2. SCIENCE EDUCATION:
As a minimum, satisfactory completion of the following courses: PHI 3404, SCE 4305, SCE 4320, and SCE 4330. These courses deal with philosophy of science, communication skills and the teaching of science at the middle grades and secondary school levels. In addition, a Physics major will need a three credit hour course in computer applications in science.

SOCIAL SCIENCE EDUCATION (SSE):
General Distribution and Professional Education requirements are listed under Teacher Education Program.
Course Requirements:
1. SOCIAL SCIENCE:
A minimum of 40 semester hours, including:
- ECO 2023 GEO 3014 ECU 2030
- ECO 2013 AMH 2010 GEO 2031
- GEO 3013 AMH 2020 POS 2041
- One of the following: AFH 3100 or LAR 3200
- One of the following: POS 2112 POS 4165
- POS 3142 INR 3002
- One of the following: SYG 3010 SYO 3500 SYP 5405
- SYP 3000 SYD 4410

2. SOCIAL SCIENCE EDUCATION:
Eight semester hours in methods of teaching and communication skills in Social Studies: SSE 4333, SSE 4334, and SSE 4460.

Department of Educational Measurement and Research
The Department of Educational Measurement and Research provides support services for undergraduate programs. Students in all programs are required to take EDF 4430, Measurement for Teachers. This course develops skills and understandings related to test construction, reporting student progress, test score interpretation, measurement characteristics, and measurement as an information resource.

Department of Music Education
MUSIC EDUCATION (MUE):
The music education curriculum is designed to serve students who wish to develop a high level of musical expertise and have a commitment to help develop similar musical potential in other people.
All students seeking a degree in music education are required to pass an audition in their respective performance area and to take a music theory placement test prior to registering for any music theory class. Students who do not pass the diagnostic test will be placed in a music fundamentals course. This course does not fulfill a requirement in the music major curriculum. All transfer students are required to take a theory placement test and required to enter at the appropriate level. Students may obtain the dates for these examinations from the music office.
Special requirements for all music education majors: successful completion of the piano proficiency requirements 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 last semester of enrollment in applied music.
Students are to 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).
For other degree requirements see College of Education requirements and the University's General Distribution and graduation requirements. Note exceptions applicable to this program.

1. Instrumental Specialization (72 cr. hrs.)
MUSIC EDUCATION courses (72 cr. hrs.)
MUE 2090 (2) MUE 3450 (1)* MUE 4311 (3)
MUE 3421 (1) MUE 3451 (1) MUE 4321 (2)
MUE 3422 (1) MUE 3460 (1)** MUE 4332 (3)
MUE 3423 (1) MUE 3461 (1) MUE 4480 (2)
One hour courses must be repeated to achieve 20 cr. hrs.
*Not required of woodwind majors
**Not required of brass majors

Music Courses (min. 52 cr. hrs.)
MUT 1111 (3) MUT 2117 (3) MUT 3300 (2)
MUT 1112 (3) MUT 2246 (1) MUT 3301 (3)
MUT 1241 (1) MUT 2247 (1) MUT 3302 (3)
MUT 1242 (1) MUT 2111 (3) MUG 3101 (2)
MUT 2116 (3)
Applied Music (Principal) 12 cr. hrs. with a minimum of 4 hours at the 3000 level and concurrent registration in MUS 3001 (Recital Attendance).
Music electives (2)
Applied Music Secondary (Techniques - 3 cr. hrs.)
(One each: string, percussion, voice)
Major performing ensembles
(Minimum of one per semester of applied music - 6 cr. hrs.)
Graduating recital
Piano proficiency requirement
Other Fine Arts Requirements
Art, Dance, Theatre (min. 3 cr. hrs. to be selected from one or more of the other departments in the College of Fine Arts)

2. Vocal Specialization - (72 cr. hrs.)

MUSIC EDUCATION courses (16 cr. hrs.)
MUE 2090 (2) MUE 3421 (1) MUE 3422 (1)
MUE 3423 (1)
MUE 3450 (1)* or MUE 3451 (1)*
MUE 3460 (1)* or MUE 4361 (1)*
MUE 4311 (3) or MUE 4352 (2) MUE 4331 (3)**
One hour courses must be repeated to achieve 16 cr. hrs.
*As determined by audition.

Music courses (min. 56 cr. hrs.)
MUT 1111 (3) MUT 2116 (3) MUT 1111 (3)
MUT 1112 (3) MUT 2117 (3) MUT 3300 (2)
MUT 1241 (1) MUT 2246 (1) MUT 3301 (3)
MUT 1242 (1) MUT 2247 (1) MUT 3302 (3)
MUG 3101 (2)
Applied Music (Principal) 12 cr. hrs. with a minimum of 4 hours at the 3000 level and concurrent registration in MUS 3001 (Recital Attendance).
Music Secondary Techniques (2 cr. hrs.)
(one each: string, percussion)
Major Ensembles
(Minimum of one per semester of applied music - 6 cr. hrs.)
Music Electives (7)
Piano proficiency requirement
Graduating recital
Other Fine Arts Requirements
Art, Dance, Theatre (min. 3 cr. hrs. to be selected from one or more of the other departments in the College of Fine Arts)

3. General Music Specialization (72 cr. hrs.)

MUSIC EDUCATION courses (16 cr. hrs.)
MUE 3460 (1)* or MUE 3461 (1)*
MUE 3450 (1)* or MUE 3451 (1)*
MUE 2090 (2) MUE 4352 (2) MUE 4321 (2)
MUE 4311 (3) MUE 3422 (1) MUE 3423 (1)
MUE 3430 (3)
One-hour courses must be repeated to achieve 16 cr. hrs.
*As determined by audition.

Music Courses (min. 56 cr. hrs.)
MUT 1111 (3) MUT 2116 (3)
MUT 1112 (3) MUT 2117 (3) MUT 3300 (2)
MUT 1241 (1) MUT 2246 (1) MUT 3301 (3)
MUT 1242 (1) MUT 2247 (1) MUT 3302 (3)
MUG 3101 (2)
Applied Music (Principal) 12 cr. hrs. with a minimum of 4 hours at the 3000 level and concurrent registration in MUS 3001 (Recital Attendance).
Attendance.
Applied Music Secondary Techniques (2 cr. hrs.)
(one each: string, percussion)
Major Ensembles
(minimum of one per semester of applied music-6 cr. hrs.)
Music electives (7)
Music proficiency requirement
Graduating recital
Other Fine Arts requirements
Art, Dance, Theatre (min. 3 cr. hrs. to be selected from one or
more of the other departments in the College of Fine Arts)

Department of Physical Education
The Department of Physical Education teaches a variety of Elec-
tive Physical Education courses and conducts a Professional Physical
Education Teacher Preparation K-8 and 6-12 Programs and a Wellness
Leadership Program.

ELECTIVE PHYSICAL EDUCATION
PROGRAM
Elective Physical Education offerings in the College of Education
are designed to provide opportunities for all students in the
University to develop desired skills and insight into the role physical
activity plays in their lives. Laboratory experiences in recognized
sports activities allow students to select and develop proficiency
appropriate for leisure pursuit and personal development. Human
movement courses expand personal awareness of the effect of
physical activity through examination of the interaction between
the needs and abilities of the person and the benefits of the activity.
Special competency courses prepare interested students with skills
and techniques applicable for conducting or directing community
activities related to sport and movement.

PROFESSIONAL PHYSICAL
EDUCATION PROGRAM
Students must choose one of the following programs: a) Physical
Education Grades K-8 (Florida Teacher Certification); b) Physical
Education Grades 6-12 (Florida Teacher Certification); or c) Wellness
Leadership (Non-certification).

Requirements for the B.S. Degree (PTE/PTS/PTW)
The two-year program is offered beginning in the junior year and
includes mandatory attendance during the summer session be-
 tween the junior and senior years.
In order to be admitted to the Program, all students must
participate in a selective admissions procedure. Enrollment in the
Program is limited and students can only enter during Semester I of
each year.
In addition to applying to the University, all students must apply
directly to the Department before May 1 for priority admission con-
sideration. Students applying after May 1, and before the final
deadline of June 1, will be accepted only on a space-available basis.
Requests for admission to the Program should be directed to:
Chairperson
Department of Physical Education
College of Education
University of South Florida
4202 E. Fowler, PED 214
Tampa, Florida 33620-8600

Course Requirements:
1. PROGRAM PREREQUISITES FOR ALL TRACKS:
   APB 3190  Human Anatomy & Physiology
   HSC 2400  First Aid

2. CORE COURSES FOR ALL TRACKS:
   EME 4402  Introduction To Computers In Education
   PEQ 3101  Aquatics
   PET 3012  Personal/Professional Development Seminar
   PET 3310  Kinesiology
   PET 3351  Exercise Physiology I
   PET 3422  Instructional Design & Content: Movement
   PET 4622  Care & Prevention of Physical Injuries
3. ADDITIONAL REQUIRED COURSES FOR K-8 TRACK: (PTE)
   EDF 3122  Learning & The Developing Child
   EDF 4430  Measurement for Teachers
   EDF 3604  Social Foundations of Education
   PET 3031  Motor Development & Assessment
   PET 3421  Curriculum and Instruction in Physical Education
   PET 3441  Instructional Design & Content: Middle School
   PET 3640  Adapted Physical Education
   PET 3799  Career Decision Making & Professional Ethics
   PET 3943  Physical Education Internship: Middle School
   PET 4141  Trends & Tasks: Elementary Physical Education
   PET 4401  Organization and Administration of Physical Educa-
tion Programs
   PET 4432  Instructional Design & Content: Physical
   Education Elementary
   PET 4433  Instructional Design & Content: Physical
   Education Elementary II
   PET 4934  Senior Seminar in Elementary Physical Education
   PET 4942  Physical Education Internship: Elementary
   PET 4946  Associate Teaching Physical Education: Elementary
4. ADDITIONAL REQUIRED COURSES FOR 6-12 TRACK: (PTS)
   EDF 3604  Social Foundations of Education
   EDF 4430  Measurement for Teachers
   EDF 4131  Learning and the Developing Adolescent
   PET 3031  Motor Development & Assessment
   PET 3421  Curriculum and Instruction in Physical Education
   PET 3441  Instructional Design & Content: Middle School
   PET 3447  Adapted Physical Education
   PET 3799  Career Decision Making & Professional Ethics
   PET 3943  Physical Education Internship: Middle School
   PET 4142  Trends & Tasks: Secondary Physical Education
   PET 4304  Principles & Issues in Coaching
   PET 4401  Organization & Administration of Physical Educa-
tion Programs
   PET 4442  Instructional Design & Content: Physical Education
   Secondary
   PET 4443  Instruction Design & Content: Physical Education
   Secondary II
   PET 4933  Senior Seminar in Secondary Physical Education
   PET 4944  Physical Education Internship: Secondary
   PET 4947  Associate Teaching Physical Education: Secondary
5. ADDITIONAL COURSES REQUIRED FOR WELLNESS LEADER-
SHIP TRACK: (PTW)
   ADE 4384  Working with the Adult Learner
   GEY 3601  Behavior Change in Later Life
   HUN 3201  Nutrition
   SEP 3940  Practicum in Health Promotion/Wellness
   SEP 3951  Communication Skills for Wellness Leaders
   SEP 4941  Wellness Internship
   PEQ 3170  Aquatic Exercise
   PET 3080  Survey of Wellness Programs
   PET 4404  Organization & Administration of Wellness Pro-
grams
   PET 4353  Exercise Physiology II
   PET 4384  Health Fitness Appraisal & Exercise Prescription
   In addition to the above courses, students in the Wellness Lead-
ership Track are required to take a minimum of eight hours (or 4
courses) of the following elective courses which are activity courses
related specifically to those found in Wellness Programs. These
courses can be taken any time during the two years.
   PEL 1341  Tennis I
   PEL 2441  Racketball
   PEM 2131  Weight Training
   PEM 2441  Karate
   PEM 2930  Jogging
   PEM 2930  Advanced Jogging
   PEM 2930  Aerobic Dance
These courses contribute to the students’ understanding of the wish to take their program of studies. Students may not register for tion entrance requirements prior to the summer, there are no summer admissions. This sequence courses on other campuses without permission.

Department of Psychological and Social Foundations of Education

The Department of Psychological and Social Foundations of Education provides courses for all students majoring in the wide array of undergraduate programs available in the College of Education. These courses contribute to the students’ understanding of the general education enterprises and are considered foundational to later professional specialization.

EDF 3122 EDF 3604 EDF 4909 IDS 3115
EDF 3214 EDF 3810 EDF 5136
EDF 3228 EDF 4131 EDF 5285
EDF 3542 EDF 4905 EDF 5672

Department of Special Education

The Department of Special Education prepares teachers to work with children who have emotional and behavioral disabilities, mental retardation, and specific learning disabilities. The undergraduate program is a State-approved program that leads to certification in one of the three areas.

Students are required to meet University and College of Education entrance requirements prior to enrollment in the Department. Upon admission, students affiliate with the campus on which they wish to take their program of studies. Students may not register for courses on other campuses without permission. On the Tampa Campus, students are assigned to teams and a faculty advisor. All courses are taken with the assigned team. Since no teams start in the summer, there are no summer admissions. This sequence includes three semesters of part-time field experience and one semester of full-day internship. All part-time field experiences must be successfully completed as a member of a team concurrently with specified course in designated local schools under the supervision of a faculty member. Field experiences begin during the second semester of a student’s enrollment. Students are responsible for providing transportation to their experience sites.

In some instances students may pursue a part-time program (9 hours or less a semester). This requires that students be available to participate in field experiences and concurrent classes during regular school hours.

Emotional and Behavioral Disabilities (EH Certification)

Students seeking the B. S. degree with certification in EH are required to take the following courses:

EED 4011 EED 4211 EEX 4604
EED 4510 EEX 4632 MAE 4310
EEX 3010 EEX 4232 RED 4310
One of the following:

ARE 4313 MUE 4210 SCE 4310
SSE 4313

Two of the following:

EEX 4706 LAE 4314 LAE 4414
RED 4511 SPA 4000

Mental Retardation (MR Certification)

Students seeking the B. S. degree with certification in MR are required to take the following courses:

EEX 3010 EEX 4243 EMR 4941
EEX 4221 EEX 4604 MAE 4310
EEX 4232 EMR 4011 RED 4310
One of the following:

ARE 4313 MUE 4210 SCE 4310
SSE 4313

Two of the following:

EEC 4706 LAE 4314 LAE 4414
RED 4511 SPA 4000

Specific Learning Disabilities (LD Certification)

Students seeking the B. S. degree with certification in LD are required to take the following courses:

EEC 3010 EEX 4243 ELD 4941
EEX 4221 EEX 4604 MAE 4310
EEX 4232 ELD 4011 RED 4310
One of the following:

ARE 4313 MUE 4210 SCE 4310
SSE 4313

Two of the following:

EEC 4706 LAE 4314 LAE 4414
RED 4511 SPA 4000

Student Organizations and Activities

College of Education Student Council

The College of Education Student Council represents the interests of education majors in regard to policies and needs of the college. The Council leadership team consists of five officers (President, Vice-President, Secretary, Treasurer, and Historian) and nine Student Government Senators. The Council represents the students majoring in the wide array of educational programs and provides opportunities for students to attend study conferences throughout the state of Florida which allows the student an opportunity for professional growth and exchange of professional ideas. Membership is open to all students, including freshmen, concerned with children two to twelve years old.

Student Council for Exceptional Children

The Student Council for Exceptional Children is an organization of those members of the University interested in the education of the exceptional child. Various exceptionalities included are Gifted, Emotionally Disturbed, Physically Handicapped, Mentally Retarded, and Culturally Different. Activities of the USF Chapter include field trips to various special educational facilities, prominent speakers, seminars, state and national conventions, and social events. The specific activities are determined by the members and the exceptionalities in which they are interested. All interested students are invited to join.

Student Music Educators National Conference

Student Music Educators Conference is an affiliate of the Music Educators National Conference and the Florida Music Educators Association. It is devoted to the furtherance of knowledge and understanding of music education on all levels. Membership is open to any student in the University of South Florida who is interested in the teaching of music.

National Education Association Student Program

The National Education Association student program is designed to provide professional growth opportunities, leadership training and membership benefits that are available to other members of the National Education Association, including $1 million liability insurance coverage while engaged in student teaching internship. Membership is open to all students.
Phi Beta Lambda
Phi Beta Lambda is a business fraternity open to all students, including freshmen, expressing an interest in Business. The emphasis is on promoting free enterprise and instilling leadership qualities.

Kappa Delta Pi
Kappa Delta Pi is an international co-educational honor society in Education. The society was founded to recognize and encourage excellence in scholarship, high personal standards, improvement in teacher preparation, and distinction in achievement.

Physical Education Association (PEA)
The Physical Education Association (PEA) is open to all students enrolled in the Physical Education Program. Social and professional meetings are conducted throughout the year to promote interaction within the organization.

Mathematics Education Club
The role of this organization shall be to provide an informative and supportive environment for all members, encourage scholarship, and provide a helpful atmosphere for students progressing through the Mathematics Education program.

Membership shall be available to any student in good standing who expresses interest in the Mathematics Education program at the University of South Florida.

Association for Library and Information Students
This is a professional organization associated with the Library, Media, and Information Studies Department and is open to all members of the university community interested in librarianship.

The USF group provides programs and guest speakers of interest to the campus community and publishes a newsletter for its members. It is the official voice of students in the department and members of the association are included on faculty-student committees within the department.

Delta Epsilon Chi of America (DECA)
The College Chapter of DECA is an integral part of the Distributive and Marketing Education and Marketing Teacher Preparation Program at the University of South Florida and provides Distributive Education majors with leadership opportunities, social experience, learning activities and professional involvement. The participation in the activities of Collegiate DECA is required of undergraduate majors and is encouraged for graduate students.

Minority Organization of Students in Education
The Minority Organization of Students in Education is organized to provide students with experiences that will facilitate the educational and professional growth of its members. This is achieved by enriching the students' experiences, informing them of various opportunities and involving them in activities. Guest speakers are invited to meetings to discuss topics which are of interest to the members. Resource people are used to inform students of employment and graduate school opportunities. Members of M.O.S.E. sponsor and participate in community service programs.

Science Education Association (SEA)
The Science Education Association provides a supportive environment for students majoring in science education, although membership is open to anyone interested in science. SEA plans field trips, guest speakers, and the compiling of a classroom science activities file for education majors.
The College of Engineering offers undergraduate and graduate programs to prepare students for a wide spectrum of professional careers in engineering. The undergraduate programs of the College are designed to provide students with a sense of human values and the scientific/technical foundation necessary for a lifetime of continued learning.

The programs offered by the College of Engineering to meet the diverse requirements of the future cover three areas: Professional Engineering, Applied Science, and Technology. The specific degrees and services offered are as follows:

- Bachelor of Science in Chemical Engineering (B.S.Ch.E.)
- Bachelor of Science in Civil Engineering (B.S.C.E.)
- Bachelor of Science in Computer Engineering (B.S.Cp.E.)
- Bachelor of Science in Electrical Engineering (B.S.E.E.)
- Bachelor of Science in Engineering (B.S.E.)
- Bachelor of Science in Industrial Engineering (B.S.I.E.)
- Bachelor of Science in Mechanical Engineering (B.S.M.E.)
- Bachelor of Science in Computer Science (B.S.C.S.)
- Bachelor of Science in Information Systems (B.S.I.S.)
- Bachelor of Science in Engineering Science (B.S.E.S.)

(Various options available including General Engineering)

[Discontinued August 1994]

The Accreditation Board for Engineering and Technology, Inc. (ABET), formerly the Engineers’ Council for Professional Development, has inspected and accredited the curricula of the College of Engineering defined by the Chemical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Industrial Engineering, and Mechanical Engineering. The Bachelor of Science program in Computer Science is accredited by the Computer Science Accreditation Commission (CSAC) of the Computing Sciences Accreditation Board (CSAB), a specialized accrediting body recognized by the Council on Post-Secondary Accreditation (COPA) and the U.S. Department of Education.

The above spectrum of program offerings provides the prospective student with a choice of avenues depending upon individual interests, career objectives, and capabilities for a significant technological contribution. These programs are described in more detail under their respective catalog headings.

Laboratory experience as well as real-world participation in technological problem-solving is a key aspect of a professional engineer's college education. The College of Engineering, in implementing this need, augments its own modern laboratory and research facilities by close contact with the professional societies and the many industries in the metropolitan Tampa Bay area.

Students interested in particular programs offered by the College of Engineering should direct their inquiries to the College of Engineering marked for the attention of the following:

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<th>Area of Interest</th>
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PROFESSIONAL ENGINEERING

The College of Engineering recognizes that modern engineering solutions draw on knowledge of several branches of engineering. It also recognizes that future technological and societal developments will lead to shifting of the relative emphasis on various branches of engineering, triggered by new needs or a reassessment of national goals. For this reason the College’s programs include a strong engineering foundation (core) portion, designed to equip the prospective engineer with a broad base of fundamental technical knowledge. To this foundation is added the student’s specialization (option) of sufficient depth to prepare him/her to successfully embark on a professional career.

The Bachelor of Science degrees offered in various engineering fields provide the student a broad education with sufficient technical background to effectively contribute in many phases of engineering not requiring the depth of knowledge needed for advanced design or research. However, while the baccalaureate degree is considered the minimum educational experience for participating in the engineering profession as such is the first professional degree, students interested in design and research are strongly encouraged to pursue advanced work beyond the baccalaureate either at this or other institutions. It is becoming increasingly evident that a large segment of today’s engineering professionals are involved in some form of post baccalaureate study. Engineers are earning advanced degrees to obtain the information and training needed to meet effectively tomorrow’s technological challenges.

All are faced with the continuing problem of refurbishing and updating their information skills and most are obtaining advanced information by means of formal graduate study, seminars, special institutes and other such systems designed for this purpose.

The Bachelor of Science degree program (in a designated engineering field requires 136 semester hours) and the Master of Science degree in the same field may be pursued simultaneously in a program of 166 semester hours called the 5-Year Program. These programs are specifically designed to prepare an individual for a professional career as an engineer. These programs have as their foundation a core of subject material encompassing Humanities, Social Science, Mathematics, Science, and Engineering which is required of all students. In addition, to the core subject material, each student will complete specialization studies in a designated field under the direction of one of the administrative departments of the College.

The engineering programs of the College have been developed with an emphasis on three broad aspects of engineering activity: design, research, and the operation of complex technological systems. Students who are interested in advanced design or research should pursue the 5-Year Program leading to a Master of Science in Engineering degree. Other students interested more in operational responsibilities may wish to terminate their initial engineering education at the baccalaureate level.

Preparation for Engineering

Students planning to attend USF’s College of Engineering should familiarize themselves thoroughly with the College’s admissions standards and requirements, which are more stringent than the University’s minimum entrance requirements.

The high school student anticipating a career in engineering should elect the strongest academic program that is available while in high school. Four years each of English, mathematics and science (preferably including Chemistry and Physics), as well as full programs in the social sciences and humanities, are most important to success in any engineering college.

Graduate students considering engineering at the University of South Florida who lack certain preparation in high school must elect to follow a program to overcome their deficiencies. One alternative might be that such a student take some remedial work and a less accelerated program as a Pre-Engineering student. As another alternative, students may wish to avail themselves of the State’s system of junior/community colleges which offer a wide range of remedial coursework, and which also offer full programs in pre-engineering (first two years’ coursework). The University of South Florida generally offers most required pre-engineering courses every semester.

Junior/community college students planning to transfer to the University of South Florida’s engineering program at the junior level from a State of Florida operated college or university should follow a pre-engineering program leading to an A.A. degree. All transfer students should complete all of the required junior level courses for the engineering core coursework as is available to them. Transfer students should be aware that the College expects them to meet its admission requirements listed in this section under college regulations for graduation just as it expects its own students to meet these requirements. Junior/community college transfer students should consult the Department of Computer Science, Computer Engineering for additional information on the junior level courses which are given each semester in meeting full continuity in studies for the student. Junior/community college students intending to pursue an engineering program at USF should contact the adviser at their institution and request a course equivalency list.
Although it is not mandatory, the College strongly recommends acquisition or personal access to a personal computer. For further details, contact the Associate Dean of Engineering - Computing Services.

