabilities.

ELD 4905 INDEPENDENT STUDY: SPECIFIC LEARNING DISABILITIES (1-3)
PR: Cl. Specialized independent study determined by student’s needs and interests. May be repeated up to 3 credit hours when subjects vary. (S/U only.)

ELD 4909 DIRECTED STUDY: SPECIFIC LEARNING DISABILITIES (1-3)
PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class.

ELD 4941 UNDERGRADUATE SUPERVISED PRACTICUM IN SPECIFIC LEARNING DISABILITIES (1-6)
PR: EEX 3010, ELD 4011, ELD 4110 and major in Specific Learning Disabilities. Supervised practicum experiences in classes for children with specific learning disabilities. Repeatable up to a total of 8 hours. (S/U only.)

EMR 3011 INTRODUCTION TO MENTAL RETARDATION (3)
PR: EEX 3010. Introduction to the classification, diagnosis, characteristics, and treatment of the mentally retarded.

EMR 4230 EDUCATING THE SEVERELY/PROFOUNDLY HANDICAPPED (3)
PR: EMR 3011 or Cl. Must be taken concurrently with EMR 3800. Emphasis on educational methods and materials for teaching the severely/profoundly handicapped. Practicum/field experience linkage.

EMR 4310 EDUCATIONAL PROCEDURES FOR ELEMENTARY AGE EDUCABLE MENTALLY RETARDED CHILDREN (3)
PR: EMR 3011, RED 4310, EEX 4941 either previously or concurrently. Special class organization, curriculum development, procedures and materials for elementary aged educable mentally retarded children.

EMR 4313 EDUCATIONAL PROCEDURES FOR EDUCABLE MENTALLY RETARDED SECONDARY YOUTH AND ADULTS (3)
PR: EMR 3011, or Cl. Special program organization, curriculum development, procedures and materials for secondary age educable mentally retarded youth and adults.

EMR 4905 INDEPENDENT STUDY: MENTAL RETARDATION (1-3)
PR: Cl. Specialized independent study determined by the student’s needs and interests. May be repeated when subjects vary. (S/U only.)

EMR 4909 DIRECTED STUDY: MENTAL RETARDATION (1-3)
PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class.

EMR 4941 UNDERGRADUATE SUPERVISED PRACTICUM IN MENTAL RETARDATION (1-6)
PR: EMR 3011 and major in Mental Retardation. Supervised Practicum experiences in the educational, social and vocational programs of mentally retarded individuals. A one hour per week seminar is required concurrently. Repeatable up to a total of 6 hours credit. (S/U only.)

EPH 5051 ADVANCED THEORIES IN MOTOR AND PHYSICAL DISABILITIES (3)
PR: EEX 3010 or Cl. Biological and functional aspects of motor and physical health disabilities, including dysfunctions in central nervous system covering motor, sensory, language and psychological disorders.

EPH 5311 EDUCATIONAL STRATEGIES FOR PHYSICALLY AND MULTI-HANDICAPPED STUDENTS (3)
PR: EPH 5051. Educational management of students with cerebral palsy, motor disabilities and multi-handicapped conditions including rehabilitation and other community services.

EVI 5311 THE VISUALLY HANDICAPPED IN THE CLASSROOM (3)
PR: EEX 3010 or Cl. The visually handicapped in the classroom, structure, hygiene and educational implications.

SPEECH COMMUNICATION-ENGLISH EDUCATION

SED 4335 METHODS OF TEACHING SPEECH COMMUNICATION (3)
PR: 14 semester hours in Speech/Communication or Cl. Investigation of curricular program in Speech Communication, including courses, curriculum guides and preparation of units and lessons;
determination of objects and teaching strategies; and problems of teachers. Completion of course and C grade required for recommendation for internship.

SED 4371 DIRECTING SPEECH ACTIVITIES IN THE SECONDARY SCHOOL
PR: 10 hours of Speech Communication courses or CI. Coaching and directing cocurricular activities in discussion, debate, oratory, theatre, oral interpretation, and extemporaneous speaking. Planning and supervision of tournaments, contests, and festivals. Observations required.

SED 4374 READING IN SPEECH COMMUNICATION INSTRUCTION
PR: CI. Strategies and materials for teaching oral and silent reading in speech and theatre classes at the secondary school level.

SED 4905 INDEPENDENT STUDY: SPEECH COMMUNICATION-ENGLISH EDUCATION
PR: CI. Specialized independent study determined by the student's needs and interests. May be repeated when subjects vary. (S/U only.)

BASIC AND INTERDISCIPLINARY ENGINEERING

EGN 1002 ENGINEERING ORIENTATION
The role of engineering in society, characteristics of different fields of engineering, required preparation for engineering careers, techniques and approaches used by engineers in their profession. (S/U only.)

EGN 1115L INTRODUCTION TO DESIGN GRAPHICS
An introduction to the basic principles of engineering design. The course will include the graphic projective systems used in engineering drawing and design. Methods of graphic communication and graphic analysis of engineering design problems will be investigated.

EGN 2210 FORTRAN FOR ENGINEERS
PR: MAC 3281 FORTRAN programming for engineers. Solving engineering type problems using the computer; introduction to programming algorithms used by the practicing engineer.

EGN 3313 STATICS

EGN 3314 DYNAMICS
PR: EGN 3313. Dynamics of discrete particles; kinematics and kinetics for rigid bodies. Lec.

EGN 3311 MECHANICS OF MATERIALS
PR: EGN 3321. Stress, strain, Hooke's Law; torsion, beam, column analysis; combined stresses; inelastic effects, limit design. Lec.

EGN 3311L MECHANICS OF MATERIALS LABORATORY

EGN 3343 THERMODYNAMICS

EGN 3354C BASIC FLUID MECHANICS
PR: EGN 3313. Fundamental and experimental concepts in ideal and viscous fluid theory; momentum and energy consideration, introduction to hydraulics, pipe flow. Lecture.

EGN 3361L MATERIALS ENGINEERING I
PR: CHM 2046. EGN 3313. Structure and property relationships in engineering materials, i.e., metal, ceramic and polymer systems. Environmental effects are also treated.

EGN 3373 INTRODUCTION TO ELECTRICAL SYSTEMS I

EGN 3374 INTRODUCTION TO ELECTRICAL SYSTEMS II
PR: EGN 3373. Continuation of EGN 3373.

EGN 3375 INTRODUCTION TO ELECTRICAL SYSTEMS III
PR: EGN 3373. Continuation of EGN 3373 or EGN 3374.

EGN 3433L MODELING AND ANALYSIS

EGN 3443 ENGINEERING STATISTICS I
PR: MAC 3283. An introduction to the basic concepts of statistical analysis with special emphasis on engineering applications.

EGN 3613 ENGINEERING ECONOMY I
A study in analyzing the economic limitations imposed on engineering activities using basic models which consider the time value of money.