The College of Engineering can assist students who are planning to obtain an Engineering degree from the University of South Florida and who have started their studies elsewhere in formulating a sound total program. Interested students should contact the College's Advising Office (813/974-2684) furnishing sufficient details to permit meaningful response.

**Undergraduate Admission to the College**

Students may apply to the College of Engineering upon initial entry to the University by declaring Engineering as their intended major. A USF student may apply through the Advising Office in the College of Engineering.

To be considered for admission to the College of Engineering, an applicant must be accepted by the University as a degree-seeking student and be academically in good standing. Admission procedures and requirements are listed below.

**Procedures for Applying to the College**

1. Students should complete and submit an Engineering Admissions Application to the College of Engineering, Advising Office.
   a. Freshmen and Sophomores must submit copies of high school transcripts, SAT or ACT test scores to the College of Engineering, Advising Office. This is in addition to records requested by the University’s Admissions Office.
   b. Transfer applicants must furnish transcripts from previously attended institutions to the College of Engineering, Advising Office. This is in addition to transcripts sent to the University’s Admissions Office.
   c. Applicants whose native language is other than English must submit TOEFL scores to the College of Engineering. The minimum TOEFL score must be 550.

2. Credentials must be received in the Engineering Advising Office 30 days prior to the date of applicable term. Failure to comply will result in the application being denied by the College of Engineering.

3. Credentials will be held for one year. If application is not updated within that year, credentials must be re-submitted.

**Engineering Admission Requirements**

1. Freshmen:
   a. Test Scores:
      - SAT-composite of 1050 minimum with a minimum quantitative of 550
      - ACT-composite of 25 minimum and mathematics of 25 minimum.
   b. High School Mathematics: Should include sufficient algebra and trigonometry to enter Engineering Calculus I. Math Placement Test must be passed to enter Calculus I.
   c. High School Grade Point Average of 2.5/4.0.

2. Transfer Students: Transfer students must have completed the equivalent U.S.F. Engineering Calculus sequence with a 2.5 GPA; must have completed one year of equivalent U.S.F. General Physics and Chemistry courses with a minimum of 2.5 GPA; must have an overall GPA of 2.5 or better. Grades of 'D' in these courses are not accepted by the College of Engineering.

**Admission to Programs in Engineering**

Once a student has been admitted to the College of Engineering, he/she must then seek admission into one of the specific departments. There are two methods by which a student may be admitted to a particular department: (1) Regular Departmental Admission (RDA), and (2) Direct Departmental Admission (DDA). Each is described below.

Admission to the College of Engineering does not imply that the student has been accepted as a degree-seeking student by a specific Engineering department. Due to limited facilities and resources, it is necessary for students to apply formally for acceptance by a specific Engineering department.

The minimum requirements for acceptance by the departments administering the Engineering programs in Chemical, Civil, Computer, Electrical, Industrial and Mechanical Engineering are:

1. Completion of English, Calculus, Differential Equations, Physics and Chemistry requirements with a grade of 'C' or better in each required course.
2. Satisfactory completion of EGN 1002 - Engineering Orientation.
3. Completion of the following courses with either: (1) a grade of 'C' or better in each course on first attempt, or (2) a cumulative grade point average of 2.2 in these courses based on all attempts. No grades below a 'C' accepted:
   - EGN 1002 - Fortran for Engineers
   - EGN 3313 - Statics
   - EGN 3343 - Thermodynamics
   - EGN 3443 - Engineering Statistics
   - EGN 3373 - Introduction to Electrical Systems

The minimum requirements for admission to the Computer Engineering program offered by the Computer Science and Engineering Department are completion of sections 1 and 2 above and:

1. Completion of:
   - COP 3002 & COP 3000L - Intro to Computer Science and Lab
   - EGN 3313 - Statics
   - EGN 3343 - Thermodynamics
   - EGN 3373 - Introduction to Electrical Systems
   - EGN 3443 - Engineering Statistics
   with a minimum of 'C' on the first attempt.
2. The minimum requirements for admission to the Computer Science program offered by the Computer Science and Engineering Department are completion of sections 1 and 2 above and completion of:
   - COT 1010 - Discrete Structures
   - EGN 3373 - Introduction to Electrical Systems
   - STA 4442 - Introduction to Probability
   - COP 3002 & COP 3000L - Intro to Computer Science and Lab
   - Students who fail to obtain a 'C' grade on the first attempt must obtain a cumulative 2.2 G.P.A. based on all attempts.

Prior to being admitted to a department, a student may be permitted to take no more than two departmental engineering courses.

**Direct Departmental Admission**

The purpose of Direct Departmental Admission (DDA) is to permit students who have displayed academic potential for completing the rigors of Engineering to accelerate their admission to a particular department. The student must apply through the Advising Office of the College of Engineering. The requirements for Direct Departmental Admission (DDA) are:

1. Admission to the College of Engineering
2. High School Students: SAT scores of 500 Verbal and 600 Mathematics, a cumulative total of 1100; ACT scores of 26 Mathematics, a combined average score of 26.
3. Transfer Students: Successful completion of the following 17 hours of courses with a minimum grade point average of 3.30. (Grades in these courses must be either "A" or "B"-a student with a "C" or less grade in any one of the below listed courses is not eligible for DDA.)
   - MAC 3281 - Engineering Calculus I 3
   - MAC 3282 - Engineering Calculus II 3
   - MAC 3283 - Engineering Calculus III 3
   - PHY 3048 - General Physics I & Lab 3+1
   - And Either:
     - PHY 3049 - General Physics II & Lab 3 + 1
     or:
     - CHM 2041 - Chemistry & CHM 2045L 3 + 1
   17 hrs.

**Engineering Advising**

Effective pursuit of engineering and engineering related studies requires careful attention to both the sequence and the type of courses taken. The engineering curriculum differs in key respects from the study plans of other majors - even in the freshmen year. It is therefore important, and the College requires, that each student plan his/her academic program and have it approved by a desig-
nated adviser in the College of Engineering. New students must attend the University’s Orientation program. They are assigned an engineering adviser during this program and receive advisement for their first semester at that time. The student and adviser jointly work out a plan of study which meets both the student’s career objectives and the College of Engineering’s degree requirements. The advisers maintain the College of Engineering’s student records.

While the College provides advising services to assist students with academic planning, the responsibility for seeing that all graduation requirements are met rests with the students. A copy of the Student Academic Support System (SASS) report may be had upon request.

The College of Engineering requires all undergraduates to apply for graduation the semester prior to the anticipated graduation term. Necessary forms and instructions can be obtained in the Advising Office.

Departments & Programs

The supervision of the academic programs for the College is the function of the six administrative departments together with several coordinators. The departments are responsible for the professional programs in engineering and engineering science. Each department is responsible for programs, faculty, laboratories and students assigned to it.

Chemical Engineering

This department offers coursework and study in all areas fundamental to Chemical Engineering. Topics included are thermodynamics, fluid flow, heat transfer, mass transfer, separation processes, chemical reactors, instrumentation and process control, economics of production, chemical engineering optimization, computer methods, computer-aided design techniques, and process plant design. Courses, together with mathematics, physics, chemistry, other interdisciplinary engineering fundamentals, English, and liberal arts courses, provide the basis for long range professional progress. Because of the many professional areas available for employment to the chemical engineer, the students are also required to take a number of electives from areas such as biotechnology, materials, and environmental engineering. These electives are designed to broaden the experience, and, therefore, the employment possibilities of our graduates. The department administers the Bachelor of Science in Chemical Engineering (B.S.Ch.E.), the Master of Science in Chemical Engineering (M.S.Ch.E.), the Master of Engineering (M.E.), and the Doctor of Philosophy in Chemical Engineering (Ph.D.) degrees.

The Chemical Engineering Department also offers a sequence of courses in biotechnology and biomedical engineering. Biotechnology involves the utilization of living organisms to produce or eliminate a variety of products (e.g., pharmaceuticals, food, and fertilizers).

Biotechnology And Biomedical Engineering

A sequence of courses in the engineering aspects of biotechnology is currently available within the Chemical Engineering program. Topics include applied microbiology, fermentation, enzyme technology, and pharmaceutical engineering.

Biomedical Engineering is a highly interdisciplinary program, drawing from all engineering disciplines, biology, physical sciences, biomedical and clinical sciences. An undergraduate Certificate in Biomedical Engineering is available to students in all areas of engineering. This Certificate is designed with two main objectives: 1) to prepare interested students for admission into medical school, and 2) to prepare students for graduate work in either Biomedical Engineering, other engineering disciplines, or the Biomedical Sciences. Opportunities for students to gain research experience exist within the College of Engineering and the Health Sciences Center. Please contact the Chemical Engineering Department for more information on these programs.

Civil Engineering and Mechanics

This department offers coursework and study pertinent to Civil Engineering, Engineering Mechanics, Materials Science, and Environmental Engineering. Topics included are structural analysis, design and optimization; metals, polymers, ceramics; solid and fluid mechanics, stress analysis, vibrations, continuum mechanics, finite element techniques, numerical methods; geotechnical engineering; transportation engineering; water resources engineering, environmental engineering, and coastal engineering. The department administers the Bachelor of Science in Civil Engineering (B.S.Ch.E.) and has a policy of mandatory academic advising of students for each school term. It also administers the Master of Science in Civil Engineering (M.S.Ch.E.) program, and a design oriented professional engineering Master of Civil Engineering (M.C.E.) program. These Master’s programs can be completed with all evening coursework. As applicable, the department administers the M.S.C.E., M.S.E., M.C.E., M.E., M.S.E.S. and the Ph.D. in Civil Engineering programs. The Department of Civil Engineering and Mechanics has a policy of mandatory academic advising of students for each school term.

Computer Science and Engineering

This department offers coursework and study in all areas fundamental to Computer Science, Computer Engineering, and Information Systems. Topics dealt with are computer architecture and hardware design, software engineering, computer system organization, operating systems, algorithms and data structures, computer graphics, user interface, database systems, theory of computation and artificial intelligence.

The Department administers the baccalaureate degree programs in Computer Science, Computer Engineering, and Information Systems; the Master of Science degree programs in Computer Science and in Computer Engineering; and Ph.D. program in Computer Science and Engineering. Our research areas of faculty concentration are 1) computer architecture and VLSI design/testing, 2) artificial intelligence and expert systems, 3) software engineering, and 4) graphics/image processing/computer vision.

Consulting facilities available to students in the Department include several microprocessors and design laboratories for hardware-oriented studies, several personal computer laboratories for general use in programming assignments, and a substantial number of graphics-oriented personal computers. The Department also runs a research-oriented network consisting of Intel Hypercube, TI Explorer, a number of AT&T 382 machines, a number of SUN workstations, and special purpose image and graphics processors. In addition, the Department has access to a large IBM mainframe facility run by the University Computing Center.

Electrical Engineering

This department offers study in all areas fundamental to Electrical Engineering and the electrical sciences: circuit analysis and design, electronics, communications, computer engineering, electromagnetic theory, controls, solid state, systems analysis, digital circuit design, etc. Basic concepts are augmented with well-equipped laboratories in networks, electronics, digital systems, electromechanics, microwave techniques and communications. In addition, a general purpose computer facility, a microprocessor laboratory and a microelectronics fabrication laboratory are available to undergraduate and graduate students. The department administers the Electrical Engineering option (program) of the Bachelor of Science in Engineering (B.S.E.) degree program, the Bachelor of Science in Electrical Engineering (B.S.E.E.) degree program, as well as the Master of Science in Electrical Engineering (M.S.E.E.) program which is also available to evening and off-campus students. As applicable, the department administers the M.S.E.E., M.E., M.S.E.S. and the Ph.D. in Electrical Engineering programs.

Industrial and Management Systems Engineering

This department offers study pertinent to the design, evaluation and operation of a variety of industrial systems, ranging from the analysis of public systems to the operation of manufacturing plants. Topics include production planning and control, production and plant design, applied statistics, operations research, human factors and productivity, management sciences, etc. The department has excellent laboratory facilities which support class projects and research in microcomputer applications, computer-aided manufacturing, automation, and applications of robotics. The department administers the Bachelor of Science in Industrial Engineering (B.S.I.E.) degree program, as well as the Master of Science in Industrial Engineering (M.S.I.E.), and the Ph.D. in Industrial Engineering. Evening
and off-campus programs are available through the Master of Science in Engineering Management (M.S.E.M.) program. The department also administers the Industrial option in the M.S.E., M.E., and M.S.E.S. programs, as well as the manufacturing option in the M.S.E. program.

Mechanical Engineering

The department offers courses leading to the degrees of Bachelor of Science in Mechanical Engineering (B.S.M.E.), Bachelor of Science in Engineering (B.S.E.), Master of Science in Mechanical Engineering (M.S.M.E.), Master of Science in Engineering (M.S.E.), and Doctor of Philosophy (Ph.D.). Coursework includes basic science and mathematics, thermal and fluid sciences, material science, solid mechanics, dynamics, machine design, vibrations, instrumentation and automatic control.

Graduates have found employment in research, design, production, marketing, service, installation (contracting), maintenance and operation in such industries as mining, petroleum, paper, food, power, manufacturing, air-conditioning, defense systems, aerospace, data processing and communications.

Laboratories are available for basic instrumentation, thermal and fluid sciences, solid mechanics, data acquisition and control, CAD/CAE, vibrations, robotics and aerodynamics. A minimum cumulative GPA of 2.2 is required in all departmental courses for the awarding of a B.S.M.E. degree and only one "D" grade in departmental courses is allowed.

Engineering Core

Both the four-year and five-year curricula of the College of Engineering Bachelor of Science programs are founded on a common core of coursework which is required of all students. This coursework is designed to give each student a thorough foundation of knowledge on which specialization studies and a professional career can be based. Emphasis is placed on five key elements: development of communication skills, familiarity with the social sciences and humanities, a solid base in science and mathematics, a strong foundation in basic engineering sciences and applications and design experience in a field of specialization.

Each degree-granting department has developed a list of courses to provide key elements for the degree offered. While the specific courses will vary slightly from one department to another, the hours in each category will be approximately as follows:

- Non-technical Courses
  - Social Sciences, Humanities, Communications: 30 Sem. Hrs.
  - Departmental Specialization: 35 Sem. Hrs.
  - Special requirements exist for Chemical Engineering. Students selecting this field should make sure they familiarize themselves with these. Detailed information can be obtained from the responsible department or the College's Advising Office.

1. Non-Technical Requirements

Prospective Engineering majors must take six hours of Freshman English (ENC 1101, 1102) in their first two semesters.

Additional coursework in this category is required as specified in the individual curricula printed on pages which follow.

Students are advised to check the College of Engineering's list of "Approved Social Sciences and Humanities Courses" before enrolling. If a student desires credit for a course not on the list, she/he must obtain approval in writing from his/her engineering department chairperson or approved representative prior to enrollment.

In no case will credits be allowed for courses taken on an S/U basis. A minimum of eight credit hours of this coursework must be of 2000 level or higher. At least six credit hours must be taken in each of the Humanities/Fine Arts area and the Behavioral and Social Sciences area. (See the University's General Distribution Requirements.)

In selecting courses to meet the minimum requirements in the Social Sciences and Humanities each student should pick at least three hours of work which will satisfy 6A-10.30 (the "Gordon Rule"). It is required that non-technical studies have at least two courses (6 hours) taken in the same subject area in either Humanities/Fine Arts or Social Sciences. Students transferring from other colleges without having met ABET depth and breadth requirements must take additional Social Sciences/Humanities courses at USF to meet this requirement.

It is desirable that at least 24 hours of this coursework be taken in the first two years. Students are responsible for checking with their advisers to be sure that the specific courses they are taking meet the requirements of the Bachelor of Science in Engineering degree program. Students who transfer from a State of Florida community college with an Associate of Arts degree who have met that college's General Education Requirement will normally find that their General Education coursework satisfies the major portion - but not all - of the Social Sciences and Humanities core requirement.

Credit by Examination can be obtained for some of this coursework. CLEP General Examination credit, acceptable to the University, is accepted for the areas of English Composition, Humanities and Social Sciences. Credit for CLEP Subject Examinations and CEEB Advanced Placement Tests can be accepted when the subject covered is recognized to be equivalent to USF courses on the College of Engineering "Approved Social Sciences and Humanities Courses" list. Questions in this area should be directed to the Coordinator of Engineering Advising in the College's Advising Office.

2. Mathematics and Science Core Requirements

The student with a satisfactory high school preparation must take 35 credit hours of mathematics and science coursework. Some credit towards this core requirement can be obtained by passing applicable CEEB Advanced Placement Tests or CLEP Subject Examinations.

In mathematics this coursework consists of a Calculus for Engineers sequence (or a calculus sequence of equivalent level), Differential Equations, and additional hours of designated courses supportive of the student's selective field of specialization, as specified by the department. In the science coursework students must take the Physics with Calculus sequence and the General Chemistry sequence.

Students whose high school preparation is insufficient to enter the Calculus for Engineers are required to take supplementary algebra and trigonometry prior to being considered for acceptance into the College. All students must take the math placement test.

3. Engineering Core Requirements

The prospective engineering major must take a minimum of 35 credit hours of engineering core (foundation) coursework drawn from the major disciplines. This coursework is designed to equip the student with a sound technical foundation for later, more advanced specialized coursework and the eventual formation of professional judgment. This coursework includes introductory studies in such areas as engineering analysis and computation, statistics, electrical engineering principles, thermodynamics, statics, dynamics, fluids, and properties of materials.

All but 6 credit hours of the engineering core are common to all areas of specialization (option) of the Bachelor of Science in Engineering and the Bachelor of Science in a Designated Engineering Field degree programs. The remaining 6 credit hours of coursework must be chosen with the advice of the departmental adviser to fit the field selected by the student. Details on this selection are available in the departmental office of the field selected, or in the College's Advising Office.

FOUR-YEAR PROGRAM – BACHELOR OF SCIENCE IN ENGINEERING DEGREE AND BACHELOR OF SCIENCE IN DESIGNATED ENGINEERING FIELD DEGREE

These engineering degrees are awarded upon successful completion of a program consisting of the required three areas of core coursework—minimum of 101 credit hours—which are described above, and an additional 35 credit hours of coursework in a designated field of specialization. Details covering specific fields are...
available on request from the responsible department, or from the College's Advising Office.

Programs are offered in the following disciplines of Engineering:

1. General

All departments of the College of Engineering offer the general option of the Bachelor of Science in Engineering degree. This program consists of the basic engineering core of approximately 100 semester hours plus additional credits to produce a total of 136, in a designated field of specialization. This program is tailored to meet needs of students who have very specific goals and wish to deviate from a prescribed disciplinary program. Since the program is tailored for individual students a curriculum cannot be published and, therefore, it cannot be accredited. Because of this it is not recommended for most students. Nevertheless, it can be a valuable program for students with special needs.

Pre-medical students may elect this option. It accommodates up to 32 hrs. of special pre-med coursework (Biology, Organic Chemistry, etc.) selected by student and adviser to meet normal admissions requirements of medical schools.

Pre-law students find this option permits a strong technical and legal undergraduate academic preparation.

2. Chemical Engineering

Students pursuing the Bachelor of Science in Chemical Engineering take coursework in advanced chemistry, thermodynamics, fluids, heat, and mass transfer, separation processes, reacting systems, instrumentation, and control. Students must also satisfactorily complete a design and/or case study as part of their program. Students in the biotechnology/biomedical option are also required to take additional courses in general biology, microbiology, and biochemistry. Special characteristics of the Chemical Engineering curriculum make it imperative that the students retain close contact with their adviser.

Students completing this program normally initiate their careers in process/manufacturing industries. Chemical engineers are found in administrative, technical, and research positions in these industries. Main products of these industries are petrochemicals, polymers, fibers, natural and synthetic fuels, electronic materials, fertilizers, pharmaceuticals, etc. Modern societal problems and technology have required the Chemical Engineering "know-how" to be applied in the biotechnology/biomedical and environmental areas. These fields depend on the chemical engineer, among others, for solutions. Chemical Engineering students are expected to have access to an IBM compatible personal computer during their last two years of study. Those who do not own one will be severely disadvantaged.

The schedule which follows indicates how a serious student who can devote full time to coursework can satisfy requirements in four academic years. Students without a solid foundation and those who cannot devote full time to academics should plan a slower pace.

### Bachelor's Curriculum

#### Chemical Engineering

<table>
<thead>
<tr>
<th>Semester I</th>
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<tbody>
<tr>
<td>ENC 1101</td>
<td>Freshman English I</td>
</tr>
<tr>
<td>MAC 3281</td>
<td>Engineering Calculus I</td>
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<td>General Chem. I</td>
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<td>EGN 1002</td>
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<tr>
<td>ENC 1102</td>
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<td>General Chem. II</td>
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<td>Gen Chem I Lab</td>
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<td>General Physics I</td>
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<td>Gen. Physics Lab I</td>
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<tr>
<td>MAC 3283</td>
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<tr>
<td>MAP 4302</td>
<td>Differential Equations</td>
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<td>CHM 2046L</td>
<td>Gen. Chem II Lab</td>
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<td>Gen. Physics II</td>
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<td>Gen. Physics Lab II</td>
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<tr>
<th>Semester III</th>
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<tbody>
<tr>
<td>EGN 3313</td>
<td>Statics</td>
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<tr>
<td>EGN 3373</td>
<td>Electrical Systems I</td>
</tr>
<tr>
<td>EGN 2210</td>
<td>FORTRAN</td>
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<tr>
<td>EGN 3343</td>
<td>Thermodynamics I</td>
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<td>EGN 3443</td>
<td>Statistics</td>
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<th>Semester IV</th>
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<tr>
<td>EGN 4450</td>
<td>Intro. to Linear Systems</td>
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<td>EGN 3365</td>
<td>Materials</td>
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<td>EML 3303</td>
<td>Mec Eng Lab I</td>
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<td>ECH 3702</td>
<td>Instrument Systems I</td>
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<tbody>
<tr>
<td>ECH 3264</td>
<td>Transport Processes I</td>
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<td>Transport Processes I Lab</td>
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<tr>
<td>ECH 4123</td>
<td>Phase &amp; Chemical Equilibria</td>
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<td>CHM 3210</td>
<td>Organic Chemistry I</td>
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<td>Organic Chemistry Lab I</td>
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<td>CHM 4412</td>
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<td>Transport Processes II</td>
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<td>Transport Processes II Lab</td>
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<td>Organic Chemistry II</td>
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<td>ECH 4605C</td>
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<td>Liberal Arts Elective</td>
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<tr>
<td>EMC 4314</td>
<td>Automatic Controls I</td>
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<tr>
<td>ECH 4415</td>
<td>Reacting Systems</td>
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<tr>
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<td>Reacting Systems Lab I</td>
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<td>EMC 4522L</td>
<td>Chem. &amp; Mech. Lab II</td>
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<td>Chemistry Elective</td>
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<th>Semester VIII</th>
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<tr>
<td>ECH 4615</td>
<td>Plant Design and Economics</td>
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<td>Technical Electives</td>
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<tr>
<td>Liberal Arts Elective</td>
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</table>

3. Civil Engineering

Students pursuing the Bachelor of Science in Civil Engineering program take designated traditional civil engineering and engineering mechanics coursework in solid mechanics, stress analysis, structures, materials, hydraulics, geotechnical, transportation, and engineering analysis. This coursework is supplemented by courses in one of the following areas of concentration, plus electives:

a. Environmental/Water Resources - courses in water treatment, waste water treatment, air pollution control and water resources.

b. Geotechnical/Transportation - courses in soil mechanics, foundations, transportation, and surveying.

d. Structural Engineering - courses in structural analysis and design, composite structures, using matrix and computer techniques. Students completing this option enter careers as engineers in the civil, structural, geotechnical, transportation and water resources, environmental, hydraulics, materials, disciplines. All of these fields share the need for knowledge in the areas of engineering mechanics, civil engineering, and materials science. Through choice of the proper area of concentration the student has the opportunity to channel academic studies specifically towards his/her career choice. Civil Engineering students commence their engineering careers in either industry, in engineering consulting firms, or in public service at the federal, state or local level. Initial assignments include planning, design and implementation of water resources, transportation and housing systems; regional planning, design and implementation of construction projects.