EGN 3435 COMPRESSIBLE FLOW
PR: EGN 3354C Fundamental and experimental concepts in compressible flow theory of fluids.

EGN 3466 MATERIALS ENGINEERING II
PR: 3365L. Phase equilibria and its relation to the microstructures and properties of multiphase materials. Heat treatment and processing of steel, aluminum, and titanium alloys.

EGN 4420 NUMERICAL METHODS OF ANALYSIS

EGN 4421 ENGINEERING ANALYSIS I

EGN 4450 INTRODUCTION TO LINEAR SYSTEMS
PR: EGN 4421. Study and application of matrix algebra, differential equations and calculus of finite differences.

EGN 4905 INDEPENDENT STUDY
PR: CI. Specialized independent study determined by the students' needs and interests. May be repeated up to 15 credit hours. (S/U only.)
CHEMICAL AND MECHANICAL ENGINEERING

ECH 4413 SEPARATION PROCESS DESIGN (3)

ECH 4415C REACTING SYSTEMS (3)
PR: ECH 4413. Equilibria and rate phenomena in reacting systems. Description of homogeneous chemical reactors for process design and control.

ECH 4615 PLANT DESIGN AND ECONOMICS (4)
PR: ECH 4413, ECH 4415 or CI. Methods of cost estimation and profitability measures. Analysis and synthesis of optimal chemical processing routes. Design of chemical process equipment. Introduction to computer-aided design. Case studies.

EMC 3103 THERMODYNAMICS (4)
PR: EGN 3343. Mass and energy balances on steady and unsteady state systems with and without chemical reactions. Combustion processes, power and refrigeration cycles.

EMC 3117 TRANSPORT PROCESSES I (3)
PR: EGN 3343. Principles of momentum and heat transfer. Boundary layer theory and pipe flow. Emphasis given to pumping and metering of compressible and incompressible fluids. Selection of proper fluid handling equipment to satisfy realistic process demands.

EMC 3301 SYSTEM INSTRUMENTS (5)

EMC 3303 CHEMICAL AND MECHANICAL ENGINEERING LABORATORY I (2)

EMC 4112 ELECTRONIC EQUIPMENT COOLING (2)
PR: EGN 3374 or CI. Analysis of extended surfaces. Printed circuit board thermal analysis. Free and forced convection as applied to electrical and electronic components. Thermo-electric cooling and performance of cold plate heat exchangers.

EMC 4418 TRANSPORT PROCESSES II (3)

EMC 4311L CONTROLS LABORATORY I (1)
effects, mathematical analysis of lumped parameter mechanical systems.

EML 4503 MACHINE ANALYSIS AND DESIGN II
PR: EML 3500, EML 3264. Continuation of EML 3500. Antifriction bearings, journal bearings, power transmission, shafting.

EML 4513 POWER PLAN ANALYSIS AND DESIGN

EML 4536 CAD-YACHT DESIGN
PR: Cl. Fundamentals of small craft design using computer-aided design techniques. Emphasis is on sailing yachts with some material included on design of commercial sail vessels and pleasure and commercial power craft. Class is taught in a microcomputer-equipped laboratory.

EML 4551C PROJECT DESIGN I
PR: Senior standing in mechanical engineering or CC. Comprehensive design or feasibility project requiring application of previously acquired engineering knowledge.

EML 4552C PROJECT DESIGN II
PR: EML 4509 or CC. Comprehensive design or feasibility study project. In some cases may be a continuation of EML 4509.

EML 4601 REFRIGERATION AND AIR CONDITIONING

EML 5241 LUBRICATION
PR: EML 4503 or Cl. The theoretical basis for lubrication and bearing theory. The study of lubrication requirement of different machine types. Introduction to gas bearings.

EML 5504 MECHANICAL DESIGN OF PROCESS EQUIPMENT
PR: EML 3500. Design of thin wall pressure vessels, ASME codes, flanges, joints, gasketed surfaces, supports and foundations.

EML 5509 PROJECT DESIGN III
PR: CC. Correlation of previously acquired mechanical design experiences with a creative design project. Lab.

EML 5528 ANALYSIS METHODS FOR MECHANICAL DESIGN
PR: EML 4503, or Cl. Treatment of stress, strain and strengths aspects of machine design. Application of failure theories, residual stresses and energy principles to machine elements.

EML 5537 CAD-NAVAL ARCHITECTURE I
PR: EML 3500, EML 4503 or Cl. Fundamentals of naval architecture for small ships and boats, pleasure and commercial, sail and power using computer-aided design techniques. Includes computer-aided stress analysis. A design project is required.

EML 5538 CAD-NAVAL ARCHITECTURE II
PR: EML 3500, EML 4503 or Cl. Fundamentals of naval architecture for small ships and boats, pleasure and commercial, sail and power using computer-aided design techniques. Includes computer-aided stress analysis. A design project is required.

ENU 4142 INTRODUCTION TO NUCLEAR ENGINEERING
PR: EMC 3103, EMC 3117 or Cl. Fundamentals of nuclear reactors, core physics, and fuel enrichment, reactor power cycles, transient reactor performance.

CIVIL ENGINEERING AND MECHANICS

CES 3400 DESIGN AND PRACTICES
PR: EGN 3354C, EGN 3365L, EGN 3331 Methodology of the design process in civil engineering. Includes problem definition, criteria, data collection and analysis, information sources, planning, specifications, and presentation of technical information.

CES 3402 CIVIL ENGINEERING LABORATORY
PR: EGN 3331, EGN 3354C, EGN 3365L. A laboratory experience in departmental facilities including the subject areas of structures, materials, fluids, transportation, soils, engineering mechanics and environmental engineering.

CES 4001 STRUCTURES I
PR: EGN 3331. Analysis of simple structural systems, both determinate and indeterminate. Introduction to the use of energy methods in indeterminate structures.

CES 4002 MATRIX STRUCTURAL ANALYSIS

CES 4003 COMPUTER AIDED STRUCTURAL DESIGN
PR: CES 4002. Computer aided structural analysis and design using existing finite element program, static dynamic loading.

CES 4104 ADVANCED MECHANICS OF MATERIALS
PR: EGN 3331, MAP 4302. Analytical analysis of the mechanical behavior of deformable solids; special topics in beam theory, elastic and inelastic methods, plastic limit analysis flexure and torsion of beams; introduction to finite element computer methods.

CES 4208 STRUCTURAL DYNAMICS
PR: CES 4001, EGM 4430. Behavior of structural components and systems when subjected to periodic dynamic loads.

CES 4403 HYDRAULIC DESIGN
PR: EGM 4816, ENV 4622. Design of hydraulic systems, including drainage, water supply, and flood control.

CES 4404 FLUID SYSTEM DESIGN
PR: EGM 4816. Design of fluid systems. Consideration of pressure, drag, and gravity forces.