The schedule which follows indicates how a serious, well prepared student who can devote full time to coursework can satisfy degree requirements in four academic years. Students without a solid foundation and those who cannot devote full time to academics should plan on a slower pace.

Additional graduation requirements are 1) graduating seniors must take the Fundamentals of Engineering Examination and 2) students are allowed to graduate with one "D" grade in Engineering courses.

Bachelor's Curricula

Civil Engineering Option

Semester I
ENC 1101 Freshman English I 4
MAC 3281 Engr. Calculus I 4
CHM 2041 General Chemistry I 3
EGN 1002 Engr. Orientation 1
EGS 1113 Intro. Design Graphics 3
Approved Social Science Elective 3
15

Semester II
ENC 1102 Freshman English II 3
MAC 3282 Engr. Calculus II 3
CHM 2046 General Chemistry II 3
CHM 2045L Gen. Chemistry I Lab 1
PHY 3048 General Physics I 3
PHY 3048L Gen. Physics I Lab 1
Approved Social Science Elective 3
17

Semester III
PHY 3049 General Physics II 3
PHY 3049L Gen. Physics II Lab 1
MAC 3283 Engr. Calculus III 3
EGN 2210 FORTRAN for Engineers 3
EGN 3313 Statics 3
Approved Humanities Elective 3
Approved Social Science Elective 3
19

Semester IV
MAP 4302 Differ. Equations 3
EGN 3365L Materials Engr. I 3
EGN 3373 Intro to Elec. Sys. I 3
EGN 3343 Thermodynamics I 3
EGN 3443 Engr. Statics I 3
Approved Humanities/Social Science Elective 3
18

Semester V
EGN 3353C Basic Fluid Mech. 3
EGN 3321 Dynamics 3
EGN 3331 Mechanics of Materials 3
EGN 3331L Mech. of Materials Lab 1

Environmental Engineering 3
EGN 4420 Num. Mthds. of Analysis 2
EGN 4450 Intro to Linear Systems 17

Semester VI
CES 3102 Structures I 3
CWR 4202 Hydraulics 3
TTE 4004 Transportation Engr. I 3
CEG 4011 Soil Mechanics I 3
CEG 4211 Geotech Lab 1
GLY 3830 Geology for Engrs. 3
16

Semester VII
EGN 3613 Engineering Economy 3
CES 4056 Concepts of Steel Design 3
CES 4702 Concepts of Concrete Design 3
ENC 3210 Technical Writing OR 3
ENC 3213 Professional Writing 3
C.E. Design Requirement 2
C.E. Concentration Requirement 3

Semester VIII
CGN 3021L C.E. Lab 1
COM 4110 Speech for Professionals 3
CGN 412C Engr. Contracts Spec's & Ethics 3
C.E. Design Requirement 2
C.E. Concentration Requirement 3
Approved Humanities or Soc. Sci. Elective 3
18

Civil Engineering Concentration Requirements
(A student must complete a minimum of 9 hours, with at least 2 courses from one group.)

Water Resources
ENV 4502 Environmental Unit Operations 3
ENV 4101 Air Pollution Control 3
CWR 4103 Water Resources Engineering 3

Geotechnical/Transportation
CEG 4012 Soil Mechanics II 3
TTE 4005 Transportation Engineering II 3
SUR 3140C Engineering Land Surveying 3

Materials
EGN 4366 Materials Engineering II 3
EMA 4324 Corrosion of Engineering Materials 3
EMA 4703 Failure Analysis & Prevention 3

Structural
CES 4141 Matrix Structural Analysis 3
CES 4820 Timber & Masonry Design 3

Civil Engineering Design Requirements
(A student must complete a minimum of 4 hours with at least 1 course from the same area of concentration selected for 2 concentration requirements.)

Environmental/Water Resources
CWR 4810 Hydraulic Design 2
ENV 4432 Water Systems Design 2
CGN 4914 Senior Project 2

Geotechnical/Transportation
CEG 4801 Geotechnical Design 2
TTE 4821 Transportation Systems Design 2
CGN 4914 Senior Project 2
Materials
CGN 4851 Cement and Concrete Design 2
EMB 4704 Selection and Application of Materials 2
CGN 4914 Senior Project 2

Structural
CES 4618 Structural Design-Steel 2
CES 4704 Structural Design-Concrete 2
CGN 4914 Senior Project 2

Environment Engineering Concentration Within Civil Engineering

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>I</td>
<td>ENC 1101</td>
<td>Freshman English I</td>
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4. Computer Science and Engineering

Two undergraduate programs are offered within Computer Science and Engineering. They are: the Computer Engineering program (leading to a Bachelor of Science in Computer Engineering) and the Computer Science program (leading to a Bachelor of Science in Computer Science).

The Computer Engineering program emphasizes the design and utilization of computers and has a core of engineering and basic science courses like those of other engineering programs outside the Department of Computer Science and Engineering. The Computer Science program deals with the fundamental and formal aspects of computation.

Graduates from these programs follow fruitful careers in either scientific or business application of computers, as well as in the design of computer systems. They are often involved in the systems level definition of information processing complexes for both manufacturers of computers and for users. A wide and expanding variety of design and applications opportunities characterize this field. The rapid growth and continual change within this field makes it essential for students to acquire a broad foundation in applied mathematics and the physical sciences, and also to develop communications abilities and clear perceptions in the social sciences and the humanities. Research and development opportunities as a computer scientist and engineer, often following graduate education, are present in the areas of computer architecture and VLSI design, artificial intelligence, software engineering, digital data communications, robotics, fault-tolerant computing and testing, computer graphics, image processing and computer vision, and simulation.

The schedules which follow indicate how a serious, well-prepared student who can devote full time to coursework can satisfy degree requirements in four academic years. Students without a solid foundation and those who cannot devote full time to academics should plan on a slower pace.

Bachelor of Science in Computer Science Curriculum

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### Semester III (Summer)
- **PHY 3049** Physics II
- **PHY 3049L** Physics II Lab
- **MAC 3283** Engr. Calculus III
- **Social Science/Hum** 3

### Semester IV
- **EGN 3373** Elect. Sys. I
- **COT 3100** Intro. to Discrete Structures
- **ENC 3210** Tech. Writing
- **EGN 3613** Engr. Economy
- **MAP 4302** Diff. Equations

### Semester V
- **Science Elective** 3
- **STA 4442** Intro. to Probability
- **MAS 3103** Linear Algebra
- **COP 3002** Intro to Computer Science
- **COP 3000L** Intro to Computer Science Lab
- **Social Science/Hum** 3

### Semester VI
- **EEL 4851C** Data Structures
- **EEL 4705** Logic Design
- **EEL 4705L** Logic Design Lab
- **COP 3010** Programming Concepts
- **Technical Electives** 3
- **Social Science/Hum** 3

### Semester VII
- **CDA 4100** Computer Organization and Architecture
- **COP 4400** Computer Systems
- **COT 4210** Intro. to Automata Theory & Formal Languages
- **Free Elective** 3
- **Computer Science Elective** 3

### Semester VIII
- **EEL 4757** Microprocessor Principles & Applications
- **EEL 4743L** Microprocessor Lab
- **COP 4600** Intro to Sys. Prog.
- **COT 4400** Analysis of Algorithms
- **Computer Science Elective** 3
- **Free Elective** 2

### Semester IX
- **CIS XXXX** Software Engr.
- **Technical Elective** 3
- **Computer Science Electives** 9
- **XXX XXXX** Computer Ethics

### Bachelor of Science in Computer Engineering Curriculum

#### Semester I
- **EGN 1002** Engr. Orientation
- **MAC 3281** Engr. Calculus I
- **CHM 2041** General Chemistry I
- **CHM 2043L** General Chemistry I Lab
- **ENC 1101** Freshman English I
- **Social Science/Hum** 3

#### Semester II
- **MAC 3282** Engr. Calculus II
- **PHY 3048** General Physics I
- **PHY 3048L** General Physics I Lab
- **ENC 1102** Freshman English II

### Semester III
- **PHY 3049** General Physics II
- **PHY 3049L** General Physics II Lab
- **MAC 3283** Engr. Calculus III
- **Social Science/Hum** 3

### Semester IV
- **EGN 3373** Elect. Sys. I
- **COT 3100** Intro. to Discrete Structures
- **MAP 4302** Diff. Equations
- **EGN 3343** Thermo I
- **EGN 3313** Statics
- **ENC 3210** Tech. Writing

### Semester V
- **EEL 3302** Electronics I
- **EGN 3321** Dynamics
- **COP 3002** Intro to Computer Science
- **COP 3000L** Intro to Computer Science Lab
- **EGN 4450** Intro to Linear Systems
- **EGN 3443** Engr. Statistics I

### Semester VI
- **EGN 3365L** Materials Engr. I
- **EEL 4851C** Data Structures
- **EGN 3613** Engr. Economy I
- **EEL 4705** Logic Design
- **EEL 4705L** Logic Design Lab
- **EEL 4305** Electronics II

### Semester VII
- **CDA 4100** Computer Organization & Architecture
- **COP 4400** Computer Systems
- **COT 4210** Intro. to Automata Theory & Formal Languages
- **Social Science/Hum** 3
- **Computer Engineering Elective** 3

### Semester VIII
- **EEL 4757** Microprocessor Principles and Applications
- **COP 4600** Intro to Sys. Prog.
- **CIS 4910** Comp. Engr. Project
- **Computer Engineering Elective** 3

### Semester IX
- **EEL 4748** Microprocessor Based System Design and Application
- **CDA 4203** Comp. Sys. Design
- **CIS 4910** Comp. Engr. Project
- **Computer Engineering Elective** 3

### Bachelor of Science in Information Systems Curriculum

#### Semester I
- **ENC 1101** Freshman English I
- **MAC 3233 or 3281** Calculus I
- **ACG 2001** Elem. Accounting I
- **Science Elective** 3
- **Humanities/Social Science Elective** 3

#### Semester II
- **MAC 3282** Engr. Calculus II
- **PHY 3048** General Physics I
- **PHY 3048L** General Physics I Lab
- **ENC 1102** Freshman English II
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5. Electrical Engineering

Students pursuing the Electrical Engineering option of the Bachelor of Science in Engineering program or the Bachelor of Science in Electrical Engineering program take designated coursework in network analysis, electronics, communications, electromagnetic theory, control systems, microelectronics and microprocessors. This coursework is supplemented by electives in many specialized areas of electrical engineering.
6. Industrial Engineering

Students pursuing the Bachelor of Science in Industrial Engineering degree program take designated, specialized coursework in industrial processes, work analysis, production control, facilities design, operations research, human factors, computer simulation, quality control, and robotics and automation. This coursework is supplemented by engineering electives and comprehensive industrial engineering design projects.

Students completing this program are prepared for graduate study or for careers in a broad range of industries, business, and public service areas. The strength of industrial engineering lies, in part, in its breadth and the applicability of its common body of knowledge in a wide variety of enterprises. Students may be involved in traditional areas of manufacturing and production, or state-of-the-art functions in automation and robotics. The same engineering principles are also applied to business organizations, service delivery systems, and governmental administration.

The current departmental policy is to allow only one "D" in each of the following categories: non-technical core, mathematics-science core, and engineering core. No "D" grades are allowed for any of the upper division Industrial Engineering courses (prefix EIN and ESI).

The schedule which follows indicates how a serious, well-prepared student who can devote full time to coursework can satisfy degree requirements in four academic years. Students without a solid foundation and those who cannot devote full time to academics should plan on a slower pace.

Bachelor's Curriculum

Industrial and Management Systems Engineering

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<tbody>
<tr>
<td>EGN 3365L</td>
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<td>EGN 4450</td>
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<tr>
<td>EIN 4312L</td>
<td>Work Analysis 3</td>
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<tr>
<td>EGN 3375</td>
<td>Intro. to Electrical Systems I 3</td>
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<tr>
<td>EIN 4411L</td>
<td>Manufacturing Processes 3</td>
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<td>AGS 3074</td>
<td>Managerial Acct. for Engineers 3</td>
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<td>ESI 4221</td>
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<tr>
<td>EIN 4364L</td>
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<td>EGN 3353C</td>
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<td>EIN 4313L</td>
<td>Human Factors 3</td>
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<td>ESI 4523</td>
<td>Ind. Syst. Stimulation 3</td>
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<tbody>
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<td>ESI 4911</td>
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<td>Production Control 3</td>
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<td>Human Factors 3</td>
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<td>Ind. Syst. Stimulation 3</td>
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7. Mechanical Engineering

Students pursuing the Bachelor of Science in Mechanical Engineering program take coursework in thermodynamics and heat transfer; instrumentation and measurements, energy conversion systems, solid and fluid mechanics, dynamics, machine analysis and design, mechanical design, controls, and fluid machinery. This is supplemented by elective coursework in such areas as power plant analysis, refrigeration and air conditioning, mechanical design, advanced mechanics, heat transfer, robotics, propulsion, vibrations, computer-aided design, manufacturing, composite materials, and aerodynamics.

Students completing this option normally enter careers in a wide range of industries which either produce mechanical products or rely on machines, mechanical devices and systems to produce electricity, petroleum products, foods, textiles, building materials, etc. Mechanical Engineering graduates may follow careers in such
fields as transportation, power generation, manufacturing, instrumentation, automatic control, machine design, construction, refrigeration, heating and air conditioning, aerospace, defense and all the process industries (foods, textiles, petrochemicals, pharmaceuticals, etc.). There are career opportunities in this wide range of industries because mechanical equipment is required in all aspects of industrial production.

**Bachelor's Curriculum**

**Mechanical Engineering**

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<thead>
<tr>
<th>Semester I</th>
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<tbody>
<tr>
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<tr>
<td>MAC 3281</td>
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<tr>
<td>CHM 2041</td>
<td>General Chemistry I</td>
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<td>EGS 1113</td>
<td>Intro. to Design Graphics</td>
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<tbody>
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<td>ENC 1102</td>
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<tr>
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<td>Engineering Calculus II</td>
</tr>
<tr>
<td>CHM 2046</td>
<td>General Chemistry II</td>
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<td>General Chemistry I Lab</td>
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<td>PHY 3048</td>
<td>General Physics I</td>
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**Required Summer Term**

| MAC 3283  | Engineering Calculus III | 3 |
| CHM 2046L | General Chemistry II Lab | 1 |
| PHY 3049  | General Physics II | 3 |
| PHY 3049L | General Physics II Lab | 1 |
| EGN 2210  | FORTRAN for Engineers | 3 |
| **Total**  | **11** |

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<td>Engr. Statics I</td>
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<td>MAP 4302</td>
<td>Differential Equations</td>
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<tr>
<td>EGN 3343</td>
<td>Thermodynamics I</td>
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<td>EGN 1002</td>
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<td>Intro. to Linear Systems</td>
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<td>EGN 3321</td>
<td>Dynamics</td>
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<td>EML 4106</td>
<td>Thermal Systems and Economics</td>
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<td>Materials Engr. I</td>
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<td>System Dynamics</td>
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<td>EML 4041</td>
<td>Computer Simulation I</td>
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<tr>
<td>EML 3264</td>
<td>Kinematics and Dynamics of Machinery</td>
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<td>EML 3500</td>
<td>Mach. Anal. and Des. I</td>
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<tr>
<td>ECH 3702</td>
<td>Instrument Systems I</td>
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<tr>
<td>EML 4503</td>
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<td>Fluid Systems</td>
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<tr>
<td>EML 4142</td>
<td>Heat Transfer I</td>
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<tr>
<td>EML 3303</td>
<td>Mechanical Engineering Lab I</td>
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**Semester VIII**

| EML 4551C | Project Design I | 3 |
| Approved Technical Elective | 3 |
| Approved Technical Elective | 3 |
| Humanities/Soc Sci Elective | 2 |
| **Total**  | **17** |

**College Regulations**

1. **Humanities and Social Science Requirements**

While the Engineering undergraduate student is expected to complete certain requirements during the first two years of study which are directed toward the humanities and social sciences, and which are fulfilled by the completion of the Distribution requirements of the University (or General Education requirements at other institutions), the College of Engineering expects more of its prospective engineering graduates than this minimum. The engineer must not only be a technically competent individual, but must also be a person who can understand, adjust and contribute to the social environment.

Students who transfer from a State of Florida community college with an Associate of Arts degree and who have met that college's General Education Requirement will normally find that their General Education coursework satisfies the major portion - but not all - of the Social Science and Humanities Core Requirements.

2. **English Requirement**

Students who have been admitted to the College of Engineering may be required to take an examination in order to evaluate their preparedness in the use and understanding of the English language. The examination will be administered by the faculty of the University's English program.

Students evidencing an English deficiency will be required to initiate the necessary corrective programs, with the assistance of their advisers. It is recognized that such deficiencies can exist even though a student has met the University's minimum English requirements. Correction of any deficiency must commence the term after a student has been notified and must be completed prior to recommendation of the student for graduation by the faculty of the College.

See Continuation and Graduation Requirements below for minimum grade requirements.

3. **Mathematics Requirement**

Students who are pursuing an engineering program are expected to acquire a facility for the rapid and accurate solution of problems requiring the use of mathematics. This requirement includes the ability to translate physical situations into mathematical models. Students evidencing a lack of manipulative ability or of the ability to apply mathematics will be required to take remedial coursework in engineering analysis and problem solving that is over and above their regular degree requirements. Faculty of the College who encounter students who are deficient in their mathematical ability will refer such cases to the Advising Office.

4. **Continuation and Graduation Requirements**

The curricula for the programs offered by various departments of the College of Engineering may be divided into four categories: a) General Education or Non-Technical Requirements; b) Basic Science Requirements (i.e., Math, Chemistry and Physics); c) Engineering Science Requirements; d) Specialization Requirements. All undergraduate students in the College of Engineering are expected to maintain the minimum grade-point average (GPA) for each category specified by the department responsible for the program pursued. In no case will the minimum GPA for a category be less than 2.0. Note that key courses, including but not limited to Freshman English, Calculus, Physics, Engineering, and Science courses in the
FIVE-YEAR PROGRAM - LEADING TO BACHELORS AND MASTERS DEGREES

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 or Engineering Science and Master of Science in Engineering or 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 of the combined degrees do not differ from those for the two degrees pursued separately.

Students apply for admission to this program through their adviser, 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 with a 3.0 GPA.
2. A minimum score of 1000 on the verbal and quantitative portions of the Graduate Records Examination is expected.
3. Above-average performance in the chosen Engineering program is expected.

ENGINEERING TECHNOLOGY

(Discontinued effective Aug., 1994)

The Engineering Technology Program is being phased out over the next three years with the last courses scheduled for August, 1994. The programs described below are applicable to students who are currently enrolled.

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 engineers, and management. It is for this reason that the program consists of a balance of coursework in technical management, and 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 year. The typical four years of study thus exhibit approximately the following coursework distribution (in credit hours):

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Engineering Technology</td>
<td>53</td>
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<tr>
<td>Management &amp; related studies</td>
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<tr>
<td>Liberal Arts, Social Science and electives</td>
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<td>Mathematics and Science</td>
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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.

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 previously. 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.

Technology Admission Requirements

Bachelor of Engineering Technology - Computer Technology Program:
A. Freshmen:
1. TEST SCORES:
   - SAT - quantitative of 450 minimum; composite of 900.
   - ACT - mathematics of 18 minimum.
2. HIGH SCHOOL MATHEMATICS: Grade point average of 2.5 or better with no grade below "C".* Sufficient coursework to enter required Calculus sequence.
B. Transfer Applicants:
1. MATHEMATICS PREPARATION:
   a. Completed College Algebra with grade of "B" or better, OR
   b. Completed College Algebra and first applicable Calculus sequence with grade point average of 2.5; no grade below "C".*

2. OVERALL GRADE POINT AVERAGE: 2.5/4.0 minimum.

Bachelor of Engineering Technology (A.S. Degree* plus 60 Semester Hrs.)

Areas of Concentration:
A) Computers
B) Management

Junior Year: Semester I

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<th>Course Title</th>
<th>Semester Hrs.</th>
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<td>CGS 3060</td>
<td>SC Introduction to Computers &amp; Programming in Basic</td>
<td>3</td>
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<tr>
<td>ECO 2023</td>
<td>Economic Principles (Microeconomics)</td>
<td>3</td>
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<tr>
<td>EGN 3613</td>
<td>Engineering Economy I</td>
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<tr>
<td>ETI 4600</td>
<td>Intro. to Industrial Systems</td>
<td>3</td>
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<tr>
<td>ACG 2001</td>
<td>Financial &amp; Managerial Accounting</td>
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Semester II

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<td>Intro. to Computers II</td>
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<tr>
<td>ACG 2011</td>
<td>Financial &amp; Managerial Accounting</td>
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<tr>
<td>ECO 2013</td>
<td>Economic Principles (Microeconomics)</td>
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<td>SC COBOL Programming I</td>
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Senior Year: Semester I

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<td>STA 3023</td>
<td>Intro. to Statistics I</td>
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<td>COP 3200</td>
<td>SC FORTRAN Programming</td>
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<td>ETI 4614</td>
<td>Principles of Indus. Ops. I</td>
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<td>Approved Communications Course</td>
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Areas of Concentration (17 semester hours)

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<th>Course Title</th>
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<tr>
<td>CGS 3462</td>
<td>SC PASCAL Programming</td>
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<td>Intro. to Computers III</td>
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<tr>
<td>CGS 4465</td>
<td>SC Data Representation &amp; Manipulation</td>
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<tr>
<td>COP 3121</td>
<td>SC COBOL Programming II</td>
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<tr>
<td>MAR 3023</td>
<td>Basic Marketing</td>
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<tr>
<td>ETG 4931</td>
<td>Special Topics in Technology I</td>
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<tr>
<td>COP 3300</td>
<td>GPSS (or Technical Elective)</td>
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*One year non-Calculus Physics and one year Calculus additionally required if not completed in A.S. degree.

 Bachelor's Curriculum For Computer Technology

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<th>Semester I</th>
<th>Course Title</th>
<th>Semester Hrs.</th>
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<td>MAC 3233</td>
<td>Elem. Calc. I</td>
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<td>Financial &amp; Managerial Accounting I</td>
<td>3</td>
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<td>CGS 3060</td>
<td>Intro to Computers &amp; Programming in Basic</td>
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<td>MAC 3234</td>
<td>Elem. Calc. II</td>
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</tr>
<tr>
<td>ACG 2011</td>
<td>Financial &amp; Managerial Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>COP 3200</td>
<td>SC FORTRAN Programming</td>
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<td>EGN 3613C</td>
<td>Engineering Economy</td>
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<td>SC COBOL Programming I</td>
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<td>Prin. of Finance</td>
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<td>COP 3300</td>
<td>GPSS (or Technical Elective)</td>
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Certificate Programs

Certificate in Biomedical Engineering

The Certificate in Biomedical Engineering provides students an opportunity to gain an enhanced experience in a field of study and to receive recognition for their endeavors. Students in the program must fulfill the requirements for an undergraduate degree, such as Bachelor of Science in Chemical Engineering, and also meet the additional requirements of the Certificate program.

Chemistry/Biology (10 hours min.)
- BSC 2010 Biology II - Cellular Processes*
- BCH 3023 Biochemistry**

One of the following Organic Chemistry sequences:
- CHM 3210 Organic Chemistry I*
- CHM 3211 Organic Chemistry II*
- CHM 3200 Organic Chemistry**

Other *human sciences* (6 hrs. min.)
- PSY 3044 Experimental Psychology**

One of the following:
- PET 3310 Kinesiology
- PET 335I Exercise Physiology I
- EXP 4104 Sensory Processes
- PSB 4013C Neuropsychology

Engineering (9 hrs. min.****)
- EEL 4935 Special Electrical Topics
- ECH 5746 Intro to Biomedical Engineering

One or more of the following (to achieve 9 hrs. min. in area):
- EIN 4313L Human Factors
- EIN 5245 Work Physiology & Biomechanics
- ECH 5747 Selected Topics in Chemical Engineering Biotechnology
- ECH 5748 Selected Topics in Biomedical Engineering
(or other approved Engineering courses)

*These courses are typically required for Medical School admission. Note that there may be other required courses, such as a course in Human Genetics and the Organic Chemistry laboratories.
**These courses are not normally required for Medical School admission, but are often "highly recommended".
***This is a single semester course in Organic Chemistry. This course does not normally satisfy the admission requirements of most medical schools. It also does not count towards the Chemical Engineering degree (students must take the full year sequence).
****It is important to note that these engineering courses are above and beyond the courses necessary to satisfy the 136 hour requirement. That is, these courses will not also be countable as engineering electives towards the B. S. requirements for any of the departmental degree programs.

Certificate of Enhancement

The Certificate of Enhancement in (designated discipline) provides students an opportunity to gain an enhanced experience in their chosen field while pursuing an engineering degree and to permit them to receive recognition for the same requirements.

Requirements:
1. Enrolled in a Bachelor of Science degree program in a specified engineering discipline.
2. A minimum of 15 hours of additional elective courses, not included as a part of the B.S. degree, from an approved list. Courses must be taken on a letter-grade basis and a minimum of 9 hours must be in engineering courses.
3. A G.P.A. of 2.0 or greater for the 15 (plus) hours.
4. The student must receive the engineering degree to receive the Certificate of Enhancement.

Please contact the appropriate department chairperson to be accepted in the program.

Computer Service Courses

These courses marked SC are specifically designed for the non-engineering student.

Recognizing that the general purpose digital computer has made significant contributions to the advancement of all elements of the academic community and that it will have an ever greater impact in the future, the College of Engineering offers several levels of credit coursework, undergraduate and graduate, to serve students of all colleges in order that they may be prepared to meet the computer challenge.

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, PL/I, COBOL, PASCAL, BASIC, "C" and ADA.

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

College Facilities

Each of the departments has several modern well-equipped laboratories that are used for undergraduate teaching. Some examples of specialized equipment available include a scanning electron microscope, a gas chromatograph mass spectrometer, a 250,000 lb. material testing machine, several microprocessor base control systems, industrial robots, a low turbulence subsonic wind tunnel, computer numerical controlled machinery, metal organic chemical vapor deposition systems, and integrated circuits design workstations.

College Computing Facilities

The College of Engineering Computing Facilities are used to provide support for specialized engineering calculations above and beyond those which are available at the IBM based Central Florida Regional Data Center (CFRDC).

The College of Engineering operates a cluster of file and computer servers for students and faculty within the College. These consist of SUN servers and four Ardent multiprocessors mini-servers. The networks provide access from offices and laboratories, computer rooms and dial-in facilities. All machines are configured for E-mail, and access to Internet. Conventional asynchronous links to the campus central facility will shortly be supplemented with an Ethernet link.

In addition to the network facilities, the College operates open access P.C. labs. Two are available for undergraduate engineering students; a third smaller lab is reserved for graduate students and
faculty. Another open access P.C. lab is operated in conjunction with the Technology program.

The network facilities provide access either via Ethernet or the ISDN. Connections to offices, laboratories and classrooms are available on request, subject to budget priorities. The FEEDS studies are also networked to provide demonstrations for remote classes.

The College facilities run most of the standard engineering software. Languages include Fortran, Basic, Pascal, C Ada, several varieties of LISP and Prolog. Applications software includes mathematical libraries, suites of programs for VLSI design, chemical process design, civil and mechanical engineering design, robotics simulation, and circuit simulation and analysis. There are high resolution color terminals for use in combination with these activities, and for mechanical design there are four multiple display workstations with joysticks and digitizing pads. Similar arrangements are used for VLSI design.

Additionally, the Computer Science and Engineering Department within the College runs other facilities consisting of the three VAX machines, an Ethernet with SUN and AT&T 382 machines, and extensive microcomputer laboratories.

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 Career Resource Center’s 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 sophomore 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. The students receive a Cooperative Education Certificate upon successful completion of a minimum of two work assignments.

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 two other State engineering colleges. The Legislature continues to support this extension with appropriations. 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 1990-91 a sponsored research volume of approximately 12 million dollars passed through EIES (USF). All departments, faculty as well as students, contribute to this research at the University of South Florida. This program is administered by the Engineering Associate Dean for Research. 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.

In this way American companies, especially small firms, are able to capitalize rapidly on the results of scientific research and technological innovation and realize the increased productivity necessary to compete in the global marketplace.

STAC teams with researchers, inventors, entrepreneurs, start-up companies and established firms in solving business problems and overcoming their technical hurdles. STAC’s team brings diverse professional experience to bear on client projects— including Electrical and Mechanical Engineering, Fluid Mechanics, Computer Technology, Marine Chemistry, Oceanography, Medicine and Dentistry, Biomedical Engineering, Laser Optics, Information Science, Transportation, Anthropology, Manufacturing Management, Systems Analysis, Marketing and Strategic Planning, International Trade and Economic Development. Other experts located in universities, government agencies and the 300+ federal labs nationwide are frequently brought in to complement STAC’s in-house expertise. Services offered on a cost reimbursable basis include Feasibility Studies, Market Analysis, Team Building, Proposal Writing, Computerized Searching, Invention Counseling, and Project Management. The cornerstone of STAC’s technology transfer capabilities is its Information Research Center (IRC). IRC researchers have logged over 200,000 hours of connect time in STAC’s international array of more than 1,500 on-line databases that reference a half billion published articles, studies, patents, books and reports. They have assembled an extensive in-house library of journals, news bulletins and periodicals published by leading trade associations and special interest groups which provide data, statistics and news items that are often not distributed publicly. These research capabilities combined with rapid retrieval of documents enables STAC to locate efficiently critical technologies, marketing and business data, experts, facilities, and equipment to complete successfully project tasks.

As one of nine NASA Industrial Applications Centers, STAC also promotes the business benefits of the Space Program, from the ordering and procurement needs of the Agency to Small Business Innovation Research Grants (SBIR) for high tech research to microgravity experiments leading eventually to manufacturing in space. Capitalizing on our nation’s most valuable renewable resource STAC promotes the pursuit of science and engineering careers through outreach seminars to K-12 students who will eventually live and work in space.

Army & Air Force R.O.T.C.

For Engineering Students

The Engineering curriculum, coupled with involvement in the Army or Air Force R.O.T.C. program, requires a minimum of five (5) years to complete the degree requirements. Army and Air Force R.O.T.C. cadets must take 16 additional hours in either military science or aerospace studies. Additionally, Air Force-sponsored summer training camp is scheduled between the sophomore and junior year for Air Force cadets, and Army cadets attend an Army-sponsored summer training program between the junior and senior years.

Bi-County Center for Engineering

The Bi-County Center for Engineering was established on the USF at Sarasota campus in 1984. It serves the Manatee and Sarasota County area by providing local access to the College of Engineering program. Selected courses from all departments are offered in response to student needs. The professional programs in Electrical and Computer Engineering are areas of special emphasis. Students who begin as freshmen at Manatee Community College and complete the A.A. in Pre-Engineering are able to transfer directly into USF and complete the B.S. degree. Approximately 85% of the transfer students will be evaluated on an individual basis. All coursework taken at USF as part of a planned degree program is applicable to that program without any campus distinction. Students may move freely between the main campus in Tampa and the regional campus in Sarasota. For information, contact the Engineering Advising Office in Tampa or the Bi-County Center Office in Sarasota.

NASA STAC

(Southern Technology Applications Center)

STAC is a multi-state technology transfer organization headquar­tered in Florida with offices in the College of Engineering at the University of South Florida, and five other SUS universities. STAC’s primary mission is to identify promising technologies developed by engineers and researchers in university and federal labs, and to facilitate their commercialization through private sector businesses.
The College of Fine Arts exists in the atmosphere of a comprehensive University. It provides opportunities for students to develop their interests 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, 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 educational and artistic achievements;
3. Serving the public by providing and related activities by internationally recognized artists and ensembles.

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 music education, art, dance, music and theatre. In addition, it also offers courses in music education and art education in cooperation with the College of Education.

Fine Arts 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.

The list of prestigious artists who have been presented over the years by the College of Fine Arts is impressive and a sampling includes John Cage, the Guarnieri String Quartet, Lazar Berman, the New York Pro-Musica, Alvin Alley, Martha Graham, Marcel Marceau, and the Polish Mime Ballet Theatre. (More extensive lists of visiting artists and performing organizations appear 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.)

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, and Theatre, a Bachelor of Fine Arts degree in Theatre, a Bachelor of Music degree in Music, and a Bachelor of Science in Music Education.

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 provided he/she has successfully completed an audition or portfolio review in the appropriate department. 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 coursework 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 ongoing academic advising, referral services and assistance to all present and potential students. Academic advisers are provided for each of the departments in the College.

A student in the bachelor of arts degree program 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 three undergraduate degrees, the Bachelor of Arts (B.A.), attainable in the Departments of Art, Dance, and Theatre, the Bachelor of Fine Arts (B.F.A.) in Theatre and the Bachelor of Music (B.M.) in Music. The University requirements are presented in detail elsewhere in this catalog, but are briefly summarized here along with the college and departmental requirements:

1. 120-124 credits for the B.A., 124-126 credits for the B.M., and 154 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 fulfilled by (1) completing the University's General Distribution Requirements as explained in 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 Fine Arts, B.A., B.M., 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., B.M., 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 under Foreign Language Competency Policy 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 at the discretion of the Art Department.
   **Dance Requirements:** Completion of a minimum of 44 credit hours in the major, 21 credit hours of Free Electives (of which 17 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 84-86 hours in the major.
   **Music Education Requirements:** For Instrumental Specialization, the completion of a minimum of 19 credit hours of Music Education courses and 52 credit hours of Music courses. For Vocal Specialization, the completion of a minimum of 15 credit hours of Music Education courses and 56 credit hours of Music courses.
   **Theatre Requirements:** For the B.A., the completion of a minimum of 54-55 credit hours in the major with 24 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., B.M. 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 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.

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**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:**

Incomplete 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.

**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 an 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 minimum 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 coursework 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 refer to Academic Policies section for more information concerning the University’s S/U Grading policy.

**Dean’s List Honors**

See Academic Policies and Procedures, Programs and Services.

**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, and 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 that section in 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 pursue 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, Computer Images, Graphics (Lithography and/or Intaglio), Photography, Cinematography (Film), 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 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 of all majors.
    ARH 4100
    ARH 4350
    ARH 4530
    ARH 4470
    ARH 4430
    ARH 4796
    ARH 4450
    ARH 4937
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 4 semester hours each) and/or Critical Studies in Art History (4 semester hours each).
5. Art Senior Seminar, 2 credit hours.
6. Must demonstrate competency in French or German as described under Foreign Language Competency Policy of this catalog.
7. A maximum of 16 semester hours of art electives.

For 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)

1. Studio Concentration:
   ART 2202C (4)
   ART 2203C (4)
   ART 3001 (4)
   Plus: Two 4 semester hour classes from 3000 studio level (8)
2. Art History Concentration:
   ART 2202C (4)
   ART 2203C (4)
   ART 3001 (4)
   Plus: Two 4 semester hour classes from any of the following:
   ARH 4100 (4)
   ARH 4350 (4)
   ARH 4450
   ARH 4796
   ARH 4430
   ARH 4937

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 Alice Aycock, Linda Benglis, Jack Burnham, James Casebere, Robert Cohan, Michael Duff, Edward Fry, Adam Gopnik, The Gorilla Girls, Nancy Holt, Barbara Kuger, Donald Kuspit, Alfred Leslie, Komar Melamid, Maslon Riggs, Miriam Shapiro, Patterson Sims, Robert Stackhouse, Sidney Tillum, Martha Wilson, Robert Zakanowich, and Ellen Zimmerman.

ART MUSEUM

The USF Contemporary Art Museum presents a schedule of changing contemporary exhibitions in the Museum (FAM), in the Teaching Gallery in the Fine Arts building (FAB), and in the lobbies of Theatres I and II. The Art Museum has two triangular exhibition galleries and an open access collection storage area.

The art collection of the University of South Florida is composed of original graphics, drawings, photographs, and African and Pre-Columbian artifacts. Many of the prints and sculpture multiples in the collection were produced at USF's internationally recognized Graphicstudio established in 1968. Selections from this collection are loaned through the Art Bank program to museums and institutions throughout the United States.

The exhibition program focuses on contemporary American and European art and also showcases the work of faculty, students and alumni. The exhibitions and art collection serve as an integral part of the studio and art history curriculum of the Art Department and serve the students, staff and faculty of the university and Tampa Bay communities. Brochures and catalogues of major exhibitions are published by the Art Museum and includes scholarly critical essays by leading curators and scholars. Lectures, seminars, workshops and symposia on contemporary issues are presented regularly.

DANCE (DAN)

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

Concerts are presented each semester as well as workshops performances. Noted professional dancers and companies perform on campus and in the community providing students with the opportunity to study with visiting artists.

Requirements for the B.A. Degree

Performance Concentration

MODERN CONCENTRATION

(44 semester hours minimum)

DAA 2204 Ballet II
DAA 3700 Choreography I
DAA 3105 Modern Dance III
(Repeat for 6 cr. hrs.)
DAA 3205 Ballet III
DAA 3701 Choreography II
DAA 3480 Performance
(Repeat for 2 cr. hrs.)
**Ballet Concentration**

(44 semester hours minimum)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAA 4106</td>
<td>Modern Dance IV</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>(Repeat for 8 cr. hrs.)</td>
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</tr>
<tr>
<td>DAA 4702</td>
<td>Choreography III</td>
<td>2</td>
</tr>
<tr>
<td>DAA 4703</td>
<td>Choreography IV</td>
<td>2</td>
</tr>
<tr>
<td>DAA 4790</td>
<td>Seminar Project</td>
<td>1</td>
</tr>
<tr>
<td>DAN 2611</td>
<td>Music for Dance II</td>
<td>2</td>
</tr>
<tr>
<td>DAN 3590</td>
<td>Practicum in Dance Prod. I</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>(Repeat for 2 cr. hrs.)</td>
<td></td>
</tr>
<tr>
<td>DAN 4111</td>
<td>Survey History of Dance</td>
<td>3</td>
</tr>
<tr>
<td>DAN 4112</td>
<td>19 &amp; 20th Century Dance History</td>
<td>3</td>
</tr>
<tr>
<td>DAN 4170</td>
<td>Dance Senior Seminar</td>
<td>2</td>
</tr>
<tr>
<td>DAN 4906</td>
<td>Directed Study</td>
<td>1</td>
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</tbody>
</table>

**Dance Minor Program**

A minimum of 20 hours is required for a dance minor. Five hours must be in DAN courses. Ten of the 20 hours must be upper level (3000 and 4000) ballets. Studio Dance courses can be repeated only once toward minor degree.

**Courses for Lower Level**

Select from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>DAA 2104</td>
<td>Modern Dance II</td>
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<tr>
<td>DAA 3700</td>
<td>Choreography I</td>
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<tr>
<td>DAA 3105</td>
<td>Modern Dance III</td>
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</tr>
<tr>
<td>DAA 3205</td>
<td>Ballet III</td>
<td>3</td>
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<tr>
<td></td>
<td>(Repeat for 6 cr. hrs.)</td>
<td></td>
</tr>
<tr>
<td>DAA 3220</td>
<td>Ballet Variations</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>(Repeat 2 times)</td>
<td></td>
</tr>
<tr>
<td>DAA 3480</td>
<td>Performance</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>(Repeat for 2 cr. hrs.)</td>
<td></td>
</tr>
<tr>
<td>DAA 3701</td>
<td>Choreography II</td>
<td>2</td>
</tr>
<tr>
<td>DAA 4702</td>
<td>Choreography III</td>
<td>2</td>
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<tr>
<td>DAA 4206</td>
<td>Ballet IV</td>
<td>4</td>
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<td></td>
<td>(Repeat for 8 cr. hrs.)</td>
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<tr>
<td>DAA 4790</td>
<td>Seminar Project</td>
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<td>Music for Dance II</td>
<td>2</td>
</tr>
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<td>DAN 3590</td>
<td>Practicum in Dance Prod. I</td>
<td>1</td>
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<td></td>
<td>(Repeat in 2 cr. hrs.)</td>
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</tr>
<tr>
<td>DAN 4111</td>
<td>Survey History of Dance</td>
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<td>DAN 4112</td>
<td>19 &amp; 20th Century Dance History</td>
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<tr>
<td>DAN 4170</td>
<td>Dance Senior Seminar</td>
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</tr>
<tr>
<td>DAN 4906</td>
<td>Directed Study</td>
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**Courses for Upper Level (minimum of 10 hours required)**

Select from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>DAA 2000</td>
<td>Theatre Dance Styles</td>
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<tr>
<td>DAN 2100</td>
<td>Introduction to Dance - 6A</td>
<td>(3)</td>
</tr>
<tr>
<td>DAA 2100</td>
<td>Fundamentals of Modern Dance I</td>
<td>(2)</td>
</tr>
<tr>
<td>DAA 2104</td>
<td>Modern Dance II</td>
<td>(3)</td>
</tr>
<tr>
<td>DAA 2200</td>
<td>Fundamentals of Ballet I</td>
<td>(2)</td>
</tr>
<tr>
<td>DAA 2204</td>
<td>Ballet II</td>
<td>(3)</td>
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<tr>
<td>DAA 2500</td>
<td>Fundamentals of Jazz Dance</td>
<td>(2)</td>
</tr>
<tr>
<td>DAN 2610</td>
<td>Music for Dance I</td>
<td>(2)</td>
</tr>
<tr>
<td>DAN 2611</td>
<td>Music for Dance II</td>
<td>(2)</td>
</tr>
<tr>
<td>DAA 2704</td>
<td>Dance Improvisation</td>
<td>(2)</td>
</tr>
<tr>
<td>DAA 3800</td>
<td>Movement Theory &amp; Body Alignment</td>
<td>(2)</td>
</tr>
<tr>
<td>DAA 3105</td>
<td>Modern Dance III</td>
<td>(3)</td>
</tr>
<tr>
<td>DAA 3205</td>
<td>Ballet III</td>
<td>(3)</td>
</tr>
<tr>
<td>DAA 3220</td>
<td>Ballet Variations</td>
<td>(1)</td>
</tr>
<tr>
<td></td>
<td>1. Pointe Class</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Men's Class</td>
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</tr>
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<td></td>
<td>3. Character Dance</td>
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<tr>
<td>DAA 3480</td>
<td>Performance</td>
<td>(1)</td>
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<tr>
<td>DAA 3502</td>
<td>Jazz Dance</td>
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<tr>
<td>DAA 3503</td>
<td>Jazz Theatre Dance</td>
<td>(3)</td>
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<tr>
<td>DAN 3590</td>
<td>Practicum in Dance Production</td>
<td>(1)</td>
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<tr>
<td>DAA 3700</td>
<td>Choreography I</td>
<td>(2)</td>
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<td>DAA 3701</td>
<td>Choreography II</td>
<td>(2)</td>
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<td>DAA 4111</td>
<td>Survey History of Dance - 6A</td>
<td>(3)</td>
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<tr>
<td>DAA 4064</td>
<td>Modern Dance IV</td>
<td>(4)</td>
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<tr>
<td>DAA 4206</td>
<td>Ballet IV</td>
<td>(4)</td>
</tr>
</tbody>
</table>

The Teaching of Dance: Theory & Practice DAE 4300 (1)
Choreography III DAA 4702 (2)
Choreography IV DAA 4703 (2)
Selected Topics in Dance
1. Massage for Dance
2. Movement Lab

**Department Policy For Academic Progress**

A maximum of 17 credit hours of Dance electives may apply toward the dance degree. TPA 2200 or 2223 Theatre Crafts: Lighting, or Costume (3) is required of all dance majors and may apply toward Area II of the General Distribution Requirements, or non-major electives, or the 6 hour Special College Requirement.

Dance majors must enroll for 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 DAA 3480 Performance performing in at least two faculty directed concerts in their junior or senior year.

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

Entrance to all major technique courses is by faculty audition. Until the student is accepted into Modern Dance III or Ballet III he/she will be considered as a probationary dance major. DAA 2104 or DAA 2204 may be repeated only once for credit toward degree requirements.

Prospective majors are urged to 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 each 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 after being placed on probation 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 adviser 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.

The criteria are:
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 aesthetically acceptable level. Should a student fail to do so, the course(s) in which the student received a "C" grade or better may be repeated once for credit toward degree requirements.

For other non-major requirements see both Fine Arts College requirements and the University's General Distribution and graduation requirements.
Visiting Artists and Artists-in-Residence
By supplementing its excellent ongoing 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.M. Degree (Performance, Piano Pedagogy, Composition and Jazz Studies):
The music curriculum is designed for students gifted in the performance and/or composition of music. Candidates for a major in music are required to pass an entrance audition in their respective performance area. Composition candidates are required to submit appropriate scores and/or tapes of their compositions for faculty appraisal. All students admitted to the degree program must take a music theory diagnostic examination prior to scheduling music theory classes. Freshmen must pass this examination or enroll in a music fundamentals course which does not fulfill a requirement in the music major curriculum. Transfer students are required to take a similar placement test and enter at the appropriate level. Students may obtain dates and times for these examinations from the music department office.

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

General Requirements:
All students seeking a Bachelor of Music degree are required to (1) complete successfully the piano proficiency and music theory-literture requirements; (2) present a partial recital during the junior year (except composition majors); (3) present a full recital during the senior year (except music education majors); (4) present a record of satisfactory recital attendance through registration in MUS 2010 (see the specific requirements for MUS 2010 as set by the music faculty). Students must be enrolled in applied music studio during the semester of the recital. Exceptions to all departmental procedures must be authorized through the Director of the School of Music.

Promotion to the next higher level in applied music is made only upon the recommendation of a performance jury conducted by that concentration's faculty. Where appropriate for the degree, the student is required to complete a minimum of two semesters, but no more than three semesters at the 2000 or 3000 level of applied music. Failure to complete these levels within the three semester maximum brings automatic dismissal from the program. Students may repeat the 4000 level as necessary to fulfill the total credit hour requirement (3000 level for composition or music education). Credit for only 2 semesters of applied music at the 1000, 2000, or 3000, levels will be applied toward the degree.

Core Requirements for all Performance, Pedagogy, and Composition Concentrations (48-52 semester hours minimum):
Music Theory (22)

Music Theory
MUT 1111 (3) MUT 2116 (3) MUT 4571 (3)
MUT 1112 (3) MUT 2117 (3) MUT 4411 (3)
MUT 1241 (1) MUT 2246 (1) or
MUT 1242 (1) MUT 2247 (1) MUT 4421 (3)

Vocal Performance (2)

MUS 3201 (2)

Music Literature (3)

MUL 2111 (3)

Music History (8)

MUC 3300 (2) MUH 3301 (3) MUH 3302 (3)

Senior Seminar (1)

MUS 4935 (1)

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

All undergraduate students enrolled in applied music for 4 or 2 credit hours are required to be enrolled concurrently in a major ensemble appropriate to their performing medium.