CES 4501 CONCEPTS OF STRUCTURAL DESIGN
PR: CES 4001. Applications of solid mechanics, material science and structural analysis to the design of buildings, bridges, and mobile structures. Review of current codes and specifications.

CES 4502 STRUCTURAL DESIGN — STEEL
PR: CES 4501. Design of structures made of steel.

CES 4700 CEMENT AND CONCRETE DESIGN
PR: EGN 3365L. Classifications and production of cements. Design and testing of concrete mixes to produce desired properties.

CES 4704 STRUCTURAL DESIGN — CONCRETE

CES 4911 SENIOR PROJECT
PR: Cl. Problem-solving experience and training for seniors in research and/or design projects. Written final reports are required.

CES 4933 SPECIAL TOPICS IN CIVIL ENGINEERING AND MECHANICS
PR: Cl. New technical topics of interest to civil engineering students.

CES 5508 ADVANCED STRUCTURAL DESIGN I
PR: CES 4002, CES 4501. A study of design of complicated structural systems such as curved bridges, orthotropic bridges, tall buildings, towers, suspension structures.

CES 5509 ADVANCED STRUCTURAL DESIGN II
PR: CES 5508. A study of design of complicated structural systems such as curved bridges, orthotropic bridges, tall buildings, towers, suspension structures.

EAS 4121 HYDRO AND AEROMECHANICS
PR: EGN 3354, MAP 4302. Advanced fluid dynamics, ideal and viscous flows, applications to flow around immersed bodies.

EAS 5100 AERODYNAMICS
PR: EGN 4355, and Cl. Fundamentals of aerodynamic flow and flight including potential theory, circulatory theory, viscosity considerations, wing theory and design.

ECI 4311 SOIL MECHANICS I
PR: EGN 3354C. Fundamental and experimental concepts in soil mechanics with emphasis on soil properties, soil moisture, soil structure, and shearing strength.

ECI 4312 SOIL MECHANICS II
PR: ECI 4311. A study of the application of the principles of soil mechanics to problems in soils engineering.

ECI 4640 GEOTECHNICAL DESIGN
PR: ECI 4311. Design of geotechnical systems including bases, foundations, embankments, and dams.

ECI 4911 RESEARCH IN CIVIL ENGINEERING AND MECHANICS
PR: CC.

EES 5203 WATER QUALITY FOR ENGINEERS
PR: Cl. An introduction to the form, structure, and chemical activities of the important processes which are essential to treatment of domestic, and industrial wastewater.
EGM 4430 SHOCK AND VIBRATIONS (3)
PR: EGN 3321, MAP 4302. Response of mechanical systems to shock excitation; vibration of discrete and continuous bodies.

EGM 4610 COMPUTATIONS IN CIVIL ENGINEERING (3)
PR: MAP 4302. Development of techniques of applied mathematics to civil engineering problems, partial differential equations, vector analysis, complex variables.

EGM 4816 HYDRAULICS (3)
PR: EGN 3354C. Fundamental and applied aspects of pipe flow, free surface flow, and unsteady flow for hydraulic systems.

EGM 5352 FINITE ELEMENT METHODS I (3)
PR: CI. Finite element methods in continuum mechanics with applications to solid and fluid mechanics problems.

EGM 5562 MECHANICS OF COMPOSITE MATERIALS (3)
PR: CES 4001. Physical and mathematical mode is for composites. Response to thermal, electrical and mechanical loading. Special composite systems and shapes, filamentary plates, shells, isotensoid domes.

EMA 4303 THERMODYNAMICS OF MATERIALS (3)
PR: EGN 3365. Principles of Chemical Thermodynamics as applied to the interactions of materials with various gaseous, aqueous and solid phase environments.

EMA 4324 CORROSION OF ENGINEERING MATERIALS I (3)
PR: EGN 3365L. Principles of electrochemical corrosion and the representation of corrosion processes by polarization diagrams. Origin and prevention of the localized forms of corrosion and approaches to corrosion control.

EMA 4324L CORROSION LABORATORY (1)
PR: EMA 4324. Experimental potentiostatic and galvanostatic polarization studies related to various corrosion phenomena.

EMA 4325 CORROSION CONTROL SYSTEM DESIGN (2)
PR: EMA 4324. Design of corrosion prevention systems and prediction of the behavior of materials in various corrosive environments.

EMA 4604 PROCESSES IN MATERIALS ENGINEERING (3)
PR: EGN 3365L. Introduction to the basic theories of solidification and ultrapurification of materials, and discussion of the primary methods of shaping and forming materials.

EMA 4703 CONCEPTS OF ENGINEERING MATERIALS (3)

EMA 4704 SELECTION AND APPLICATION OF ENGINEERING MATERIALS (3)
PR: EGN 3365L. Determination of the property requirements for the utilization of materials in specific applications, comparison of properties of metals, plastics, and ceramics, the effect of heat treatment, etc., on materials, properties, limitations.

EMA 4905 INDEPENDENT STUDY (1-5)
PR: CC. Specialized independent study determined by the students' needs and interests. May be repeated up to 15 credit hours. (S/U only.)

EMA 5644 ENGINEERING CERAMICS (3)
PR: EGN 3365L and CI. Detailed examination of the materials of ceramic engineering and the engineering properties of advanced ceramic products.

ENV 3001 ENVIRONMENTAL ENGINEERING (3)
An introduction to various aspects of environmental problems faced by today's society.

ENV 4011 ENVIRONMENTAL UNIT OPERATION AND PROCESS LABORATORY (2)
CR: ENV 4012. Experimental work of the theory and design practices learned in Unit Operations and Unit Processes lecture courses. It provides the student familiarity with the development of bench and pilot plant processes and operations used in environmental engineering.

ENV 4012 ENVIRONMENTAL UNIT PROCESSES (3)
PR: EMC 3103. The theory and design of unit processes normally used in environmental engineering such as coagulation of colloidal materials, water stabilization, water softening and neutralization, ion exchange, adsorption and oxidation processes for removal of iron and magnesium.

ENV 4014 ENVIRONMENTAL UNIT OPERATIONS (3)
PR: EGN 3343, EGN 3254C. CR: ECM 3103. The theory and the design of unit operations normally used in the practice of environmental engineering, such as agitation and mixing of liquids, filtration, leaching, gas absorption, sedimentation and clarification, drying, and evaporation.

ENV 4111 AIR POLLUTION CONTROL (3)
PR: EGN 3354C. Behavior and effects of atmospheric contaminants and the principles of making measurements in the air environment. Basic concepts of meteorology and control technology are discussed. Regulatory aspects and air pollution standards are covered.

ENV 4402 ENVIRONMENTAL ENGINEERING LABORATORY (1)
PR: ENV 4417. Laboratory experience in the measuring of environmental parameters.