Music Electives
Performance Concentration 10 hours
Piano Pedagogy Concentration 4 hours
Composition Concentration 10 hours

Core Requirements for Jazz Studies Performance and Jazz Studies Composition Concentrations (54-58 semester hours minimum):

Music Theory (26)

MUT 1111 (3) MUT 2116 (3) MUT 3641 (2)
MUT 1112 (3) MUT 2117 (3) MUT 3642 (2)
MUT 1241 (1) MUT 2246 (1) MUT 3353 (3)
MUT 1242 (1) MUT 2247 (1) MUT 3354 (3)

Music Literature (3)

MUL 2111 (3)

Music History (11)

MUH 3300 (2) MUH 3301 (3) MUH 3302 (3)

Senior Seminar (1)

MUS 4935 (1)

Elective Hours in Music (9)

Major Ensemble: Performance (8), Composition (4)

All students enrolled in applied music for 4 or 2 hours are required to enroll concurrently in a major ensemble appropriate to their performing medium.

Additional Requirements for Specific Concentrations:

Performance Concentration
A total of 32 credit hours of applied music major is required with a minimum of 8 hours to be completed at the 4000 level and concurrent registration in MUS 2010 (Recital Attendance).

Piano Pedagogy Concentration
(86 semester hours minimum):
The following requirements for the piano pedagogy concentration are in addition to the above performance concentration requirements:

Piano Pedagogy (8)

MVK 4640 (4) MVK 4641 (4)

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.

Jazz Studies-Performance Concentration
The following courses are required in addition to the core requirements:

MUT 3663 (2) MUT 3664 (2)

Applied music (major) through the 3000 level (min. of 24 hours).

In addition to the major instrument, Jazz Bass and Jazz Guitar majors are required to enroll for 4 credits in the corresponding double bass or classical guitar applied music lessons in addition to the major applied studies.

Jazz piano proficiency

Jazz Studies-Composition Concentration
The following courses are required in addition to the core requirements:

MUC 4241 (6) MUC 3231 (3) MUC 2221 (3)

Applied music (principal) with a minimum of 4 hours at the 2000 level (min. of 8 hrs.)

In addition to the principal applied music study, Jazz Bass and Jazz Guitar majors are required to enroll for 2 credits in the corresponding double bass or classical guitar applied music lessons in addition to the principal applied studies.

Jazz piano proficiency

Elective composition (6)
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 composition 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 designated by the composition faculty.

Major Ensemble (4)

All undergraduate students enrolled in applied music for 2 credit hours are required to be enrolled concurrently in a major ensemble appropriate to their performing medium.

Applied Music (Principal) (8)

A minimum of 8 credit hours of applied music is required with a minimum of 4 credit hours at the 2000 level and concurrent registration in MUS 2010 (recital attendance).

Composition Courses (30)

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

MUC 2221 (3,3) MUC 3401 (3) MUT 4311 (2)
MUC 3231 (3,3) MUC 3402 (3) MUT 4312 (2)
MUC 4241 (3)

and a minimum of 5 hours selected from:

MUC 2301 (2) MUC 3601 (3) MUC 4404 (3)
MUC 3441 (3) MUC 3602 (3) MUC 4501 (2)
MUC 3442 (3) MUC 4403 (3) MUC 3353 (3)

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

**MUSIC EDUCATION**

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

The music education curriculum is designed to serve students who wish to develop a high level of musical expertise and have a commitment to help develop similar musical potential in other people.

All students seeking a degree in music education are required to pass an audition in their respective performance area and to take a music theory placement test prior to registering for any music theory class. Students who do not pass the diagnostic test will be placed in a music fundamentals course which does not fulfill a requirement in the music major curriculum. All transfer students are required to take a theory placement test and enter at the appropriate level of study. Students may obtain the dates for these examinations from the music office.

Special requirements for all music education majors; successful completion of the piano proficiency requirements 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 last semester of enrollment in applied music.

Students are to present a record of satisfactory recital attendance through registration in MUS 2010 (see the specific requirements for MUS 2010 as set by the music faculty).

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

Note exceptions applicable to this program.

1. Instrumental Specialization (72 cr. hrs.)

Music Education courses (20 cr. hrs.)

MUE 2090 (2) MUE 3450 (1)* MUE 4311 (3)
MUE 3421 (1) MUE 3451 (1) MUE 4321 (2)
MUE 3422 (1,1) MUE 3460 (1)*** MUE 4332 (3)
MUE 3423 (1,1) MUE 3461 (1) MUE 4480 (2)

* Not required of woodwind majors
** Not required of brass majors

Music courses (min. 52 cr. hrs.)

- MUT 1111 (3) MUT 2117 (3) MUG 3300 (2)
- MUT 1112 (3) MUT 2246 (1) MUG 3301 (3)
- MUT 1241 (1) MUT 2246 (1) MUG 3302 (3)
- MUT 1242 (1) MUG 3111 (3) MUG 3101 (2)

Applied Music (Principal) 12 cr. hrs. with a minimum of 4 hours at the 3000 level and concurrent registration in MUS 2010.

Music electives (2)

Applied Music Secondary (Techniques - 3 cr. hrs.)

(One each: string, percussion, voice)

Major performing ensembles

(Minimum of one per semester of applied music - 6 cr. hrs.)

Graduating recital

Piano proficiency requirement

Other Fine Arts Requirement

Art, Dance, Theatre (min. 3 cr. hrs. to be selected from one or more of the other departments of the College of Fine Arts)

2. Vocal Specialization (72 cr. hrs.)

Music Education courses (16 cr. hrs.)

- MUE 2090 (2) MUE 3423 (1) MUE 4352 (2)
- MUE 3421 (1,1) MUE 3450 (1) or 3451 (1)*
- MUE 3422 (1) MUE 3460 (1) or 3461 (1)*
- MUE 4331 (3)

One hour courses must be repeated to achieve 16 cr. hrs.

*As determined by audition.

Music courses (min. 56 cr. hrs.)

- MUT 1111 (3) MUT 2116 (3) MUL 2111 (3)
- MUT 1112 (3) MUT 2117 (3) MUL 3300 (2)
- MUT 1241 (1) MUT 2246 (1) MUL 3301 (3)
- MUT 1242 (1) MUT 2247 (1) MUL 3302 (3)
- MUG 3101 (2)

Applied Music (Principal) 12 cr. hrs. through with a minimum of 4 hours at the 3000 level and concurrent registration in MUS 2010.

Applied Music Secondary (Techniques 2 cr. hrs.)

(One each: string, percussion)

Major Ensembles

(Minimum of one per semester of applied music - 6 cr. hrs.)

Music Electives (7)

Piano proficiency requirement

Graduating recital

Other Fine Arts Requirement

Art, Dance, Theatre (min. 3 cr. hrs. to be selected from one or more of the other departments of the College of Fine Arts)

3. General Music Specialization (72 cr. hrs.)

Music Education courses (15 cr. hrs.)

- MUE 3460 (1) or MUE 3461 (1)*
- MUE 3450 (1) or 3451 (1)*
- MUE 2090 (2)
- MUE 3421 (1) MUE 4311 (3)
- MUE 3422 (1) MUE 4330 (3)
- MUE 3423 (1) MUE 4352 (2)

One hour courses must be repeated to achieve 16 cr. hrs.

*As determined by audition.

Music Courses (min. 56 cr. hrs.)

- MUT 1111 (3) MUT 2116 (3) MUL 2111 (3)
- MUT 1112 (3) MUT 2117 (3) MUL 3300 (2)
- MUT 1241 (1) MUT 2246 (1) MUL 3301 (3)
- MUT 1242 (1) MUT 2247 (1) MUL 3302 (3)
- MUG 3101 (2)

Applied Music Principal 12 cr. hrs. with a minimum of 4 hours at the 3000 level and concurrent registration in MUS 2010.

Applied Music Secondary Techniques (3 cr. hrs.)

(One each: string, percussion, voice)

Major Ensembles

(minimum of one per semester of applied music - 6 cr. hrs.)

Major electives (7)

Piano proficiency requirement

Graduating recital
Other Fine Arts requirement
Art, Dance, Theatre (min. 3 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 (19-23 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 hours.

1. Core Curriculum: 11 hours
   - Music Theory (8)
   - Introduction to Music Literature (3)
   - or Music History (3)

2. Optional Concentrations:
   a. History-Theory-Literature
      - Music History and/or Theory and/or Literature (7-8)
      - Music Ensemble (2)
   b. Applied Music (Principal)
      - Performance Studio courses which may include up to 2 semester hours of class-studio (6-8)
      - Music Ensembles (2-4)
   c. Composition
      - Composition 9 hours (2)
      - Introduction to Electronic Music (1)
      - Composition Studio courses which may include one course of orchestration (6)
      - Music Ensemble (1)

3. Admission to all studio applied music courses is by audition and/or 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 Metropolitan Arts Trio, the Ars Nova (faculty) Wind Quintet and the Faculty Jazz Quartet. USF music graduates are found teaching successfully in public schools and universities around the country and performing in a variety of concert settings.

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. College Music Educators National Conference is an affiliate of the Music Educators National Conference and is open to all interested students. A student chapter of the International Association of Jazz Educators is active on campus.

Financial Aid:
The University has made available to highly qualified undergraduate students a number of music service awards. Awards are made following open auditions held in January, 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 Flute Scholarship, Mary Corey Bogdonas Scholarship, Steve Penovich Scholarship, Marjorie Roe Cello Scholarship, the Zbar Piano Award, and the V. A. Bridges Music Education Scholarship. Additionally, loans, grants and work programs are available to qualified University of South Florida students. Financial aid is granted on need, academic promise and talent.

Unique Learning Opportunities:
The School of Music 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 music education, choral, orchestral and wind ensemble areas, opportunities are available in jazz with performances with the jazz ensemble and chamber ensembles, a full range of jazz courses, and professional playing opportunities in the area.

Visiting Artists and Artists-in-Residence:
The School 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: Norman Dello Joio, Olly Wilson, Randall Thompson, Guarneri String Quartet, Virgil Thompson, Beaux Arts Trio, Walter Trampler, Boris Goldovsky, Fred Hemke, Gregg Smith, Lukas Foss, Norman Luboff, Maurice Andre, Phil Woods, Jean Pierre Rampal, David Baker, Adele Adison, John Cage, Byron Janis, Karel Husa, Louis Bellson, Leslie Bassett, David Samuels, Samuel Adler, Julius Baker, Gunther Schuller, Ransom Wilson, Robert Merrill, T. J. Anderson, Doc Severinsen, Hale Smith, Barthany Beardse, George Russell, Robert Shaw, Art Blakey, Toshiko Akiyoshi, Andre Watts, Christopher Hogwood

THEATRE (TAR)
The Department Major:
Through its curriculum and production program, the Department of Theatre offers seriously interested students the opportunity to prepare themselves for 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 with 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 selects one of the following areas of study: Performance, Design, Theatre Arts, or Theatre Education. To allow for greater preparation in design, a Bachelors of Fine Arts degree in Design is offered. The department also offers a minor in Theatre. For advanced upper level students a Theatre Honors Program of specialized courses is offered, often involving guest artist residencies.

Through the production program, which includes a variety of performances for the university community and the general public, the student is encouraged to participate in all aspects of theatre practice. The Department also offers opportunities to the advanced student to work with visiting professional companies.

Visiting Artists and Artists-in-Residence:
TheatreUSF actively promotes guest artists on campus. A partial list of the internationally known artists and the theatres with which they are affiliated includes: Edward Albee, Marge Barstow, Joseph Chaikin, Daniel Chumley, Martin Esslin, H. D. Flowers, Christopher Fry, John and Lisle Gale, Patrick Garland, Miriam Goldina, Boris Goldovsky, Henry Hewes, Jeff Jones, Bob Kelly, Mesrop Kesdekan, Michael Kirby, Arthur Lithgow, Marcel Marceau, Siobhan McKenna, Sam Mendes, Bob Moody, Eric Ovemayer, Estelle Parsons, Olga Petrovna, Ben Piazza, Sergei Ponomarov, Alan Schneider, Doug Watson, and Able and Gordon. These and others have helped develop departmental relationships with: London’s West End, The Archie Studio, Dublin’s Abbey Theatre, Broadway, Washington’s Arena Stage, San Francisco Mime Troupe, The Stratford Ontario Shakespeare Festival, The Welsh National Theatre, the BBC, the London Academy of Music and Dramatic Art, the Working Theatre, Coventry’s Belgrade Theatre, The Deutsches Thearte, Free Theatre of Munich, The Polish Theatre, The Chichester Festival, The Edinburgh Festival and The Spoleto Festival.

Requirements for the B.A. Degree with a major in Theatre
Of the total 124 credit hours needed for graduation in the Performance, Design, or Theatre Arts areas, the student following a
Performance area must take a minimum of 54 credit hours, and the student following the Design area or Theatre Arts area must take a minimum of 55 credit hours within the Department of Theatre. In addition, a maximum of 11 credit hours (Performance) and a maximum of 10 credit hours (Design or Theatre Arts) may apply to the theatre electives area. Of the 137-140 total credit hours needed for graduation in the Theatre Education area, the student must take a minimum of 54 credit hours within the Department of Theatre and a minimum of 37-40 credit hours within the College of Education.

The student may choose one of four areas for the B.A. degree: Performance, Design, Theatre Arts, or Theatre Education. Common to all is the following core:

**Core Curriculum (35 hours)**
- **First Year (11 credit hours)**
  - THE 2020 Theatre Fundamentals
  - TPA 2200 Theatre Crafts: Stagecraft
  - TPP 2110 Voice-Body-Improvisation
  - **Choice of one:**
    - TPA 2223 Theatre Crafts: Lighting
    - TPA 2232 Theatre Crafts: Costume

- **Second Year (10 credit hours)**
  - THE 3100 Theatre History
  - TPA 3004 Means of Visual Expression
  - TPP 3111 Workshop for Text Analysis

- **Third Year (8 credit hours)**
  - **Choice of two:**
    - THE 4320 Theatre of Myth and Ritual
    - THE 4330 Shakespeare for the Theatre
    - THE 4360 19th Century Theatre Revolution
    - THE 4401 O'Neill and After
    - THE 4442 Comedy of the Classic and Neo-Classic Stage
    - THE 4480 Drama - Special Topics
  - **plus 2 credits of THE 3925 for Pl***

- **Fourth Year (6 hours)**
  - **Choice of one:**
    - THE 4180 Theatre Origins
    - THE 4562 Senior Colloquium
  - **plus 2 credits of THE 4927 for Pl***

*Theatre Crafts Lab: TPA 2200 Theatre Crafts Stagecraft, TPA 2223 Theatre Crafts Lighting, TPA 2232 Theatre Crafts Costume has a laboratory (LAB) in addition to the regularly scheduled class sessions. LAB guidelines are available in the Theatre Office.

*Production Involvements: All Theatre Majors must complete 4 Pl's (Production Involvements) as part of their graduation requirements. Pl's must be taken under THE 3925 Production Involvement and/or THE 4927 Advanced Production Involvement for a total of 4 Pl's. Students may register for Pl credit beginning in the second semester of the Sophomore year and are expected to register each consecutive semester until completion of the four involvements. Pl assignments are made by faculty committee following the student's completion of a Pl request form and registration in the course. Pl guidelines are available in the Theatre Office.

*Audition and Portfolio Review: All students desiring admittance into the Scene Study sequence must audition and those entering the upper level design sequence must present a portfolio.

**Required Courses for Areas of Study:**

**Performance Area**

(54 hours minimum with core) - 19 hours as follows:
- **Third Year (10 hours)**
  - TPP 3500 Body Disciplines
  - TPP 3790 Voice Preparation
  - TPP 4150 Scene Study I
  - TPP 4152 Scene Study II

- **Fourth Year (9 hours)**
  - TPP 4140 Styles of Acting
  - TPP 4180 Advanced Scene Study
  - TPP 4920 Senior Workshop for Actors

**Design Area**

(55 hours minimum with core) - 20 hours Theatre, 4 hours Art as follows:
- **Second Year (3 hours)**
  - Complete Theatre Crafts sequence with TPA 2223 Lighting or TPA 2232 Costume
  - ART 3301C* Drawing I
*required in the Theatre Design Area, recommended to be taken upon completion of prerequisite TPA 3004 Means of Visual Expression

- **Third Year (9 credit hours)**
  - TPA 4208 Stagecraft and Drafting
  - Choice of two depending on design concentration:
    - TPA 3221 Light Design
    - THE 4264 History of Costume
  - THE 4266 Architecture and Decor

- **Fourth Year (8 credit hours)**
  - Choice of 2 depending on design area:
    - TPA 4020 Light Design
    - TPA 4040 Costume Design
    - TPA 4060 Scene Design

**Theatre Arts Area**

The Theatre Arts area is intended for the student who, in consultation with the Theatre Advisor, wishes to construct his/her own degree program from a broad spectrum of theatre courses. In addition to courses in performance and design, areas of study available are Puppetry, Playwriting, Stage Management, Directing, Literature and Criticism.

(55 hours minimum with core) - 20 hours as follows:
Two credit hours from any of the Performance sequence of courses (TPP) plus eighteen hours to be selected from the Theatre Department’s course offerings.

**Theatre Education Area**

The Theatre Education area prepares students for the Florida Drama Teaching Certification exam for Grades 6-12. In addition to Department of Theatre requirements students must meet the College of Education’s upper level entrance requirements and complete 37-40 credit hours in Education.

(54 hours minimum with core in Theatre Department)

**Note to students: The curriculum for this program is currently being revised. Students are responsible for getting a copy of the revised program during the 1992/93 academic year. It is each student’s responsibility to keep a copy of the revision to refer to for their graduation requirements under this catalog.**

**Freshman Lab and Production Involvement:**
- TPA 2200, TPA 2223 and TPA 2232 have a weekly 4 hour laboratory (LAB) in addition to weekly lectures (3 hours).
- Beginning with the second semester of the sophomore year, the Theatre major is expected to enroll each succeeding semester in either THE 3925 or THE 4927 (1 credit). All theatre majors must satisfy four Pl's before they are approved for graduation. The Pl's are assigned by the faculty and are usually construction or running crews or performance assignments. Each assignment entails a minimum of 55 hours.

**Requirement for a Minor in Theatre**

(23 hours minimum):
- THE 2020 Theatre Fundamentals
- TPA 2200 Theatre Crafts: Stagecraft
Requirements for the B.F.A. Degree in Design:

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.

Admission to the B.F.A. program is by portfolio presentation and acceptance by the Design 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:

- 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. (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.)

Design Concentration

- 7 hours in Creative Project and Execution:
  - THE 4905 or THE 5909 Directed Studies (Research & Design Creative Project)

- 7 hours in completion of third area of design and its prerequisite.

- 9 hours in the following:
  - TPP 4310 Directing I
  - THE 4900 Directed Reading
  - Choice of one of the following:
    - TPP 4150 Scene Study I
    - TPP 4230 Lab Workshop in Performance

- 7 hours of additional electives of which 6 must be outside the Department of Theatre.

Honors Program

The Honors Program is available to upper level majors who have a 3.0 overall GPA in the major, and who have achieved a comparably high level of artistic and/or scholarly achievement. A 6-8 credit one-year sequence of courses is offered to students accepted into the Honors Program.

- THE 4593 2 credit hours
- THE 4594 3 credit hours
- THE 4595 1-3 credit hours
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 New College culminates in a senior thesis and baccalaureate examination in the student's chosen area of concentration.

New College offers excellent academic facilities. A $6.1 million library opened on the campus in 1986, housing a collection presently numbered at over 200,000 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. New 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 studies at New 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, Child Development, Classics, Computer Science, Economics, Environmental Studies, Fine Arts, History, International Relations, Languages, Literature, Mathematics, Medieval & Renaissance Studies, Music, Philosophy, Physics, Political Science, Psychology, Public Policy, Religion, Sociology, Urban Studies.

Elementary through advanced studies in French, German, Russian, Spanish, Latin and Greek language and literature are available.

Study at New College leads to a wide range of careers. Graduates from New College go to medical, dental and law school. A large number do graduate work in the arts and sciences, leading to teaching, research and careers in government and industry. Others obtain advanced degrees in business, education, religion and architecture. Those not going on for advanced degrees have launched successful careers in journalism, fine arts, retailing, management, finance, environmental planning and a host of other fields. Quite a few have become entrepreneurs, founding businesses of their own based on skills acquired while students.

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 in late May. 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 New College without loss of scholarship support. By special petition and with summer study, exceptionally 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 demanding academic program and flexible curriculum. 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, a graded research paper from an English or history class, teacher's recommendation, and counselor recommendation. An interview is required for all applicants within a 100-mile radius of Sarasota and encouraged for all candidates. 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 New College from Florida's two-year community colleges.

New College tuition is the same as for other institutions within the State University System.

Both need-based financial aid and achievement-based scholarships are available to New College students, and about 67% of the students receive some type of direct financial assistance. Students must apply for need-based aid and for USF scholarships. Achievement 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 January 15. 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 Office of Admissions, 5700 N. Tamiami Trail, Sarasota, Florida 34243. Phone (813) 359-4269.

Student Life
New College is a residential college, with the majority of its students living on campus or in adjacent neighborhoods. All students attend full-time. Students are challenged to accept major responsibilities for the direction of their own affairs, including their 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 and participate in the community dining plan. Underclass students may choose college or non-college housing. A medical plan gives students access to a physician.
The College of Nursing is committed to the improvement of nursing and health care services through its educational programs, community service, and research activities. In order to carry out its commitment in nursing education, the college offers an upper division program that leads to a Bachelor of Science degree with a major in nursing.

There are two sequences in the undergraduate program, one for qualified students with no previous preparation in nursing (basic students), and one for registered nurses, who are graduates of diploma or associate degree nursing programs. The basic sequence is designed so that students who have completed the prerequisite/support courses 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 registered nurse sequence is designed so that registered nurses can enroll in the nursing major on a full-time basis on the Tampa campus, or on specific university campuses. Registered nurses who enroll as full-time students, the degree requirements can be completed in five to six semesters.

The program is accredited by the National League for Nursing and approved by the Florida State Board of Nursing. Graduates of the basic sequence are eligible to write the qualifying examination for licensure as a registered nurse by the State of Florida Board of Nursing. Graduates also may apply for licensure in other states.

Graduates of the undergraduate program have the educational background and necessary background for graduate study in nursing.

The College of Nursing encourages applications from qualified applicants of both sexes and from all cultural, racial, religious, ethnic, and age groups. The College of Nursing uses selective criteria for the admission of students. Limitations on enrollments are determined on the basis of availability of sufficient qualified faculty, laboratory and classroom facilities, and clinical teaching resources. Florida residents are given priority.

Professional Nursing Philosophy

Nursing is a profession and a discipline sanctioned by society. Its essential goal is health which is expressed within the context of personal, interpersonal and social systems. The focus for professional nursing is human beings interacting in a variety of environments for the purpose of pursuing health or a dignified death. Nursing is a transactional process which establishes mutually set goals with the individuals, groups, families and communities for the purpose of providing health related care of the sick, injured, and dying. The complex intellectual processes used by nursing are perceiving, thinking, relating, judging, acting and interacting. These processes require the use of a scientific body of knowledge to assess, plan, implement, and evaluate nursing care.

Concepts which are the central focus for the practice of professional nursing are human beings, society, environment and health. Human beings are unique and holistic, and are characterized by open systems of interaction with their environment. They are perceptual; purposeful; action, time and goal oriented. Human beings communicate through their use of language and other symbols that reflect individual, group, and societal differences.

Society encompasses individual, group, family and community values, norms and expectations. The United States is a pluralistic, democratic, dynamic society in continuous change as exemplified by increased technological advances. However, the freedom of individuals and groups is protected by the laws and the behavioral norms of this social system.

Environment is comprised of ecosystems which support the interactive process of the personal, interpersonal, and social systems. Nursing systems strive to promote, provide, and support healthy environments as an integral aspect of professional nursing practice.

Health is viewed within the context of dynamic life experiences of individuals, groups, families, and communities. Health implies continuous adjustment to stressors and challenges in the internal and external environment through use of resources in order to achieve maximum potential for optimum functioning. Health is influenced by cultural, social, economic, genetic, political factors as well as value systems and religious beliefs. Human beings have the right to quality health care, the obligation to engage in health practices and the freedom to make informed decisions about their health and health practices.