ENV 4417 WATER QUALITY AND TREATMENT (3)
PR: EGM 4816. An introduction to municipal water supply and wastewater treatment. Topics include water requirements and waste volumes, water quality, physical and chemical treatment processes, and advanced wastewater treatment processes.

ENV 4432 WATER SYSTEMS DESIGN (2)
PR: EGN 3354C. A design oriented course which utilizes the theory obtained in the Unit Operations course to design both industrial and domestic water treatment and water transport systems. It emphasizes the design procedures normally used in engineering practice.

ENV 4504 WASTE WATER SYSTEMS DESIGN (2)
PR: ENV 4012. Emphasis is placed upon design practice and economics for a comprehensive design of a waste water system and a collection system.

ENV 4622 WATER RESOURCES ENGINEERING (3)
PR: EGM 4816. A study of the engineering principles involved in sustaining and managing the quantity and quality of water available for human activities with particular emphasis on surface water and ground water hydrology.

ENV 5614 ENVIRONMENTAL RISK ANALYSIS (3)
PR: CI. Study of comprehensive application of risk analysis techniques for environmental control and protection purposes.

ENV 5539 URBAN WATER TREATMENT THEORY AND DESIGN (3)
PR: ENV 4417 and CI. A study of the theory of water treatment and the relation of theory to analysis and design practice. Emphasis is given to unit processes. The course is devoted to the design and analysis of specific water treatment facilities.

ENV 5539 URBAN WASTEWATER TREATMENT THEORY AND DESIGN (3)
PR: ENV 4417. A study of the theory of wastewater and the relation of theory to analysis and design practice. Emphasis is given to unit processes. The course is devoted to the design and analysis of specific wastewater treatment works.

SUR 3101C ENGINEERING LAND SURVEYING (3)
PR: MAP 4302. Principles of land surveying for engineering practice. Traverses, levels, boundary surveys, route surveys, coordinate geometry, and mapping.

TTE 4004 TRANSPORTATION ENGINEERING I (3)
PR: MAP 4302. Introduction to transportation engineering, including urban transportation planning, traffic control and highway design.

TTE 4006 TRANSPORTATION ENGINEERING II (3)
PR: TTE 4004. The planning and design of transportation systems.

TTE 4721 TRANSPORTATION SYSTEMS DESIGN (2)
PR: TTE 4404. Design of transportation systems, including airports, highways, mass transit systems, etc.

COMPUTER SCIENCE
AND ENGINEERING

CAP 4621 INTRODUCTION TO ARTIFICIAL INTELLIGENCE (3)
PR: EEL 4851C. Basic concepts, tools and techniques used to produce and study intelligent behavior. Organizing knowledge, exploiting constraints, searching spaces, understanding natural languages, problem solving strategies, etc.

CDA 4101 COMPUTER ORGANIZATION AND ARCHITECTURE (3)
PR: EEL 4705 or CC. CR: CDA 4171. Elements of computer systems, processors, memories and switches. Register transfer presentation of a computer. ALUs and their implementation. The control unit, Memory and I/O. Hardware support of operating system functions. Multiprocessor systems. Economic considerations.

CDA 4171 MINICOMPUTER LABORATORY (1)
CDA 4905 INDEPENDENT STUDY IN COMPUTER SCIENCE
(1-5)
PR: CI. Specialized independent study determined by the needs and interests of the student. May be repeated up to 10 credit hours. (S/U only.)

CDA 5225 MODELING COMPUTER SYSTEM
PERFORMANCE I
(3)

CDA 5226 MODELING COMPUTER SYSTEM
PERFORMANCE II
(3)

CIS 4321 DATA PROCESSING APPLICATIONS
(3)
PR: EEL 4850C, EEL 4851C. An introduction to principles of information processing and applications. Fundamentals of systems for management and control.

CIS 4911 COMPUTER SCIENCE PROJECT
(2)
PR: CC. Projects intended to develop individual interests and abilities in computer science involving either computer hardware or software aspects of a well defined proposal.

COC 2400 COMPUTERS AND SOCIETY 6-A
(3)
This computer literacy course covers the fundamentals of hardware, software, and programming languages, presents a broad overview of data processing concepts, problems and applications for students with little or no computing background. (For non-engineering majors only.)

COC 4935 SPECIAL TOPICS IN COMPUTER SCIENCE I
(1-4)
PR: CC.

COC 4939 COMPUTER SCIENCE AND ENGINEERING SEMINAR
(2)
PR: CC. This is a seminar course for majors in Computer Science and Engineering. May be repeated up to 4 credit hours.

COP 2170 PROGRAMMING IN BASIC (CAI)
(1)
Laboratory course in theory and applications of BASIC interactive programming language using a minicomputer and CAI instruction.

COP 3150 PROGRAMMING IN APL (CAI)
(2)
PR: MAC 1104, MAC 1114. Laboratory course in fundamental theory and applications of APL programming language using a minicomputer and CAI learning techniques.

COP 3510 INTRODUCTION TO COMPUTER SCIENCE
(3)
PR: EGN 2210. CR: COP 3510L. Introduction to the concepts of algorithmic formulation of problems for computer solution and the general abstract operations used in these formulations.

COP 3510L COMPUTER SCIENCE LABORATORY
(1)
CR: COP 3510. Laboratory for implementation of algorithms in a general purpose computer language.

COP 4400 COMPUTER SYSTEMS
(3)
PR: COP 3510, COP 3510L and MAC 3283 or CC. Principles of computer organization, machine and assembly language programming.

COP 4502 COMPARISON OF PROGRAMMING LANGUAGES
(3)
PR: EEL 4850C, EEL 4851C. A comparative study of procedural and nonprocedural computer languages, emphasizing the fundamental differences in information binding, string and data structures manipulation, control and I/O structures in different languages.

COP 4550 PROGRAMMING LANGUAGES
(3)
PR: EEL 4851C and COP 4400. An introduction to programming languages, survey of language types and design of translators and interpreters.

COP 4620 INTRODUCTION TO SYSTEMS PROGRAMMING
(3)
PR: EEL 4851C, COP 4400. Introduction to systems programming. Design of operating systems. Concurrent processing, synchronization, and storage management policies.

COP 5001 TOPICS IN COMPUTERS AND PROGRAMMING
(4)
PR: CC. Survey of topics in machine organization systems programming and data structures.

COT 3001 INTRODUCTION TO DISCRETE STRUCTURES
(3)
PR: MAC 3281 or equivalent. Introduction to set algebra, propositional calculus and finite algebraic structures as they apply to computer systems.

COT 4125 INTRODUCTION TO AUTOMATA THEORY AND FORMAL LANGUAGES
(3)
PR: EEL 4851C, COT 3001, or CC. Introduction to the theory and application of various types of computing devices and the languages they recognize.