Nursing care is an integral component of health care delivery. Professional nurses assume various roles which involve independent, collaborative, interdependent, and dependent functions. Professional nurses provide health services in a variety of complex systems and are accountable for these professional services based on (1) a body of knowledge which is continuously being refined and expanded through nursing research; (2) a Code of Ethics; (3) standards of practice as determined by the profession; and (4) the Nurse Practice Act. Professional nurses provide leadership through participation in professional and community organizations. As responsible citizens, nurses contribute to the promotion of quality health care by participation as knowledgeable members of society in activities that influence the health of individuals, families, groups and communities.

The discipline of nursing is an integral part of the system of higher education and is responsible for the development and dissemination of knowledge. The discipline is also responsible for promoting and preserving the historical and philosophical foundation of the profession. Knowledge is developed through identification of models for systematic thought; constructing and testing theories for nursing; and conducting research. The discipline disseminates knowledge for nursing through scholarly publications and presentations; and through curriculums that prepare for entry into professional practice and for entry into areas of specialized practice and research. In these curriculums the teaching-learning process is a cooperative enterprise in which learners have the freedom to learn and teachers have the freedom to teach. Learning is viewed as a lifelong process of social, psychological, and intellectual growth essential for performing the functions of professional nursing.

UNDERGRADUATE PROGRAM TERMINAL OBJECTIVES

UPON GRADUATION, GRADUATES WILL:

1. Use the nursing process as the basis for nursing practice in primary, secondary and tertiary care settings to assist individual clients, families or groups of clients of all cultures and ages in the promotion and maintenance of health, prevention of illness, coping with actual and perceived threats to health, restoration of health, habilitation and rehabilitation.

2. Participate cooperatively with other health care professionals and community leaders in assessing community health needs and planning and providing essential services.

3. Practice within the legal/ethical parameters of professional nursing.

4. Utilize knowledge of concepts, principles, theories, and models underlying nursing practice to guide clinical decision making.

5. Utilize appropriate principles of leadership in providing leadership within the health care system of the profession.

6. Exercise clinical judgment needed to apply clinical data and research findings from nursing and related fields in nursing practice.

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. The undergraduate program in nursing is an upper division major at the University of South Florida. The University's general education distribution requirements and College of Nursing prerequisite/support courses can be completed on the Tampa campus or at any local community college, university or college that offers the general education distribution. These can be completed prior to transfer to USF for the nursing major.
Students who enroll at USF in the lower division are admitted to Undergraduate Studies. They must meet the requirements for admission to the University, and should follow the procedures for admission to the University in this Catalog.

Applications for admission to the University may be obtained by contacting the Office of Admissions, University of South Florida, Tampa, Florida 33620. College graduates and transfer students from other undergraduate nursing programs are also eligible for admission to the major on a space available basis. 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 is confirmed and enrollment permitted.

Basic students are admitted in the Fall semester of each year. The deadline for University application is January 4 of the year in which the student plans to enroll. 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 by February 1, prior to the Fall semester. College applications are available from: College of Nursing, Office of Student Affairs, University of South Florida, Tampa, Florida 33612.

Registered nurse students are admitted to the College on a more flexible basis contingent upon completion of admission requirements, and the availability of the appropriate sequence of nursing courses on the campus to which they are seeking to pursue coursework. The deadline for receipt of an application from registered nurse students is the University deadline date for the semester in which they intend to enroll. For more specific information, contact the College of Nursing Office of Student Affairs.

HONORS PROGRAM
An Honors Program in Nursing is available for highly qualified students. Emphasis is on individual research and creative scholarship and each student is required to complete and defend orally an undergraduate thesis.

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. Students are required to meet the University requirement for foreign language.

Admission Requirements
In order to be considered for full admission to the college, the applicant must:
1. Submit an application to USF by the appropriate deadline.
2. Submit an application and all supporting materials, including transcripts, to the College of Nursing by the appropriate deadline.
3. Maintain a minimum grade point ratio of 2.5 with a grade of "C" or better in each general education support course.
4. Complete prior to enrollment in the major all those general education and specific general education support courses required for admission to the major.
5. Complete all general education support courses with not more than two (2) repeated courses and not more than one (1) repeat of any given course.
6. Complete the College Level Academic Skills Test (CLAST) and the writing and computation course requirements of 6A10.30.
7. Complete an approved cardiopulmonary resuscitation (BCLS) course prior to enrollment.
8. Provide evidence of computer literacy.
9. Provide evidence of current licensure in Florida if enrolling in the program as a registered nurse.
10. Provide evidence of recent work in nursing if enrolling in the program as a registered nurse.

Admission to the College of Nursing for transfer students also requires a minimum grade point ratio of 2.5 with a grade of "C" or better in each general education support course. 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 is confirmed and enrollment permitted.

Conditional Admission Policy for Registered Nurses
RN students who have not completed their general education requirements may be admitted conditionally to the College of Nursing. Students may enroll in selected nursing courses while completing their requirements. Nursing courses may be selected from the following:
- NUR 3117 Introduction to Professional Nursing
- NUR 3007 Nursing Process
- NUR 3066C Client Assessment I
- NUR 3706 Nursing Concepts in Secondary Care
- NUR 3706L Nursing Practicum I
- NUR 3829 Ethical/Legal Aspects in Nursing and Health Care
- NUR 4165 Introduction to Research
- Electives

The following courses are restricted to fully admitted students: NUR4707, NUR4707L, NUR 4827C, and NUR 4943L. Students who are admitted conditionally must satisfy written contract requirements.

Specific Course Requirements
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. Suggested courses are also included. 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. 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 Office of Student Affairs (813-974-2191).

1. Mathematics/Quantitative Methods: completion of at least one course in mathematics that meets the Gordon Rule requirement.
   a. Mathematics - one course in college level algebra must be completed with a grade of "C" or better. CLEP subject exams are acceptable.
   b. Statistics - one course in statistics must be completed with a grade of "C" or better. STA 3122
2. Natural Sciences: minimum of 14 semester credits (excluding anatomy, physiology, and microbiology). Each course taken to-
ward meeting this requirement must have been completed with a grade of "C" or better. At least one course must include a laboratory or have a corequisite laboratory course. At least 6 semester credits must have been completed by the admissions application deadline.

a. Biology - minimum of 6 semester credits. Courses should include content in 1) cell theory, 2) biological transport, 3) genetics, 4) evolution, 5) phylogenetic survey of plant and animal kingdoms, 6) ecology, etc.
   BSC 2100, and BSC 2111. CLEP is acceptable.

b. Chemistry - A minimum of 6 semester credits. Courses should include content in 1) principles of chemistry, 2) structure of the atom, 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.
   CHM 2041, 2046 or *CHM 3030, 2031 can be partially met with CLEP.
   *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 recommended but not required.)

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.
   POS 2041, POS 2112, PAD 3003, POT 4204, POS 4424.

b. Individual and Social Community Behavior: completion of at least three courses with at least one course in psychology and 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 to full admission for the nursing major with a grade of "C" or better in each course.

a. Microbiology - one course. CLEP is not acceptable. APB 3110 or MCB 3030C. The ACT/PEP examination in microbiology is acceptable.

b. Anatomy and Physiology - one course. A combined course in anatomy and physiology which is equivalent to APB 3190 is acceptable for individual courses. The ACT/PEP examination in anatomy and physiology is acceptable.

c. Nutrition - one course. College of Nursing Challenge Examination or University of Florida correspondence course are acceptable. HUN 2201

d. Human Growth and Development (Life Span) - Must include birth through aging process to death. HUS 4020, DEP 3101 or FSC 3000 or DEP 3105 and GEY 3000. N.B. Each of the above courses are not offered every semester, therefore, the student should plan his or her enrollment schedule with care. CLEP is not acceptable.

CLEP Examinations

In accordance with University policies, College Level Examination Program (CLEP) general and subject examinations may be taken in several areas. CLEP examinations must be taken according to the University or community college policies related to CLEP. The CLEP general examinations apply toward the distribution requirements at USF, and successful performance results in credit for any one or all of the required areas. In addition, credit may be earned for a number of College of Nursing support courses, including: American Government POS 2041; English Composition ENC 1101, 1102; Biology BSC 2010, BSC 2111; General Chemistry CHM 2041, CHM 2046; and Statistics STA 3122. Additional information may be obtained from the Office of Evaluation and Testing, University of South Florida.

ACT/PEP and College of Nursing Examinations

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

1. College of Nursing - Nutrition Challenge Examinations: 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 contacting the College of Nursing Office of Student Affairs, University of South Florida.

2. Registered nurses who are graduates of diploma programs may receive 23 semester general elective lower level credits through successful completion of the ACT/PEP examinations in nursing. These credits do not apply toward meeting the University requirement of 40 upper level credits, or toward meeting the requirements of the upper level 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 offered by the College of Nursing. Additional information about the 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 23 semester general elective lower level credits for their previous nursing education.

4. Both basic 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, and up to 3 credits in microbiology through successful completion of the ACT/PEP examination in microbiology.

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 support courses (physical, biological, social and behavioral), upper level 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 level work (courses numbered 3000 or above). At least 60 semester hours must be earned from a baccalaureate-degree-granting institution regardless of credit hours transferred from a Community/Junior College unless prior written approval has been received from the college of the student's intended major.

Nursing Courses - Basic Baccalaureate Sequence

Junior Year (2 semesters)

NUR 3117 Introduction to Professional Nursing (3)
NUR 3615 Nursing Process I (3)
NUR 3615L Nursing Intervention I (2)
NUR 3666C Client Assessment I (2)
NUR 3829 Ethical-Legal Aspects in Nursing and Health Care (2)
NUR 3456 Nursing Process II (2)
NUR 3456L Nursing Intervention II (3)
NUR 3536 Nursing Process III (2)
NUR 3536L Nursing Intervention III (2)
NUR 3067C Introduction to Community Health Nursing (2)

Senior Year (3 semesters)

NUR 4165 Introduction to Research (2)
NUR 4285C Nursing Process IV (1)
NUR 4256 Nursing Process V (2)
NUR 4256L Nursing Intervention IV (4)
NUR 3835 Leadership-Management Aspects in Community Health Nursing (2)
NUR 4257 Nursing Process VI (2)
NUR 4257L Nursing Intervention V (6)
NUR 4258 Nursing Process VII (2)
NUR 4265 Nursing Process VIII (2)
NUR 4837 Leadership/Management and Role Transition (3)
NUR 4946L Preceptorship (6)

In addition to the requirements listed above, a minimum of 10 credits in upper level electives will be required for graduation: at least six (6) credits in upper level 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 4935, Selected Topics in Nursing, and/or NUR 4905C, Independent Study in Nursing, are currently used for this purpose).

Nursing Courses - Registered Nurse Sequence

(3 semesters)

NUR 3007 Nursing Process (2)
NUR 3829 Ethical-Legal Aspects of Nursing and Health Care (2)
NUR 3117 Introduction to Professional Nursing (3)
NUR 3066C Client Assessment I (2)
NUR 3706 Nursing Concepts in Secondary Care (4)
NUR 3706L Nursing Practicum I (2)
NUR 4165 Introduction to Research (2)
NUR 4707 Nursing Concepts in Primary Care (4)
NUR 4707L Nursing Practicum II (3)
NUR 4827C Leadership/Management Concepts for Nursing Practice (4)
NUR 4943L Nursing Practicum III (4)

In addition to the requirements listed, a minimum of 10 credits in upper level electives is required for graduation: at least six (6) credits in upper level 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 4935, Selected Topics in Nursing and/or NUR 4905C, Independent Study in Nursing are currently used for this purpose).
COURSES DESCRIBED IN THE UNIVERSITY OF SOUTH FLORIDA - 1992/93 UNDERGRADUATE CATALOG

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, 3041. GENERAL PHYSICS & LABORATORY (3:1) Credits separated by commas indicate unified 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 |
| CI  | 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 (Gordon Rule)

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:

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### Cross-Listing of Departments and Programs Alphabetically by College, Department/Program

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### College of Engineering

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

Computer Science and Engineering
- Computer Science Courses
- Electrical Engineering
- Engineering Technology
- Industrial and Management Systems
- Mechanical Engineering

- Courses:
  - EGN
  - ECH, EMC
  - CEG, CES, CGN, CWR
  - EES, EMA, ENV, TTE
  - CAP, CDA, CGS, CIS, COC, COP, COT, EEL, ESI
  - EEL, EFR
  - EIN, ESI
  - EAS, EMC, EML, ENU

### College of Fine Arts

- Art
- Dance
- Music

- Music Education
- Theatre

- Courses:
  - ARH, ART
  - DAA, DAN
  - MUC, MUG, MUH, MUL
  - MUN, MUO, MUS
  - MUT, MV8, MVK, MVP
  - MVS, MVV, MVW
  - MUE
  - THE, TPA, TPP

### College of Nursing

- Nursing

### College of Public Health

- Public Health

### Cross-Listing Departments/Programs

Alphabetically by Prefix

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### Categorical Listings

- CBH Psychology
- CCCI Criminal Justice
- CDA Computer Science Courses, Computer Science and Engineering
- CES Civil Engineering & Mechanics
- CGN Civil Engineering & Mechanics
- CGS Engineering Technology
- CHM Chemistry
- CHS Chemistry
- CIS Computer Science & Engineering
- CJT Criminology
- CLA Ancient Studies (Religious Studies), Classics
- CLP Psychology
- CLT Classics
- COC Computer Science Courses, Computer Science & Engineering, General Business Administration, Information Systems & Decision Sciences
- COE Cooperative Education
- COM Communication
- COP Computer Service Courses, Computer Science & Engineering, Library, Media & Information Studies, Mathematics
- COT Computer Science & Engineering
- CPO African & Afro-American Studies, Political Science
- CRW English
- CWR Civil Engineering & Mechanics
- DAA Dance, Physical Education Elective
- DAN Dance
- DEC Distributive & Marketing Education
- DEP Psychology
- EAS Civil Engineering & Mechanics
- ECH Chemical and Mechanical Engineering
- ECI Civil Engineering and Mechanics
- ECO Economics
- ECP African & Afro-American Studies, Economics
- ECS Economics
- EDA Administration/Supervision
- EDE Curriculum, Elementary Education
- EDF Foundations, Measurement-Research, Computers in Education
- EDG Art Education, Curriculum, Communication-Speech Communication, Elementary Education, Special Education
- EDH Higher Education
- EDM Curriculum
- EDS Elementary Education, Administration/Supervision
- EEC Elementary Education
- EED Special Education
- EEL Computer Science & Engineering, Electrical Engineering
- EES Civil Engineering & Mechanics
- EEX Special Education
- EGC Counselor Education, Rehabilitation Counseling
- EGI Special Education
- EGM Civil Engineering & Mechanics
- EGN Basic & Interdisciplinary Engineering
- EIA Industrial & Technical Education
- EIN Industrial & Management Systems Engineering
- EIP Industrial & Technical Education
- ELD Special Education
- ELR Electrical Engineering
- EMA Civil Engineering & Mechanics
- EMC Chemical & Mechanical Engineering
- EML Chemical & Mechanical Engineering
- EMR Special Education
- ENC English
- ENE Computers in Education, Content Specializations
- ENG English
- ENU Chemical & Mechanical Engineering
- ENV Civil Engineering and Mechanics
- ENY Zoology (Biology)
- EPH Special Education
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**COURSE LEVEL DEFINITION**

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UNIVERSITY OF SOUTH FLORIDA - 1992/93 UNDERGRADUATE CATALOG

COOPERATIVE EDUCATION

Associate Director: Ray Easterlin, Assistant Director: TBA.

AEROSPACE STUDIES

Professor: Lt Col Clemens E. Uptmor; Assistant Professors: Capt James J. Chambers, Capt Darryl E. Rogers, Capt Jeffrey M. Plate.

HONORS PROGRAM

Director: Stuart Silverman (Instructors for the Honors courses are recruited from among the University's outstanding teacher-scholars).

MILITARY SCIENCE

Professor: LTC Howard M. Abney, Jr.; Assistant Professors: MAJ Elton L. Fowler, MAJ J. A. Fraley, Jr., CPT Michael S. O'Neil, CPT Peter T. Owen.

OFF-CAMPUS TERM

Director: D. Keith Lupton.

COOPERATIVE EDUCATION

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

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

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

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

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

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

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

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

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

COE 4949 COOPERATIVE EDUCATION, 10TH TRAINING EDUCATION
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 today.

AFR 2001 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 cadet 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.

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 nonmilitary operations in support of national objectives. Emphasis is on the period from post WWII 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 (POC). The major areas of study for 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 LEADERSHIP AND MANAGEMENT-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 LEADERSHIP AND MANAGEMENT-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 strategy 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, the role of 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.
OFF-CAMPUS TERM

IDS 4900 DIRECTED READINGS (1-4)
PR: OCT Program approval. Open to all students approved for OCT Program. Provides students with community related readings. May be repeated up to 8 credit hours.

IDS 4910 DIRECTED RESEARCH (1-4)
PR: OCT Program approval. To provide students with community related research experience in areas of specific interest. May be repeated up to 8 credit hours.

IDS 4942 OFF-CAMPUS TERM SOCIAL ACTION PROJECT (1-4)
PR: OCT Program approval. May be repeated up to 4 credit hours. (S/U only.)

IDS 4943 OFF-CAMPUS TERM SPECIAL PROJECT (1-2)
PR: OCT Program approval. (S/U only.)

IDS 4955 OFF-CAMPUS TERM INTERNATIONAL PROGRAM (1-2)
PR: OCT Program approval. (S/U only.)

HONORS PROGRAM

University Honors Students must take all of the following including 2 semesters of either Thesis or Project (but not both).

IDH 2010 ACQUISITION OF KNOWLEDGE (3)
PR: 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 (3)
PR: IDH 2010. An introduction to western arts and letters from the perspectives of three period's terms (classicism, romanticism, and modernism), the relationship of ideas to art, the similarities and differences among the arts of a given period, and important differences between periods.

IDH 3350 NATURAL SCIENCES HONORS (3)
PR: IDH 2010. An exploration of current knowledge concerning fundamental principles in the Sciences, their potential for application and attendant ethical and philosophical questions.

IDH 3400 SOCIAL AND BEHAVIORAL SCIENCES HONORS (3)

IDH 3600 SEMINAR IN APPLIED ETHICS (3)
PR: IDH 2010. This course explores ethical issues related to selected topics such as Ethics of Technology, Ethics in Business, Bio/Medical Ethics, Personal Ethics Development.

IDH 4000 HONORS PROGRAM SEMINAR (3)
PR: IDH 2010. A course designed to prepare students for independent research. The class will be responsible for determining course content and requirements under the supervision of a faculty mentor. This course is taken for 2 semesters.

IDH 4950 HONORS PROJECT (3)
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. Course is taken for 2 semesters.

IDH 4970 HONORS THESIS (3)
PR: Senior Honors Standing. The development and public presentation of a senior thesis under the direction of a mentor. Course is taken for 2 semesters.

MILITARY SCIENCE

Students not attending on an Army Scholarship may take the 1000 and 2000 level courses with no obligation to the Army. Army Scholarships and Service obligation options are discussed in class.

MIS 1000 ORGANIZATION OF THE ARMY AND ROTC (1)
Introduction, purpose, and obligation of the Army and ROTC. Introduction to military customs and traditions; rank structure and the role of an Army officer.

MIS 1400 FUNDAMENTALS OF LEADERSHIP DEVELOPMENT (1)
Basic leadership techniques and principles, professional ethics, senior-subordinate relationships, leadership problems, basic counseling and management techniques.

MIS 2601 MILITARY TRAINING MANAGEMENT AND INSTRUCTIONAL TECHNIQUES (1)
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 of instruction will be an integral part of the course.

MIS 2610 LEADERSHIP ASSESSMENT (1)
Course will include an introduction to interpersonal skills required for effective leadership and diagnostic leadership assessment exercises. Topics will also include immediate first aid and injury prevention.

MIS 3302 SMALL UNIT OPERATIONS (3)
PR: Permission of Department. Provides training required by junior officer to direct and coordinate individuals and small units in the execution of offensive and defensive tactical missions. Also provides exposure to military weapons and communications systems found at this level.

MIS 3404 LEADERSHIP FUNDAMENTALS - TACTICS AND CAMP PREPARATION (3)
PR: Permission of Department. 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. Major emphasis during course is placed on physical training and field training exercises.

MIS 4002 ARMY AS A PROFESSION (2)
PR: Permission of Department. Designed to prepare cadets for duty as commissioned officers. Instruction centers around proficiency/familiarization with the military justice system, military administration, the Officer Professional Management System, international laws of war, and principles of management/leadership.

MIS 4421 SEMINAR IN MILITARY LEADERSHIP & MANAGEMENT (3)
PR: Permission of Department. Provides a basic understanding of the professional soldier's responsibilities to the Army and the nation. Attempts to improve ethical decision-making skills through an examination of the need for ethical conduct, greater awareness and sensitivity to ethical issues, and the opportunity to apply these abilities in real world case study situations. Included are seminars to acquaint the new lieutenant with his/her relationship to NCOs, company grade officers, and senior officers.

MIS 4930 ADVANCED DIRECTED STUDY AND RESEARCH (1-3)
PR: CI and permission of Professor of Military Science. Intensive individual study in a particular aspect of military science that is not covered in regular course offerings. Request for enrollment must be made prior to registration in the form of a written proposal. May be repeated for credit.
AFRICAN AND AFRO-AMERICAN STUDIES
Interim Director: N. C. James; Associate Professor: K. R. Glover; Visiting Faculty: B. Anthony-Davis; Other Faculty: F. U. Ohaegbula, P. Taylor.

AMERICAN STUDIES
Chairperson: J. B. Moore; Professors: J. B. Moore, R. E. Snyder; Associate Professor: R. A. Banes; Assistant Professor: P. J. Brewer; Other Faculty: S. A. Zystra.

ANTHROPOLOGY

ASTRONOMY
Director: C. A. Williams; Professor: C. A. Williams (Mathematics Department), Visiting Professor: G. Hammond.

BACHELOR OF INDEPENDENT STUDIES
Director: K. E. Kearney; Area Coordinators: J. Bell (BIS Humanities), H. Mushinsky (BIS Natural Sciences), P. Waterman (BIS Social and Behavioral Sciences).

BIOLOGY

CHEMISTRY

CLASSICS
Chairperson: A. L. Motto; Professor: A. L. Motto; Associate Professor: J. D. Noonan; Assistant Professor: J. S. Campbell; Courtesy Professor: A. Starr; Other Faculty: J. R. Clark, W. M. Murray, J. F. Strange, G. K. Tipps.

COMMUNICATION

COMMUNICATION SCIENCES AND DISORDERS

CRIMINOLOGY

ENGLISH

GEOGRAPHY

GEOLOGY

GERONTOLOGY

HISTORY

HUMAN SERVICES
HUMANITIES
Chairperson: A. J. Sparks; Professors: C. B. Cooper, S. L. Gaggi, T. B. Hoffman (Emeritus), H. Juergensen, G. S. Kashdin (Emerita), E. M. MacKay (Emerita), D. Rutenberg, A. J. Sparks, S. A. Zylstra; Assistant Professor: J. D’Emilio; Courtesy Professor: Lazlo J. Hetenyi.

INTERDISCIPLINARY SOCIAL SCIENCES
Director: J. B. Snook; Professor: S. M. D. Stamps, Jr.; Associate Professor: J. B. Snook; Lecturer: R. Gagan.

INTERNATIONAL STUDIES
Director: M. M. Amen; Professors: C. W. Arnade, H. W. Nelsen, M. T. Orr; Associate Professors: M. M. Amen, R. Barylski, A. Hechic, S. S. Northcutt, D. Slider; Assistant Professors: E. Conteh-Morgan, P. Ruffin; Assistant Professor Emeritus: J. W. Palm; Joint Appointments: Professors F. J. Ohaegbulam, S. D. Stamps, H. Vanden; Associate Professor: K. R. Glover, R. Khator; Assistant Professor: M. Milani.