COT 4310 SEQUENTIAL CIRCUITS
(3)

COT 4300 ANALYSIS OF ALGORITHMS
(3)
PR: EEL 4851C and COT 3001. Design principles and analysis techniques applicable to various classes of computer algorithms frequently used in practice.

COT 5002 FUNCTIONAL PROGRAMMING LANGUAGES
(3)
PR: COP 4550. The properties of functional and applicative languages compared with conventional languages, features and examples of applicative languages, LISP, KRC AND Forth. Implications to computer architecture.

EEL 4705 LOGIC DESIGN
(3)
PR: EGN 3373, CR: EEL 4705L or CC. Binary number systems; truth functions; Boolean algebra; canonical forms; minimization of combinational logic circuits; synchronous logic circuits in computers.

EEL 4705L LOGIC LABORATORY
(1)
CR: EEL 4705.

EEL 4706 TESTING AND FAULT TOLERANCE IN DIGITAL SYSTEMS
(3)
PR: COP 4400, COT 4130, or CC. Test generation for combinational and sequential digital circuits, fault analysis and diagnosis. Methods for reliability improvement through fault tolerant and testable circuit design. Introduction to software reliability.

EEL 4743L MICROPROCESSOR LABORATORY
(1)
CR: EEL 4757. Laboratory for Microprocessor use and evaluation.

EEL 4757 MICROPROCESSOR PRINCIPLES AND APPLICATIONS
(3)

EEL 4758 MICROPROCESSOR-BASED SYSTEM DESIGN AND APPLICATION
(3)
PR: EEL 4757, EEL 4743L. Study of techniques for design of microprocessor-based systems used in various applications. Includes a project on development of an experimental application system.

EEL 4850C PROGRAMMING METHODOLOGY
(3)
PR: Senior standing in Computer Science or CC; COP 3510. Methods of designing and developing effective and efficient computer programs. Top-down design, structured programming, debugging and program analysis are addressed.

EEL 4851C DATA STRUCTURES
(3)
PR: COP 3510. Fundamentals of data organization for purposes of program efficiency, clarity and simplicity will be addressed.

EEL 4852C DATA BASE SYSTEMS
(3)
PR: COP 4400 and EEL 4851C. Fundamentals of data base management systems. CODASYL, network, hierarchial, and relational data base systems are analyzed, and typical applications are presented.

EEL 4853C DISTRIBUTED PROCESSING AND COMPUTER NETWORKS
(3)
PR: COP 4620, CDA 4101. Design and analysis of distributed processing systems. Covers communication hardware and software, network operating systems, and reliability enhancement techniques.

EEL 5771 INTRODUCTION TO COMPUTER GRAPHICS I
(3)
PR: CC. An introduction to the evolution of computer graphics including point-plotting, line drawing, two-dimensional transformations and graphics software packages.

ELECTRICAL ENGINEERING

EEL 3100 NETWORK ANALYSIS AND DESIGN
(3)

EEL 3302 ELECTRONICS
(3)
PR: EGN 3373. A course in the physical principles of electronic devices with emphasis on semiconductor electronics. Includes the analysis and design of amplifiers and switching circuits.
EEL 3410, 4411 FIELDS AND WAVES I, II (3,2)
PR: MAP 4302, PHY 3041, PHY 3041L. A basic introduction to electromagnetic field theory, including static and dynamic electromagnetic fields.

EEL 4102 LINEAR SYSTEMS ANALYSIS (3)
PR: EEL 3100. Provides further study in the analysis of linear networks and systems. Includes time and frequency domain points of view. Laplace, Fourier and superposition integrals.

EEL 4108 DISTRIBUTED NETWORKS (3)
PR: EEL 3410, EEL 3100. Transmission lines, standing waves, impedance, waveguides.

EEL 4163 COMPUTER AIDED DESIGN AND ANALYSIS (2)
PR: EEL 3302. The emphasis is upon applications and how to use the major CADA programs as effective tools to solve a wide variety of engineering problems. The coverage includes solid state design, system analysis, digital logic, transfer function solutions and concludes with a brief look at thermal and mechanical systems analysis. The programs used include SUPER*SCEPTRE, SPICE 2, NASAAP and others.

EEL 4220, 4222 ELECTROMECHANICS I, II (3,3)

EEL 4500 COMMUNICATION CIRCUITS (3)
PR: EEL 3302. Provides further study in electronic circuits. Includes oscillator, modulator, and detector analysis and design.

EEL 4520 ELECTRO-OPTICS (2)
PR: EEL 3410. System considerations of electronic circuits; radio propagation; antennas; transmitters and receivers.

EEL 4511 COMMUNICATION ENGINEERING (2)
PR: EEL 4300. System considerations of electronic circuits; radio propagation; antennas; transmitters and receivers.

EEL 4511L COMMUNICATIONS LABORATORY (1)
CR: EEL 4511. Experiments in amplitude modulation, frequency modulation, pulse communications, and data transmission.

EEL 4567 ELECTRO-OPTICS (2)
PR: EEL 3301L, EEL 3302L, and Fields and Waves 1, EEL 3410. An introduction to the emerging field of electro-optics, including visible and infra-red sources and detectors, radiometry, optical and electronic components, and fiber optics.

EEL 4567L ELECTRO-OPTICS LABORATORY (1)

EEL 4656 LINEAR CONTROL SYSTEMS (3)

EEL 4705 LOGIC DESIGN (3)
PR: EGN 3373. Non-majors may enroll with CC. Binary number system; truth functions; Boolean algebra; canonical forms; minimization of combinational logic circuits; logic circuits in computers.

EEL 4705L LOGIC LABORATORY (1)
CR: EEL 4705.

EEL 4905 INDEPENDENT STUDY (1-5)
PR: CI. Specialized independent study determined by the students' needs and interests. May be repeated up to 15 credit hours. (S/U only.)

EEL 4906 DESIGN PROJECT (2)
PR: Senior standing. An individual or team project involving the design of an electrical component system. Required of all electrical seniors.

EEL 4935, 4936, 4937 SPECIAL ELECTRICAL TOPICS I, II, III (1-4 each)
PR: CC.

EEL 5250 POWER SYSTEMS ANALYSIS (2)
PR: CC. Analysis techniques for AC power systems.

EEL 5253 COMPUTER ANALYSIS OF POWER SYSTEMS (2)
PR: CC. Review of Fortran programming, matric algebra, network formulation, short circuit studies, simulation of algebraic equations, load flow studies, numerical solution of differential equations, transient stability studies. Strong emphasis on techniques adaptable to digital computer studies. Programs will be written and run on the IBM 360/65.

EEL 5367 PULSE CIRCUIT PRINCIPLES (2)
PR: EEL 4102, EEL 4300. An introduction to the analysis and design of pulse and timing circuits with applications.