LANGUAGE

LIBRARY AND INFORMATION SCIENCE
Interim Director: F. C. Pfister; Professors: J. A. McCrossan, F. C. Pfister, A. Prentice; Professor Emeritus: J. K. Gates, A. G. Smith; Associate Professors: B. El-Hadidy, J. M. Knego, H. M. Smith, T. C. Wilson; Courtesy Associate Professor: Y. L. Ralston; Assistant Professor: V. Gregory.

LINGUISTICS

MARINE SCIENCE

MASS COMMUNICATIONS

MATHEMATICS

MEDICAL TECHNOLOGY
Director: E. D. Olsen; Professors: F. E. Friedheim, E. D. Olsen; Associate Professor: S. H. Grossman, D. T. TeSterke; Assistant Professors: D. A. Dunigan, R. L. Potter; Courtesy Professors: K. W. Barwick (Baptist Medical Center), I. L. Browarsky (Tampa General Hospital), W. Burgert (Tallahassee Memorial Regional Medical Center), L. J. Davis (Bayfront Medical Center), N. M. Hardy (University Medical Center/Jacksonville), R. F. Holcomb (Florida Hospital), F. C. Holland (Baptist Medical Center), R. Poppiti, Jr. (Mount Sinai Medical Center); Courtesy Lecturers: G. Atz (Baptist Medical Center), S. Carrera (Mount Sinai Medical Center), J. Ferguson (Tampa General Hospital), A. Plagge (Tallahassee Memorial Regional Medical Center), P. Rogers (Florida Hospital), J. Schurie (Bayfront Medical Center), J. Sigler (University Medical Center).

PHILOSOPHY

PHYSICS

POLITICAL SCIENCE

PSYCHOLOGY

PUBLIC ADMINISTRATION
Director: W. J. Laramore, Jr.; Professors: J. E. Jierek, S. A. MacManus, D. C. Menzel; Associate Professor: W. J. Pamer, Jr.; Assistant Professors: J. L. Daly, M. Y. Mongkuo, D. Rahm.

REHABILITATION COUNSELING
Chairperson: C. M. Pinkard; Professors: J. F. Dickman, W. G. Ermener, J. D. Rasch; Associate Professors: P. Gross, M. J. Lamsdun, C. M. Pinkard, T. J. Wright.
### RELIGIOUS STUDIES

### SOCIAL WORK
Chairperson: B. L. Yegeidis; Professor: T. J. Northcutt, Jr.; Associate Professors: J. A. Giordano, T. U. Hancock, W. S. Hutchison, Jr., P. R. Newcomb, A. A. Smith, P. L. Smith, R. J. Wilik, B. L. Yegeidis; Assistant Professors: P. A. d’Oronzio, C. S. Roberts, K. Sohn, A. L. Strozier; Courtesy Faculty: Professor J. I. Kosberg; Associate Professor: M. L. Couler.

### AFRICAN AND AFRO-AMERICAN STUDIES

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<td>CPO 4204</td>
<td>Government and Politics of Africa</td>
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<td>CPO 4244</td>
<td>Government and Politics of East, Central, and Southern Africa</td>
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<td>HUM 3420</td>
<td>Arts and Music of the African People</td>
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<td>Africa in World Politics</td>
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<td>PUP 3313</td>
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### AMERICAN STUDIES

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<td>America at the Turn of the Century -6A</td>
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<td>AMS 3210</td>
<td>Regions of America</td>
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<td>AMS 3230</td>
<td>America during the Twenties and Thirties</td>
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<td>AMS 3302</td>
<td>Architecture and the American Environment</td>
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<tr>
<td>AMS 3501</td>
<td>Material Culture and American Society</td>
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</table>
ANT 3410 CULTURAL ANTHROPOLOGY (3)
PR: ANT 2000 or CI. Discussion of major methods of and orientations to the crosscultural study of the world’s peoples. Representative case studies are used to demonstrate variations in human adaptations and to encourage an appreciation of diverse values and lifestyles.

ANT 3511 BIOLOGICAL ANTHROPOLOGY (3)
PR: ANT 2000 or CI. Non-human primates, the fossil record and the biology of races are surveyed in order to understand the human animal as a product of biocultural phenomena. Anatomy, genetics, culture and evolution are emphasized.

ANT 3610 ANTHROPOLOGICAL LINGUISTICS (3)
PR: ANT 2000 or CI. The comparative study of language in its cultural context, especially emphasizing the role of language in the cultural interpretation of physical and social reality.

ANT 4034 THEORIES OF CULTURE (3)
PR: Senior standing with major in anthropology or equivalent. The major concepts that form the anthropological view of humanity are viewed in historical perspective. Basic ideas of the western philosophical tradition are analyzed from the Greeks to the 19th century when they became incorporated into the new discipline of anthropology. 20th century anthropological developments on these themes are considered.

ANT 4124 ARCHAEOLOGICAL FIELD METHODS (4)
PR: ANT 3100 or CI. Normally offered as part of a Summer Field Session. Students also take Florida Archaeology and Laboratory Methods in Archaeology. Emphasis on appropriate methods of archaeological excavation and recovery and recording of data.

ANT 4153 NORTH AMERICAN ARCHAEOLOGY - 10A (3)
PR: ANT 3100 or CI. Examination of the evidence regarding the human settlement of North America from its beginnings through the development of aboriginal culture to the period of European conquest. Emphasis on the comparative study of material culture at selected sites from all time periods. No field work is involved.

ANT 4158 FLORIDA ARCHAEOLOGY (4)
PR: ANT 3100 or CI. The content of prehistoric cultures such as PaleoIndian, Weeden Island, and Safety Harbor are reviewed and examined in terms of their temporal and spatial relationships to each other and the Eastern U.S. Normally offered as part of a Summer Field Session. Students also take Field Methods in Archaeology and Laboratory Methods in Archaeology.

ANT 4162 SOUTH AMERICAN ARCHAEOLOGY (3)
PR: ANT 3100 or CI. Focuses on the evidence regarding the human settlement of South America. Cultures such as the Inca, Chavin, Moche, Wari, Chimú are included. Emphasis on the environmental setting and the relationship between cultural ecology and the growth of civilization.

ANT 4163 MESOAMERICAN ARCHAEOLOGY (3)
PR: ANT 3100 or CI. The chronological sequence from its beginnings through Protohistoric development is described and analyzed. Cultures such as the Maya, Aztec, Mixtec, Zapotec, Olmec, and Toltec are included, with emphasis on the environmental setting and the relationship between cultural ecology and the growth of civilization.

ANT 4172 HISTORICAL ARCHAEOLOGY - 6A (3)
PR: ANT 3100 or CI. A survey and analysis of archaeology focused on the historic period. Laboratory research with data recovered from historic sites in addition to classwork.

ANT 4180 LABORATORY METHODS IN ARCHAELOGY (4)
PR: ANT 3100 or CI. Normally offered as part of a Summer Field Session. Students also enroll in Florida Archaeology and Field Methods in Archaeology. Data recovered in excavation are cleaned, catalogued, identified, and analyzed in the laboratory.

ANT 4181 MUSEUM METHODS (4)
PR: ANT 3100 and CI. Design, preparation and installation of exhibits in the Department of Anthropology Teaching Exhibit Gallery. Emphasis on theory, research, design, and construction. Discussion of museum-related issues such as administration and curation.
ANT 4226 ANTHROPOLOGY OF ART - 6A (3)
PR: ANT 3410 or CI. An examination of the relationship between the visual arts (sculpture, painting, masks, carving, etc.) and culture in non-Western societies. Emphasis on formal symbolic and functional comparative analysis of specific art styles based on cross-cultural materials. Consideration of diffusion and change in art forms, commercial and ethnic arts, and role of the artist.

ANT 4231 FOLKLORE - 6A (3)
PR: ANT 3410 or CI. Focuses on cross-cultural methods and techniques regarding the collection, classification, and analysis of such materials as myths, jokes, games, and items of material culture. African (or African-derived), Oceanic and Native American societies are surveyed.

ANT 4241 MAGIC AND RELIGION - 6A (3)
PR: ANT 3410 or CI. The crosscultural study of the social and cultural aspects of religion. Religious activities in traditional and modern societies will be discussed. Ritual behavior, religious practitioners and symbols of belief will be considered in light of their impact on the social, political or economic aspects of peoples' lives.

ANT 4309 ROLES IN CROSS-CULTURAL PERSPECTIVE (3)
PR: ANT 3410 or CI. Focuses on various theories, models and beliefs about male-female behaviors and interactions in human cultures throughout history and in various societies in the world today. (Also offered under Women's Studies.)

ANT 4305 VISUAL ANTHROPOLOGY (3)
PR: ANT 3410 or CI. The use of photographic techniques for the crosscultural recording and analysis of human activities. The study of ethnographic photography as both art and science, and the production of an anthropological study that expresses the goal of 'visual literacy.' Review and evaluation of the uses of visual techniques and the evidence they provide to the social scientist.

ANT 4312 NORTH AMERICAN INDIANS (3)
PR: ANT 3410 or CI. An examination of the evidence for the origin and antiquity of human beings in North America and of patterns of regional development until the period of contact with European colonists. Emphasis on varieties of ecological adaptation, social, political and religious systems, enculturation and worldview, folklore and visual art.

ANT 4316 THE UNITED STATES (3)
PR: ANT 3410 or CI. Special concerns include the American community, change and continuity in American values and lifestyles, and the historical background and recent manifestations of human problems in the United States.

ANT 4324 MEXICO AND CENTRAL AMERICA - 6A (3)
PR: ANT 3410 or CI. Focuses on the history, contemporary values and interpersonal relationships, and patterns of rural and urban life in Mexico and Central America.FEATURED: Special emphasis on the cultural influence of the Maya and on the nature of the human environment.

ANT 4340 THE CARIBBEAN - 6A (3)
PR: ANT 3410 or CI. Main themes include: the depopulation of the original population and the resettlement of the area via slavery, indenture, and migration; contemporary ethnic heterogeneity; economic problems of Third World microstates; development of a modern social and political consciousness. Religious diversity, music, the graphic arts, and the literature of the Caribbean will also be surveyed.

ANT 4367 THE MIDDLE EAST (3)
PR: ANT 3410 or CI. Delineates the environment and cultural ecology of the Middle East and analyzes how they have influenced the variety of subcultures of the region. The rise and fall of the "little tradition" of the enduring folk cultures will be analyzed. Contemporary culture change will be analyzed in a broad cultural context.

ANT 4432 THE INDIVIDUAL AND CULTURE - 6A (3)
PR: ANT 3410 or CI. The relationship between the individual and society is studied crossculturally. Main themes include childrearing practices, psychosomatic illness and curing. Discussion of theories and models of personality development with special reference to their applicability to the emerging field of cross-cultural mental health planning.

ANT 4442 URBAN LIFE AND CULTURE (3)
PR: ANT 3410 or CI. The crosscultural study of urbanization, urbanism and human problems associated with metropolitan environments. Emphasis on the ethnography of city life and its relationship to the practical applications of urban research.

ANT 4462 HEALTH, ILLNESS, AND CULTURE (3)
PR: ANT 3410 or CI. The study of health and human behavior in crosscultural perspective. Main themes include: the impact of disease on the development of human culture; comparative studies of curing practices; medical systems in their relationship to ideology. Emphasis on understanding the role of medicine, and the behavior of both practitioners and patients in modern societies.

ANT 4495 METHODS IN CULTURAL RESEARCH (3)
PR: CI. The stages in the development and execution of ethnological research are discussed and practiced. Literature search, hypothesis formation, selection of data collection techniques, elicitation of information, data analysis, and report presentation are stressed. Research design models from the case literature are studied and supervised research in the local community is designed and carried out.

ANT 4542 CULTURE AND HUMAN EVOLUTION (3)
PR: ANT 3511 or CI. A survey of the many ways in which behavior and technology influence the biology of prehistoric and modern human populations. Phenomena such as mating practices, urbanization, and dietary habits are related to humans as animals. Behavior genetics and sociobiology are covered.

ANT 4552 EVOLUTIONARY BIOLOGY OF THE PRIMATES (3)
PR: ANT 3511 or CI. A survey of non-human primates focusing on biological and evolutionary patterns. Anatomy, genetics, and evolution are stressed; major primate types are surveyed for their biological adaptation. Primate sociobiology is discussed.

ANT 4583 HUMAN VARIATION (3)
PR: ANT 3511 or CI. An overview of evolution and biological variation of human races. Anatomical, morphological, and physiological patterns are surveyed geographically. Cultural influences on racial biology are explored.

ANT 4586 PREHISTORIC HUMAN EVOLUTION (3)
PR: ANT 3511 or CI. A survey of the fossil record from the early primates through the ascent of Homo sapiens sapiens, focusing on the human lineage. Biosocial patterns and cultures of the past are also covered.

ANT 4620 LANGUAGE AND CULTURE - 6A (3)
PR: ANT 3610 or CI. Examines the relationships between language and culture in crosscultural perspective. Explores the extent to which languages shape the world views of their speakers. Emphasis on the nature and degree of fit between linguistics and other cultural systems of knowledge.

ANT 4750 APPLIED SOCIAL ANTHROPOLOGY (3)
PR: ANT 3410 or CI. A review of approaches applying the anthropological perspective to contemporary human problems. Particular emphasis placed on public policy issues in United States society. Discussion of the historical development of applied anthropology, problems of economic development of the Third World, and the ethics of applied research and intervention.

ANT 4753 LINGUISTIC AND SOCIAL INTERACTION - 6A (3)
PR: ANT 3610 or CI. Examines the role of language and other modes of communication in the social settings of speech communities. Student field projects focus on the crosscultural description and analysis of patterns of communication in ethnographic contexts.

ANT 4901 DIRECTED READING (1-4)
PR: CI. Individual guidance in concentrated reading on a selected topic in anthropology. Contract required prior to registration.

ANT 4907 INDIVIDUAL RESEARCH (2-4)
PR: CI. Individual guidance in a selected research project. Contract required prior to registration.

ANT 4930 SPECIAL TOPICS IN ANTHROPOLOGY (3)
PR: CI. Topics to be chosen by students and instructor permitting newly developing disciplinary special interests to be explored. May be repeated as topics vary.
ANT 4932 HONORS SEMINAR (4)
PR: Admission to the honors program in anthropology and Cl. Seminar designed to provide the honors student with an opportunity to present, discuss and defend his/her own research and to explore in-depth topics in several areas of anthropology.

ANT 4935 RETHINKING ANTHROPOLOGY - 6A (3)
PR: Senior standing with major in anthropology, or equivalent. Through discussion of readings and constructing calendars, students rethink and reevaluate anthropology as a discipline and the integration of its branches and specialty fields. Students develop and articulate their current images of anthropology.

ANT 4970 HONORS THESIS (3)
PR: Admission to the honors program, completion of the honors seminar and Cl. The student under the supervision of a faculty member will formalize, conduct, analyze, and report in writing a research project in anthropology. (S/U only.)

ANT 5904 DIRECTED READING (1-4)
PR: Cl. Individual guidance in concentrated reading on a selected topic in anthropology. Contract required prior to registration.

ANT 5915 INDIVIDUAL RESEARCH (2-4)
PR: Cl. Individual guidance in a selected research project. Contract required prior to registration.

ANT 5937 SEMINAR IN ANTHROPOLOGY (2-4)
PR: Graduate standing. Topics to be chosen by student and instructor.

MUH 4054 FOLK MUSIC (3)
PR: ANT 3410 or Cl. Examines ethnic musics in America, emphasizing the functions of folk music in rural and urban settings. Materials drawn cross-culturally are studied in both religious and secular forms. When feasible, classwork is supplemented by live performances. Technical knowledge of music is not required. (May not be counted for credit toward an Anthropology major.)

ASTRONOMY

AST 2005 ASTRONOMY OF THE SOLAR SYSTEM (4)
Introduction to the Astronomy of the Solar System. No Physics background assumed. Topics covered include properties of light, stellar coordinates, timekeeping, eclipses, formation and dynamics of the solar system, properties of the sun and planets, space exploration of planets and the moon, life on other worlds. This course is complementary to but independent of AST 2006. Either may be taken before the other or taken by itself.

AST 2006 STELLAR ASTRONOMY AND COSMOLOGY (4)
An introduction to Astrophysics and the structure of the universe. No Physics background assumed. Topics covered include properties of light, stellar coordinates, measurement of the physical properties of stars, formation, structure and evolution of stars, normal and peculiar galaxies, cosmology. This course is complementary to but independent of AST 2005. Either may be taken before the other or taken by itself.

AST 2032C ILLUSTRATIVE ASTRONOMY (3)
Constellations, use of small telescopes, etc., apparent motions of celestial objects, comets and meteors, seasons, weather. Current events in the space program. Planetarium and open sky demonstrations. Lec.-lab.

AST 3033 CONTEMPORARY THINKING IN ASTRONOMY (3)
PR: Junior or Senior Standing or Cl. Seminar designed to assist the layman, with no scientific background, in comprehending contemporary developments in Astronomy. Necessary background material is provided by the instructor and a text. Topics covered in recent years include the space program, pulsars, X-ray astronomy, black holes, extra-terrestrial life, interacting galaxies, cosmology.

AST 3044C ARCHAEOASTRONOMY (3)
PR: Jr. or Sr. Standing or Cl. Astronomical concepts and observational techniques used by prehistoric/ancient peoples for detecting, changing of seasons, constructing calendars, predicting eclipses, etc. Particular attention is given to Stonehenge, and to works of N.A. Indians, the Maya and Aztecs, and the Egyptians. Lec.-lab.

AST 3652 NAVIGATION (3)
PR: Some knowledge of geometry, algebra, and trigonometry. Timekeeping, use of sextant, constellations, celestial navigation with minimum equipment, spherical astronomy.

AST 3930 SELECTED TOPICS IN ASTRONOMY (1-4)
PR: Cl. Course content will depend upon the interest of the faculty member and student demand. May be repeated up to 8 credit hours.

AST 5506 INTRODUCTION TO CELESTIAL MECHANICS (3)
PR: MAC 3313 or MAC 3283 and some knowledge of differential equations, or Cl. The two-body problem, introduction to Hamiltonian systems and canonical variables, equilibrium solutions and stability, elements of perturbation theory.

AST 5932 SELECTED TOPICS IN ASTRONOMY (1-5)
PR: Senior or advanced junior standing or Cl. Intensive coverage of special topics to suit needs of advanced students.

BIOLoGY

APB 1150 PRINCIPLES OF BIOLOGY FOR NON-MAJORS (3)
Lectures and demonstrations of selected biological principles, usually taught by television. For non-majors only. No credit for Biology Majors.

APB 2200 ENVIRONMENT (3)
The application of basic principles of ecology to relevant problems and topics relating to man's environmental interaction through consideration of scientific and popular literature. For non-majors. May be taken by majors for free elective credit.

APB 2250 SEX, REPRODUCTION AND POPULATION (3)
The application of basic biological principles to relevant problems and topics in nutrition and drugs through the consideration of scientific and popular literature. For non-majors. May be taken by majors for free elective credit.

APB 3110 MAN, MICROBE AND MOLECULE (3)

BOT 2010C FUNDAMENTALS OF BOTANY (4)
PR: BSC 2010. Cell division, genetics, reproduction and development. Topics covered include photosynthesis, mitosis and meiosis, genetics, gene expression, and evolution. The course is designed for majors and has a laboratory associated with the lecture.

BSC 2011C BIOLOGY I - BIOLOGICAL DIVERSITY (4)
An analysis of biological systems at the organismal and supraorganismal levels: unity and diversity of life, organismal structure and function, and ecology. The course is recommended to be taken before Biology II (BSC 2010). This course is restricted to majors and has a laboratory associated with the lecture.

BSC 2932 SELECTED TOPICS IN BIOLOGY (1-4)
May be repeated.

BSC 3263 MARINE BIOLOGY (3)
PR: 1 year major's Biology. A survey of the marine environment, the types of organisms found inhabiting a variety of marine habitats, and the adaptations of the organisms to those habitats. Emphasis is placed on shallow water Florida environments.

BSC 4905 INDEPENDENT STUDY (1-3)
PR: Cl and CC. Specialized independent study determined by the student's needs and interests. The written contract required by the Department of Biology specifies the regulations governing independent study. May be repeated. (S/U only.)
population genetics, adaptations, speciation theory, faculty member.

Senior or advanced junior standing. May be repeated once. (S/U only.)

PR: 1 year major's knowledge

PR: PCB 3023C. Topics in modern developmental biology to be covered in lecture and through readings so as to gain a working knowledge and understanding of the cellular and molecular mechanisms of cell differentiation in both plants and animals.

PR: PCB 3063.

PR: PCB 3023C. Survey of the structure and function of cytoplasmic and nuclear components of plant and animal cells. Lec.-lab.

PR: PCB 3023C or MCB 3030C. Course will emphasize the biological principles involved in the vertebrate immune response. It will present the homeostatic, defense, and detrimental aspects of the immune system in terms of basic cellular and molecular mechanisms. Techniques will be described to familiarize the student with the types of immunological tools available to the cellular and molecular biologist.

PR: ZOO 3203C, PCB 4043C. An emphasis on the evolutionary mechanisms that influence an organism's behavioral responses to environmental events. The theoretical framework is presented and analyzed. Intended for majors.

PR: PCB 3063. Detailed examination of DNA, RNA and protein synthesis; the effects of mutations on proteins, cellular control; selected aspects of viral, bacterial, and fungal genetics.

PR: PCB 3023C. Examination of factors such as mutation, migration, natural selection, and genetic drift which modify the genetic structure of populations.

PR: PCB 3023C. A comparative analysis of the physicochemical basis and evolution of nervous systems and sensory mechanisms.

PR: PCB 4743C. Study of the mammalian brain's structure and function, with an emphasis on the neuroanatomy, neuropharmacology, and neurophysiology of the human brain.

BOT 3373 VASCULAR PLANTS: FORM AND FUNCTION

PR: BSC 2010, BSC 2011. Introduction to the morphology, adaptation and evolution of vascular plants, integrating form and function to understand diversity.

PR: BSC 3373 identification and classification of native and naturalized flowering plants of Florida including historical, climatic and floristic aspects of plant communities. Conducted largely in the field. Lec.-lab. (Summer).

PR: BOT 3373. Comparative studies of and organ systems of fossil and present-day vascular plants. Functional and phylogenetic aspects stressed. Lec.-lab. (Fall semester, even years).

PR: BOT 3373 or MCB 3030C. A survey of the fungi with emphasis on their taxonomy, morphology, physiology and economic importance. Lec.-lab. (Summer).

PR: PCB 3023C. Fundamental activities of plants; absorption, translocation, transpiration, metabolism, growth, and related phenomena. Lec.-lab.

PR: BOT 3373. Identification and classification of the more interesting vascular plants of Florida; angiosperm evolution; principles of taxonomy. Conducted largely in the field. Lec.-lab. (Fall semester, odd years)

PR: BOT 3373. Study of the uses of plants by man for food, chemicals, fibers, and medicines.

PR: BSC 2010, BSC 2011, CHM 2045, CHM 2046, Junior standing. Study of agents that are produced by plants and that are psychoactive or psychoactive in humans or are used as remedies.

PR: BOT 3373, PCB 4043C. A field course in marine plants with emphasis on the biogeography and functional morphology. Field work will stress the ecological aspects of plants in a subtropical marine environment in Florida. Lec.-lab.

Each topic is a course in directed study under supervision of a faculty member.

Microbiology

PR: MCB 3030C, PCB 3023C, PCB 3063, BCH 3023. A study of the biological, metabolic, and genetic phenomena pertinent to understanding the growth, development, ecology, regulation, and reproduction of microorganisms. The course emphasizes the interdependence of physiological and genetic approaches to microbiology. Lec.-lab.