EEL 5388 LOW NOISE ELECTRICAL CIRCUITS (3)
PR: EEL 3302. Noise sources, circuit noise representations, noise in diodes, bipolar transistors, field-effect transistors and sensors, low noise circuit design and noise measurements.

EEL 5435 UHF PRINCIPLES (2)
PR: EEL 4102, EEL 4300, EEL 4411. A study of tubes, devices, and circuits peculiar to systems which operate at ultra high and super high frequencies.

EEL 5435L UHF LABORATORY (1)
CR: EEL 5435.

EEL 5437 MICROWAVE ENGINEERING (3)
PR: EEL 4411, 4102, or CC. Introduction to passive and active components, devices, and circuits, including transmission lines and waveguides, employed in microwave integrated circuits and systems.

EEL 5438 IMAGING SYSTEMS I (3)

EEL 5620 NONLINEAR CONTROL SYSTEMS (2)

EEL 5711 DIGITAL COMPUTERS (3)
PR: EEL 4705. Digital arithmetic; computer subsystems, arithmetic units; control units; memory units; general purpose computers.

EEL 5711I DIGITAL LABORATORY (1)
CR: EEL 5711.

EEL 5755 DIGITAL SIGNAL PROCESSING I (3)

EEL 5760 DISCRETE STRUCTURES FOR DIGITAL SYSTEMS (2)

EEL 5800 IMAGE PROCESSING BY COMPUTERS (2)
PR: EEL 4102 or CC. Two dimensional convolution and system functions. Fourier transform in two dimensions. Digitization of two dimensional signals, sampling theorems, bandlimited signals. Image procession by computers. Applications of image processing.

EEL 5935, 5936, 5937 SPECIAL ELECTRICAL TOPICS I, II, III (1-3 each)
PR: CC.

ELR 3301L LABORATORY I (1)
PR: ELR 3301L, EEL 3302.

ELR 3302L LABORATORY 2 (1)
PR: EGN 3373.

ELR 4114 ELECTRICAL MEASUREMENTS (2)
PR: EEL 3100. Techniques and principles of electronic measurement.

ELR 4305L LABORATORY 3 (1)
PR: ELR 3302L, EEL 4300.

ELR 4306L LABORATORY 4 (1)
PR: ELR 3302L CR: EEL 4411.

ENGINEERING TECHNOLOGY

ETG 4931 SPECIAL TOPICS IN TECHNOLOGY I (1-5)
PR: CC.

ETG 4932 SPECIAL TOPICS IN TECHNOLOGY II (1-5)
PR: CC.

ETG 4933 SPECIAL TOPICS IN TECHNOLOGY III (1-5)
PR: CC.

ETI 3101 INDUSTRIAL STATISTICS (3)
PR: ETK classification. Industrial applications of probability, testing
of hypotheses, regression techniques and analysis of variance. (No credit for engineering majors.)

**ETI 4600 INTRODUCTION TO INDUSTRIAL SYSTEMS** (3)
PR: ETK classification of CC. Introduction to organizational planning and control functions in industrial systems.

**ETI 4614 PRINCIPLES OF INDUSTRIAL OPERATIONS I** (3)
PR: ETK classification of CC. Techniques of work measurement and methods design; principles of production control and inventory control.

**ETI 4661 PRINCIPLES OF INDUSTRIAL OPERATIONS II** (3)
PR: ETI 4600, ETI 4614, or CC. Application of techniques developed to the operation of an industrial firm through special projects.

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**INDUSTRIAL AND MANAGEMENT SYSTEMS**

**EIN 4214C SAFETY ENGINEERING** (3)
Industrial safety practices. Application of hazard reduction or elimination techniques. Achievement of safety and health goals. OSHA, NIOSH. Design of loss control program.

**EIN 4251C AUTOMATION AND ROBOTICS** (3)
PR: EIN 4304L, EGN 3613. Introduction to the practices and concepts of automation as applied to material handling, inventory storage, material transfer, industrial processes and quality control. Economic justification of automated activities.

**EIN 4304C INTRODUCTION TO INDUSTRIAL ENGINEERING** (3)
History of industrial engineering. Introduction to basic industrial processes and controls. Students research specific industries and visit local industrial plants.

**EIN 4312L PRODUCTION DESIGN** (3)
PR: EIN 4304. Methods Analysis, work measurement techniques and labor standards.

**EIN 4313C HUMAN FACTORS DESIGN** (3)
Design of man-machine systems by taking into consideration both human and machine capabilities and limitations.

**EIN 4395L MANUFACTURING PROCESSES** (3)
PR: EGN 3365, EIN 4304. The study of basic manufacturing processes. CAD/CAM and precision assembly.

**EIN 4334 PRODUCTION CONTROL** (3)
PR: EIN 4304, ESI 4314. Analysis of production and inventory systems. Forecasting, aggregate and capacity planning, scheduling, Deterministic and stochastic inventory models, materials requirement planning.

**EIN 4352 ENGINEERING ECONOMY II** (2)
PR: EGN 3613 or equivalent. Analysis of economic limitations on engineering projects. Income tax considerations, replacement models, MAPI, and obsolescence.

**EIN 4364L PLANT FACILITIES DESIGN** (3)
PR: EIN 4313L. Design and modification of industrial production and material handling facilities. Basic analysis techniques, use of computer programs, automated warehousing.

**EIN 4933 SPECIAL TOPICS IN INDUSTRIAL ENGINEERING I (1-5)**
PR: CC. Special topics related to economic analysis, optimization, human factors, manufacturing and automation aspect of industrial systems. Repeatable up to 5 credit hours.

**EIN 5101C ARBITRATION OF INDUSTRIAL ENGINEERING DISPUTES** (3)
Case studies in the arbitration of technical disputes involving job evaluation and classification, labor standards, wage incentives, crew size, etc.

**EIN 5218 HAZARDS CONTROL ENGINEERING** (3)
PR: Senior or graduate status. Open to non-majors. Nature of industrial accidents. Practices, standards, OSHA, and other governmental requirements for reducing accident frequency and severity in the industrial environment. Design measures for the prevention of health impairment due to non-accidental causes.

**EIN 5245 WORK PHYSIOLOGY AND BIOMECHANICS** (3)
PR: CC. A study of the human physiological limitations encountered in the design, analysis and evaluation of man-machine systems.

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**INDUSTRIAL AND MANAGEMENT SYSTEMS** 167
COLLEGE OF FINE ARTS

ART


ARH 4200 MEDIEVAL ART
A comprehensive study of early Christian, Byzantine and Medieval painting, sculpture, architecture and manuscript illumination.

ARH 4301 RENAISSANCE ART
A comprehensive study of Renaissance and Mannerist painting, sculpture and architecture in Italy and Northern Europe.

ARH 4350 BAROQUE AND ROCOCO ART
A comprehensive study of the painting, sculpture and architecture in France, Italy, Spain and the Netherlands in the seventeenth and early eighteenth centuries.

ARH 4430 NINETEENTH CENTURY ART
A comprehensive study of nineteenth century painting, sculpture and architecture in France and England.

ARH 4450 TWENTIETH CENTURY ART
A comprehensive study of painting, sculpture and architecture from Cezanne to the present in Europe and the United States. Required of all art majors.

ARH 4530 ORIENTAL ART
An introduction to concepts of the arts of China, Japan and other Far Eastern countries.

ARH 4742 INTRODUCTION TO THE PERSONAL FILM
PR: ART 3630C. Comparison of philosophical and technical distinctions between the personal film and theatrical or commercial releases.
ARH 4790 SELECTED TOPICS IN THE HISTORY OF FILM
In-depth investigation of a selected period, development, or school in the history of film as art. May be repeated.

ARH 4796 CRITICAL STUDIES IN ART HISTORY -6A
PR: CI. Specialized intensive studies in art history. Specific subject matter varies. To be announced at each course offering. May be repeated for different topics only.

ARH 4937 SEMINAR IN THE HISTORY OF ART
PR: Four courses in Art History at the 4000 level, CI. An examination of the origins of Art History as a discipline and changing nature of Art History from Vasari to the present.

ART 2202C VISUAL CONCEPTS I
Studio projects supplemented by reading and discussion. Consideration of spatial organization of the two-dimensional surface.

ART 2203C VISUAL CONCEPTS II
Studio projects supplemented by reading and discussion. Consideration of the three-dimensional organization of shape and space.

ART 3110C CERAMICS I

ART 3301C DRAWING I

ART 3420C LITHOGRAPHY I
PR: Visual Concepts I. Introduction to Art and Drawing I. Intermediate problems in lithography with emphasis on the exploration of methods and media and development of individual concepts.

ART 3470C INTAGLIO I
PR: Visual Concepts I. Introduction to Art and Drawing I. Intermediate problems in intaglio with emphasis on the exploration of methods and media and development of individual concepts.

ART 3510C PAINTING I
PR: Visual Concepts I, Introduction to Art, and Drawing I. Intermediate problems in painting with emphasis on the exploration of methods and media and development of individual concepts.

ART 3600C PHOTOGRAPHY I
PR: Visual Concepts I and Introduction to Art. Intermediate problems in photography with emphasis on the exploration of materials and media and development of individual concepts.

ART 3630C CINEMATOGRAPHY I
PR: Visual Concepts I and Introduction to Art. Intermediate problems in cinematography with emphasis on the exploration of materials and media and development of individual concepts.

ART 3701C SCULPTURE I
PR: Visual Concepts II and Introduction to Art. Intermediate problems in sculpture with emphasis on the exploration of materials and media and development of individual concepts.

ART 3935 STUDIO TECHNIQUES: SELECTED PROJECTS
PR: Visual Concepts I, II and Introduction to Art and CI. Concentration in specialized technical data and process. May be repeated for credit for different topics only.

ART 4111C CERAMICS II
PR: ART 3110C. Continued problems in ceramics. May be repeated.

ART 4200C DRAWING II
PR: ART 3301C. Continued problems in drawing. May be repeated.

ART 4421C LITHOGRAPHY II
PR: ART 3420. Continued problems in lithography. May be repeated.

ART 4471C INTAGLIO II
PR: ART 3470. Continued problems in intaglio. May be repeated.

ART 4520C PAINTING II
PR: ART 3510C. Continued problems in painting. May be repeated.

ART 4601C PHOTOGRAPHY II
PR: ART 3600C. Continued problems in photography. May be repeated.

ART 4631C CINEMATOGRAPHY II
PR: ART 3630C. Continued problems in cinematography. May be repeated.

ART 4633C SOUND TECHNIQUES
PR: ART 3630C. The recording and editing of sound for film. Collaboration with other departments, particularly Music and Theatre, is encouraged. To be taken concurrently with ART 4631C or ART 5642C whenever possible.

ART 4702C SCULPTURE II
PR: ART 3701C. Continued problems in sculpture. May be repeated.

ART 4900 DIRECTED READING
PR: CI and CC. A course of reading and study in an area of special concern governed by student demand, instructor interest and/or departmental requirements. Registration by contract only. May be repeated for credit for different study areas only.

ART 4905 DIRECTED STUDY
PR: CC. Independent studies in the various areas of Visual Arts. Course of study and credits must be assigned prior to registration. May be repeated.

ART 4935 ART SENIOR SEMINAR
PR: Senior Status. To aid majors to understand, appraise, and perfect their own art and technique through critical and aesthetic judgments of their colleagues. Discussion and critical evaluation.

Admission to all 5000 level studio courses by Consent of Instructor.

ART 5125C CERAMICS
PR: ART 4111C. Advanced problems in the various ceramic techniques, including throwing and glaze calculation. May be repeated.

ART 5340C DRAWING
PR: ART 4320C. Advanced problems in various drawing techniques. Emphasis on individual creative expression. May be repeated.

ART 5422C LITHOGRAPHY
PR: ART 4421C. Advanced problems in various lithographic techniques. Emphasis on individual creative expression. May be repeated.

ART 5472C INTAGLIO
PR: ART 4471C. Investigations into more complex intaglio processes including photoengraving and color printing procedures. Emphasis on personal conceptual development in graphic media. May be repeated.

ART 5532C PAINTING
PR: ART 4520C. Advanced problems in the various painting techniques. Emphasis on individual creative expression. May be repeated.

ART 5604C PHOTOGRAPHY
PR: CI. Advanced work in photography and related media leading to development of personal/expressive statements. May be repeated.

ART 5642C CINEMATOGRAPHY
PR: ART 4631C. Advanced studio work using black and white, color and sound as technical and aesthetic factors in visual, artistic productions. May be repeated.

ART 5730C SCULPTURE
PR: ART 4702C. Advanced problems in the various techniques of sculpture. Emphasis on individual creative expression. May be repeated.

ART 5910 RESEARCH
PR: CC. May be repeated.

ART 5936 STUDIO TECHNIQUES: SELECTED PROJECTS
PR: Visual Concepts I, II and Introduction to Art, the topic-technique related 3000-4000 level studio sequence and CI. Concentration in specialized technical data and process. May be repeated for credit for different topics only.

DANCE
Chairperson: L. D. Berger; Professors: L. D. Berger, W. G. Hug, Associate Professor; G. W. Warren; Assistant Professors: H. S. Parrish, S. W. Robinson, L. Wimmer; Instructors: G. Pope, K. McBee; Lecturer: M. W. Katz; Visiting Assistant Professor: M. Fredman; Visiting Instructors: K. Silver, S. Taylor; Visiting Lecturer: M. Battistone; Other Faculty: Mary Ann Bentley, G. Stephens.

DANCE 2100 FUNDAMENTALS OF MODERN DANCE I
To acquaint beginning modern dance students with fundamentals of dance vocabulary, movement, rhythm and alignment.

DAA 2160 MODERN DANCE II
PR: Admission by audition. Study of principles of modern dance technique. Practical work in exercises and movement phrases, utilizing
chaining rhythms and dynamics. May be repeated. (Ballet requirement)

DAA 2200 FUNDAMENTALS OF BALLET I
To acquaint beginning ballet dance students with fundamentals of vocabulary, movement, rhythm and alignment.

DAA 2201 BALLET II
PR: Admission by audition. Positions and barre exercises. Emphasis on correct alignment of the body and the application of simple step combinations in centre work. The use of ballet vocabulary (French terms). Material is covered almost totally as practical work in class with a few outside projects. Concert and performance attendance required. May be repeated. (Modern requirement)

DAA 3161 MODERN DANCE III
PR: Admission by audition. Continuation of DAA 2160. Further emphasis on style and phrasing. Work in projecting mood and quality by dancing and rehearsing in more advanced student choreography, leading to performance. Rehearsal hours to be arranged. May by repeated.

DAA 3202 BALLET III
PR: Admission by audition. Intensification of barre exercises for the development of strength and form. Most of the ballet steps are introduced. Application of phrasing and movement. Material covered as practical work in class for concerts and performances. Rehearsal hours to be arranged. May be repeated.

DAA 3220 BALLET VARIATIONS
PR: DAA 3202. This course introduces fundamental exercises for the development of pointe technique. Material covered may also be put to use in more advanced student choreography, leading to performance. Rehearsal hours to be arranged. May be repeated.

DAA 3502 JAZZ DANCE
PR: Admission by audition, DAA 2201 or 2160. A technique class for the intermediate level dancer to become acquainted with the dance styles and forms of musical theatre and concert jazz dance. Emphasis is on highly stylized movement on a strong rhythmic base. May be repeated.

DAA 3503 JAZZ THEATRE DANCE
PR: Admission by audition and DAA 3502. Continuation of DAA 3502. Further emphasis on projection, phrasing, rhythmic patterns and dynamics. Solo and ensemble studies leading to performance. May be repeated.

DAA 3700 CHOREOGRAPHY I
(2)
Study and execution for basic principles of composition. Preparation of studies in theme and variations, breath phrases and metric phrases. May be repeated.

DAA 3701 CHOREOGRAPHY II
PR: DAA 3700 or CI. Preparation of studies in rhythm, dynamics, form and motivation, culminating in a solo. May be repeated.

DAA 4162 MODERN DANCE IV
PR: Admission by audition. Intensive work on the growth of personal performance styles. Equal emphasis will be given to training the body in the development of technical excellence. Rehearsal hours to be arranged. May be repeated.

DAA 4203 BALLET IV
PR: Admission by audition. Perfecting the execution of barre work. Intensification of centre work. More stress on aesthetic quality of movement and phrasing. Students expected to be proficient in pointe work. Outside projects, concerts, and performances are required. Rehearsal hours to be arranged. May be repeated.

DAA 4702 CHOREOGRAPHY III
PR: DAA 3701 or CI. Work directed toward duets and group dances. The students will submit choreographic ideas for instructor's approval, then proceed with rehearsals. The best dances will be performed and fully produced under supervision of student choreographers. Lec-lab., reading. Rehearsal hours to be arranged. May be repeated.

DAA 4703 CHOREOGRAPHY IV
PR: DAA 4702. The student will prepare studies based on free form, rhythm, style, and dance methods. Lec-lab., reading. May be repeated.

DAN 3100 INTRODUCTION TO DANCE
PR: DAA 4702. The student will prepare studies based on free form, rhythm, style, and dance methods. Lec-lab., reading. May be repeated.

DAN 3300 PRACTICUM IN DANCE PRODUCTION I
(1-4)
A practicum in mounting dance concerts with shop work and back-stage participation. Intended for students working in costume, set preparation, light presentation, stage management and production crew. Dance majors must have at least 2 credits for graduation accumulated in two different semesters.

DAN 3610 MUSIC FOR DANCE
Development of practical music skills in relation to dance. Emphasis on rhythm and the relationship of music forms to dance. May be repeated up to 4 credits.

DAN 3611 MUSIC FOR DANCE II
PR: DAN 3610 or CI. Elements within historical context. Continued problems in rhythmic materials.

DAN 3710 REPERTORY
(1)
The development and performance of solo and/or group dances. Open to all university students by audition. May be repeated.

DAN 4120 SURVEY OF DANCE 4A
(3)
Survey history of dance. Study of development of dance from its inception through 18th Century. Social and theatrical dance forms, Ethnic Dance included.

DAN 4151 19TH AND 20TH CENTURY DANCE
(3)
Survey history of dance. Study of development of dance from 19th Century through 20th Century. Theatrical and other expressive forms included. Reading, lecture and visual aids.

DAN 4710 DANCE SENIOR SEMINAR
(2)
PR: Senior or CC. To aid majors to understand, appraise and perfect their own art and technique through critical and aesthetic judgments of their colleagues.

DAN 4905 DIRECTED READING
(2)
PR: CI and CC. Readings in topic of special interest to the student. Selection of topic and materials must be agreed upon and appropriate credit must be assigned prior to registration. A contract with all necessary signatures is required for registration. May be repeated for credit for different topics only.

DAN 4906 DIRECTED STUDY
(1-5)
PR: CI, CC. Independent studies in the various areas of Dance. Course of study may be used to fulfill Junior Project. Must receive approval prior to registration. May be repeated.

DAN 4930 SELECTED TOPICS IN DANCE
(1-5)
PR: CI and CC. The content of the course will be governed by student demand and instructor interest. May be repeated for credit for different topics only.

MUSIC


MUC 2201 COMPOSITION
(3)
PR: MUC 1113 and 1123. Private instruction in original composition. Required of composition majors. May be repeated for three semesters.

MUC 2301 INTRODUCTION TO ELECTRONIC MUSIC
(2)
History and repertory of electronic music; standard sound studio techniques; basic electronics as applied in electronic sound synthesis; mathematics for music, composition and electronic music.

MUC 3202 COMPOSITION
(3)
PR: Necessary competence at MUC 2202 level determined by faculty jury. Private instruction in original composition. Required of composition majors. May be repeated for three semesters.

MUC 3401, 3402 ELECTRONIC MUSIC—ANALOG SYNTHESIS
(3,3)
PR: MUC 2301 and CI. Composition for tape medium with analog synthesizers; use of sound recording studio; repertory or analog music synthesis; techniques and design of analog systems for design and construction.

MUC 3441, 3442 ELECTRONIC MUSIC—DIGITAL SYNTHESIS
(3,3)
Computer assisted composition for conventional instruments; compo-