PR: MCB 3030C. Survey of bacterial classification; detailed examinations of bacteria important to man in agriculture, industry and as pathogens. Lec.-lab.

PR: MCB 3030C, PCB 3023C, PCB 3063, BCH 3023. A study of the physiological, metabolic, and genetic phenomena pertinent to understanding the growth, development, ecology, regulation, and reproduction of microorganisms. The course emphasizes the interdependence of physiological and genetic approaches to microbiology. Lec.-lab.
MCB 4652C APPLIED AND ENVIRONMENTAL MICROBIOLOGY (4)
PR: MCB 3030C. A study of the applications of microbiology in industry, agriculture, the biomedical sciences, engineering, and environmental science.

MCB 4934 SEMINAR IN MICROBIOLOGY (1)
PR: Senior or advanced junior standing. May be repeated. (S/U only.)

MCB 5206 PUBLIC HEALTH AND PATHOGENIC MICROBIOLOGY (3)
PR: MCB 3030C. A comprehensive survey of pathogenic microbes responsible for disease in man and other animals and the impact of these infectious agents on the public health. These pathogenic forms will be studied with respect to their morphology, cultivation, mechanisms of pathogenicity, laboratory diagnosis, and epidemiology.

MCB 5265 MEDICAL MYCOLOGY (3)
PR: MCB 3030C. A survey of the yeasts, molds, and actinomycetes most likely to be encountered by the bacteriologists, with special emphasis on the forms pathogenic for man.

MCB 5606 SYMBIOLOGY (3)
PR: A course in microbiology, cell biology or biochemistry and advanced standing. Consideration of mutualistic and parasitic symbioses between microbes and various animal, plant and microbial hosts from cellular, biochemical, evolutionary and ecological perspectives.

Zoology

APB 3190 HUMAN ANATOMY AND PHYSIOLOGY (5)
PR: BSC 2010 and BSC 2011. Lectures and discussions on the structure and function of the human body. For non-majors. May be taken by majors for free elective by S/U only.

ENY 4004 INTRODUCTION TO ENTOMOLOGY (3)
PR: ZOO 3203C. An introduction to general aspects of insect morphology, development, and classification. The identification of local forms will be emphasized. Lec.-lab.

ENY 5505 AQUATIC ENTOMOLOGY (3)
PR: ENY 4004. Taxonomy, development, and ecology of aquatic insects with emphasis on local forms. Lec.-lab.

PCB 4184C HISTOLOGY (4)

PCB 4743C ANIMAL PHYSIOLOGY (4)
PR: PCB 3023C. Advanced presentation of mechanisms employed by animals to interact with their environment and to maintain their organization. Lec.-lab.

PCB 5306C LIMNOLOGY (4)
PR: Cl. An introduction to the physical, chemical, and biological factors of fresh water environments. Lec.-lab.

ZOO 3203C INVERTEBRATE ZOOLOGY (4)
PR: BSC 2010, BSC 2011. An introduction to the major invertebrate groups, with emphasis on local forms. Field work will be required. Lec.-lab.

ZOO 3713C COMPARATIVE VERTEBRATE ANATOMY (4)

ZOO 4503C ANIMAL SOCIAL BEHAVIOR (3)
PR: BSC 2010, BSC 2011, or senior standing. An introduction to comparative animal behavior (Ethology), with emphasis on communication, social use of space, and behavioral evolution.

ZOO 4693 ANIMAL EMBRYOLOGY (4)
PR: PCB 3023C. Structural and functional events involved in differentiation and morphogenesis. Lec.-lab.

ZOO 5235C PARASITOLOGY (4)
PR: ZOO 3203C. Fundamentals of animal parasitology and parasitism, the biology of selected animal parasites, including those of major importance to man. Lec.-lab.

ZOO 5425C HERPETOLOGY (4)
PR: ZOO 3713C, Cl. Major aspects of amphibian and reptilian biology emphasizing fossil history, evolutionary morphology, sensory physiology, life history and reproductive behavior. Lec.-lab. Field trip.

ZOO 5475C ORNITHOLOGY (4)
PR: Senior standing in Biology. The biology of birds. Field trips emphasize local avifauna. Lec.-lab.

ZOO 5555C MARINE ANIMAL ECOLOGY (4)
PR: PCB 4043C and ZOO 3203C. Investigation of energy flow, biogeochemical cycles, and community structure in marine environments. Lec.-lab.

CHEMISTRY

BCH 3023 INTRODUCTORY BIOCHEMISTRY (3)
PR: CHM 3200 or CHM 3211 and BCH 2010C. Introduction to the chemistry and intermediary metabolism of biologically important substances. Lec.-lab.

BCH 3023L BASIC BIOCHEMISTRY LABORATORY (2)
CR: BCH 3023. Practical work in determination and characterization of important biomolecules. Lec.-lab.

BCH 4034 ADVANCED BIOCHEMISTRY (3)
PR: BCH 3023. An advanced undergraduate course emphasizing such topics as metabolic regulation, DNA and RNA structure and function, receptors, channels, antibodies, and contraction.

BCH 5045 BIOCHEMISTRY CORE COURSE (3)
PR: Either CHM 3211, CHM 3211L, and CHM 3400 or CHM 4410 or graduate standing. A one-semester survey course in biochemistry for graduate students in chemistry, biology, and other appropriate fields and for particularly well-qualified undergraduates. Lec.

CHM 2020 CURRENT ISSUES IN CHEMISTRY (3)
A survey of the important current issues in which chemistry affects our lives; e.g., environment, drugs, cancer, warfare, etc. No credit for chemistry majors.

CHM 2021 CHEMISTRY FOR TODAY (3)
A one semester terminal course designed to survey some of the important concepts and technologies of modern chemistry. No credit for science majors.

CHM 2030 INTRODUCTION TO GENERAL, ORGANIC AND BIOCHEMISTRY I (3)
First half of a two-semester sequence. Fundamental concepts of general, organic, and biological chemistry. No credit for science majors.

CHM 2031 INTRODUCTION TO GENERAL, ORGANIC AND BIOCHEMISTRY II (3)
PR: CHM 2030. Second half of general, biological and organic chemistry. No credit for science majors.

CHM 2040 INTRODUCTORY GENERAL CHEMISTRY (3)
PR: High school chemistry and two years of high school mathematics including algebra are recommended. An introduction to the principles and applications of modern chemistry including the properties of matter, quantitative relations in chemical reactions, technological aspects and societal impact.

CHM 2041 GENERAL CHEMISTRY I (3)
PR: Satisfactory score on placement exam; or, completion of CHM 2040 with grade of C or better. Principles and applications of chemistry including properties of substances and reactions, thermodynamics, atomic-molecular structure and bonding, periodic properties of elements and compounds.

CHM 2045L GENERAL CHEMISTRY I LABORATORY (1)
CR: CHM 2041. Laboratory portion of General Chemistry I. Introduction to laboratory techniques; study of properties of elements and compounds; synthesis and analysis of natural and commercial materials.

CHM 2046 GENERAL CHEMISTRY II (3)
PR: CHM 2041 or CHM 2045 or equivalent. Continuation of General Chemistry I.

CHM 2046L GENERAL CHEMISTRY II LABORATORY (1)
PR: CHM 2045L. Laboratory portion of General Chemistry II. Continuation of chemistry laboratory.

CHM 2932 SELECTED TOPICS IN CHEMISTRY (3)
Topics of interest to students relating to chemistry and other sciences.
CHM 3120C ELEMENTARY ANALYTICAL CHEMISTRY (4)

CHM 3200 ORGANIC CHEMISTRY (4)
PR: CHM 2046 or equivalent. Fundamental organic chemistry principles. Structure, nomenclature, properties, preparation, reactions of hydrocarbons, alkyl halides, alcohols, phenols, ethers, sulfur analogs and other compounds. A one-semester course.

CHM 3210 ORGANIC CHEMISTRY I (4)
PR: CHM 2046, CHM 2046L. Fundamental principles of organic chemistry. Lecture.

CHM 3210L ORGANIC CHEMISTRY LABORATORY I (1)

CHM 3211 ORGANIC CHEMISTRY II (4)
PR: CHM 3210 or equivalent. Continuation of organic chemistry. Lecture.

CHM 3211L ORGANIC CHEMISTRY LABORATORY II (1)

CHM 3400 ELEMENTARY PHYSICAL CHEMISTRY I (3)
PR: CHM 2046, CHM 2046L, MAC 3281 or MAC 3311, PHY 3054, PHY 3054L. Introduction to thermodynamics. Properties of solutions with emphasis on biological applications.

CHM 3401 ELEMENTARY PHYSICAL CHEMISTRY II (3)
PR: CHM 3400. Reaction kinetics, enzyme kinetics, macromolecular systems, radiochemistry, molecular spectroscopy, and chemical bonding.

CHM 3402L ELEMENTARY PHYSICAL CHEMISTRY LABORATORY (1)
PR: CHM 3120C, CR: CHM 3400 and/or CHM 3401. A physical chemistry laboratory with emphasis on modern techniques and instruments. Lab.

CHM 3610C INTERMEDIATE INORGANIC CHEMISTRY (4)
PR: CHM 2046, CHM 2046L. Fundamental principles of inorganic chemistry including atomic structure, bonding theories and structural consequences, transition metal chemistry and illustrative laboratory work. Lec.-lab.

CHM 4060 USE OF THE CHEMICAL LITERATURE (1)
Discussions and assignments using abstracts, bibliographies, indices, encyclopedias, journals, patent files, electronic databases, and other information sources to obtain and discuss the following topics: Chemical databases, digital libraries, and other electronic information sources.

CHM 4070 HISTORICAL PERSPECTIVES IN CHEMISTRY (3)
PR: One year of college chemistry, or senior standing, and consent of instructor. A study in depth of the historical and philosophical aspects of outstanding chemical discoveries and theories. Lec.-dis.

CHM 4130C METHODS OF CHEMICAL INVESTIGATION I (4)
PR: CHM 3120C, CHM 3211, CHM 3211L, CHM 4060, CHM 4410. Theory and applications of instrumental methods in chemical research, chemical synthesis and analysis; electrochemical and calorimetric techniques, separation methods, spectroscopy, statistical analysis of data, computer data handling, and individual projects.

CHM 4131C METHODS OF CHEMICAL INVESTIGATION II (4)
PR: CHM 4130C. Continuation of CHM 4130C.

CHM 4300 BIOMOLECULES I (3)
PR: CHM 3211. Nature, structure, elucidation, synthesis and (in selected cases) organic chemical mechanisms of biochemical involvement of the major classes of organic compounds found in living systems. Lec.

CHM 4410 PHYSICAL CHEMISTRY I (3)
PR: CHM 3120C and MAC 3282 or MAC 3312, and PHY 3054, PHY 3054L. Thermostatics, the states of matter, solutions. Lec.

CHM 4411 PHYSICAL CHEMISTRY II (3)
PR: CHM 3120C, and MAC 3282 or MAC 3312, and PHY 3054 or PHY 3049. Introduction to quantum mechanics and molecular spectroscopy. Lec.

CHM 4412 PHYSICAL CHEMISTRY III (3)

CHM 4610 ADVANCED INORGANIC CHEMISTRY (3)
PR: CHM 3610 and CHM 4410 or Cl. An advanced descriptive and theoretical treatment of inorganic compounds. Lec.

CHM 4905 INDEPENDENT STUDY (1-3)
PR: Cl. Specialized independent study determined by the student's needs and interests. The written contract required by the College of Arts and Sciences specifies the regulations governing independent study. May be repeated. (S/U only)

CHM 4932 SELECTED TOPICS IN CHEMISTRY (1-3)
PR: Cl. The course content will depend on the interest of faculty members and student demand.

CHM 4970 UNDERGRADUATE RESEARCH (1-3)
PR: Cl. (S/U only)

CHM 5225 INTERMEDIATE ORGANIC CHEMISTRY (3)
PR: CHM 3211, CHM 3211L, or equivalent. This course will extend organic chemistry beyond the undergraduate level and will emphasize concepts of stereochemistry and reaction mechanisms.

CHM 5226 INTERMEDIATE ORGANIC CHEMISTRY II (3)
PR: CHM 5225 or Cl. An introduction to synthetic organic chemistry for graduate students and advanced undergraduates. Lec. Semester II.

CHM 5425 APPLICATIONS IN PHYSICAL CHEMISTRY (3)
PR: CHM 4411, CHM 4412 or equivalent. Applications of chemical theory to chemical systems.

CHM 5452 POLYMER CHEMISTRY (3)
PR: Either CHM 3211, CHM 3211L, and CHM 3400 or CHM 4410 or graduate standing. Fundamentals of polymer synthesis, structure, properties, and characterization.

CHM 5621 PRINCIPLES OF INORGANIC CHEMISTRY (3)
PR: CHM 4411 or Cl. Chemical forces, reactivity, periodicity, and literature in inorganic chemistry; basic core course. Lec.

CHM 5931 SPECIAL TOPICS IN CHEMISTRY (1)
PR: Cl. The following courses are representative of those that are taught under this title: Natural Products, Stereochemistry, Reactive Intermediates, Photochemistry, Instrumental Electronics, Advanced Lab Techniques, Heterocyclic Chemistry, etc.

CHS 4100C NUCLEAR CHEMISTRY (3)
PR: CHM 3120C. Theory and application of natural and induced radioactivity. Emphasis on the production, properties, measurement, and uses of radioactive tracers. Lec.-lab.

CHS 4200 INDUSTRIAL CHEMISTRY (3)
PR: CHM 3211 or Cl. The chemistry of water, air, and land, and the application of chemical principles to the production and use of industrial materials. Lec.-lab.

CHS 4300 FUNDAMENTALS OF CLINICAL CHEMISTRY (3)
PR: BCH 3033. Theoretical and practical aspects of the analysis of various body fluids, with emphasis on the medical significance. Clinical chemistry majors must take CHS 4301L concurrently. Lec.

CHS 4301L CLINICAL LABORATORY (2)
PR: BCH 3033 and Cl. CHS 4300L. Laboratory experience in some of the most important clinical determinations. CHS 4300 must be taken concurrently. Lec.-lab.

CHS 4302 CLINICAL CHEMISTRY PRACTICE (2-12)
PR: Cl. Laboratory practice in clinical chemistry laboratories in the Tampa Bay area. (S/U only)

CHS 4310C INSTRUMENTAL ANALYSIS (4)
PR: CHM 4412 or Cl. Theory and practice of instrumental methods of chemical analysis. Lec.-lab.

CLASSICS
CLA 4103 GREEK CIVILIZATION - 6A (3)
Study of Greek Civilization from its beginning to the Roman period, with emphasis on social customs, political institutions, and daily life.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
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<tbody>
<tr>
<td>CLA 4123</td>
<td>ROMAN CIVILIZATION - 6A</td>
<td>(3)</td>
<td>Study of Ancient Roman Civilization with emphasis on social customs, political institutions, and daily life.</td>
</tr>
<tr>
<td>CLT 3040</td>
<td>CLASSICAL WORD ROOTS IN SCIENCE</td>
<td>(3)</td>
<td>A course in the Greek and Latin word elements used in science and technology.</td>
</tr>
<tr>
<td>CLT 3101</td>
<td>GREEK LITERATURE IN TRANSLATION -6A</td>
<td>(3)</td>
<td>Reading and discussion of major works in Greek literature. Special emphasis on the <em>Iliad</em>, 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.</td>
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<tr>
<td>CLT 3102</td>
<td>CLASSICAL MYTHOLOGY</td>
<td>(3)</td>
<td>Reading and discussion of major works in Roman literature. Special emphasis is placed on the <em>Aeneid</em>, comedy and satire. Some attention is given to the political background of the works. All readings are in English.</td>
</tr>
<tr>
<td>CLT 3370</td>
<td>CLASSICAL MYTHOLOGY</td>
<td>(3)</td>
<td>Study of Greek and Roman myths embodied in classical literature and of their impact on Western civilization. All readings are in English.</td>
</tr>
<tr>
<td>Greek</td>
<td>GRE 1120 BEGINNING CLASSICAL GREEK I</td>
<td>(4)</td>
<td>An introductory course in classical Greek grammar with appropriate readings.</td>
</tr>
<tr>
<td></td>
<td>GRE 1121 BEGINNING CLASSICAL GREEK II</td>
<td>(4)</td>
<td>PR: GRE 1120 or equivalent. An introductory course in classical Greek grammar with appropriate readings.</td>
</tr>
<tr>
<td></td>
<td>GRK 1120 BEGINNING MODERN GREEK I</td>
<td>(4)</td>
<td>An intensive study of basic skills; pronunciation, listening comprehension, speaking and some composition.</td>
</tr>
<tr>
<td></td>
<td>GRK 1120 BEGINNING MODERN GREEK II</td>
<td>(4)</td>
<td>PR: GRK 1120 or its equivalent. A continuation of GRK 3120.</td>
</tr>
<tr>
<td></td>
<td>GRW 4905 DIRECTED READING</td>
<td>(1-4)</td>
<td>Departmental approval required.</td>
</tr>
<tr>
<td></td>
<td>GRW 5905 DIRECTED READING</td>
<td>(1-4)</td>
<td>Departmental approval required.</td>
</tr>
<tr>
<td></td>
<td>GRW 5934 SELECTED TOPICS</td>
<td>(4)</td>
<td>Study of an author, movement or theme. May be repeated up to 12 credit hours.</td>
</tr>
<tr>
<td>Latin</td>
<td>LAT 1120 BEGINNING LATIN I</td>
<td>(4)</td>
<td>An introductory course in Latin grammar with appropriate readings.</td>
</tr>
<tr>
<td></td>
<td>LAT 1121 BEGINNING LATIN II</td>
<td>(4)</td>
<td>PR: LAT 1120 or equivalent. An introductory course in Latin grammar with appropriate readings.</td>
</tr>
<tr>
<td></td>
<td>LNW 4363 MARTIAL</td>
<td>(4)</td>
<td>PR: LAT 1121 or equivalent. Readings in the Epigrams of Martial. Study of the tradition, techniques, and artistry of the Roman epigram. Available to majors and non-majors.</td>
</tr>
<tr>
<td></td>
<td>LNW 4381 LIVY</td>
<td>(4)</td>
<td>PR: Basic knowledge of Latin. Readings in the ideas and artistry of this Roman historian.</td>
</tr>
<tr>
<td></td>
<td>LNW 4500 CICERO AND ROMAN PHILOSOPHY</td>
<td>(4)</td>
<td>PR: Basic knowledge of Latin. Readings in the philosophic writings of Cicero, together with a consideration of eclectic thought.</td>
</tr>
<tr>
<td></td>
<td>LNW 4501 SENECA AND ROMAN PHILOSOPHY</td>
<td>(4)</td>
<td>PR: Basic knowledge of Latin. Readings in the philosophic writings of Lucius Annaeus Seneca, together with an examination of Stoic, Epicurean, and Eclectic thought.</td>
</tr>
<tr>
<td></td>
<td>LNW 4634 CATULLUS</td>
<td>(4)</td>
<td>PR: Basic knowledge of Latin. Readings in Catullus. Study of techniques and tradition in Roman lyric poetry.</td>
</tr>
<tr>
<td></td>
<td>LNW 4644 CICERO</td>
<td>(4)</td>
<td>PR: Basic knowledge of Latin. Readings in the epistles of Cicero.</td>
</tr>
<tr>
<td></td>
<td>LNW 4654 HORACE</td>
<td>(4)</td>
<td>PR: Basic knowledge of Latin. Readings in the Odes and Epodes of Horace; study of the Ode's tradition.</td>
</tr>
<tr>
<td></td>
<td>LNW 4660 VERGIL</td>
<td>(4)</td>
<td>PR: LAT 1121 or equivalent. Readings in Vergil's <em>Aeneid</em>. Study of the tradition, techniques, and artistry of Roman epic poetry. Available to majors and non-majors.</td>
</tr>
<tr>
<td></td>
<td>LNW 4670 OVID</td>
<td>(4)</td>
<td>PR: LAT 1121 or equivalent. Readings in Ovid's <em>Metamorphoses</em>. Study of Ovid's technique, style, and artistry. Available to majors and non-majors.</td>
</tr>
<tr>
<td></td>
<td>LNW 4900 DIRECTED READING</td>
<td>(1-4)</td>
<td>Departmental approval required.</td>
</tr>
<tr>
<td></td>
<td>LNW 4930 SELECTED TOPICS</td>
<td>(4)</td>
<td>Study of an author, movement, or theme.</td>
</tr>
<tr>
<td></td>
<td>LNW 5900 DIRECTED READING</td>
<td>(1-4)</td>
<td>Departmental approval required. (S/U only.)</td>
</tr>
<tr>
<td></td>
<td>LNW 5934 SELECTED TOPICS</td>
<td>(4)</td>
<td>Study of an author, movement or theme. May be repeated up to 12 credit hours.</td>
</tr>
</tbody>
</table>

**COMMUNICATION**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 3003</td>
<td>DIMENSIONS OF COMMUNICATION</td>
<td>(3)</td>
<td>PR: SPC 2023. 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 pragmatic dimensions.</td>
</tr>
<tr>
<td></td>
<td>COM 3110 COMMUNICATION FOR BUSINESS AND THE</td>
<td>(3)</td>
<td></td>
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<tr>
<td></td>
<td>PROFESSIONS</td>
<td></td>
<td>Identification of 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.</td>
</tr>
<tr>
<td></td>
<td>COM 3120 INTRODUCTION TO COMMUNICATION THEORY IN</td>
<td>(3)</td>
<td></td>
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<tr>
<td></td>
<td>ORGANIZATIONS</td>
<td></td>
<td>A study of communication theory relative to interview situations with emphasis on the employment interview, appraisal interview, and persuasive interview. Students must sign up for a one-hour lab and the mass lecture.</td>
</tr>
<tr>
<td></td>
<td>COM 3121L INTERVIEW COMMUNICATION LAB</td>
<td>(0)</td>
<td>Interview laboratory for practice and individual consultation. Students must take this course in conjunction with the mass lecture COM 3122. Open to majors and non-majors. Not repeatable.</td>
</tr>
<tr>
<td></td>
<td>COM 4942 COMMUNICATION INTERN SEMINAR</td>
<td>(3)</td>
<td>PR: Communication major, minimum GPA 3.0, 75 hours completed, 15 hours of core requirements and 9 elective hours completed, and CI. 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.</td>
</tr>
<tr>
<td></td>
<td>COM 5123 COMMUNICATION ASSESSMENT IN ORGANIZATIONS</td>
<td>(3)</td>
<td>PR: for undergraduates, COM 3120 or CI; graduates, CI. 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.</td>
</tr>
<tr>
<td></td>
<td>ORI 3000 INTRODUCTION TO COMMUNICATION AS</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PERFORMANCE</td>
<td></td>
<td>Designed to develop proficiency in the understanding and oral communication of literary and other written materials.</td>
</tr>
<tr>
<td></td>
<td>ORI 3950 COMMUNICATION AS PERFORMANCE LAB</td>
<td>(1-3)</td>
<td>PR: ORI 3000 or CI. The study, rehearsal, and performance of literature for Readers Theatre and Chamber Theatre productions. May be repeated (maximum total four hours).</td>
</tr>
</tbody>
</table>
SPC 2023 FUNDAMENTALS OF HUMAN COMMUNICATION (3) The nature and basic principles of human communication; 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 (3) 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 3210 COMMUNICATION THEORY (3) PR: Junior standing or CI. The study of source, message, and receiver variables in human communication; communication settings; descriptive and predictive models of communication; communication as a process.

SPC 3230 RHETORICAL THEORY (3) 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.

SPA 3011 INTRODUCTION TO DISORDERS OF SPEECH AND LANGUAGE (3) PR: SPA 2303 or SPA 3681. Open to non-majors with CI. This course examines persuasive strategies and language in oral and written discourse (not repeatable).

SPA 3681 RHETORICAL ANALYSIS (3) This course introduces students to fundamentals of message analysis. Student examines persuasive strategies and language in oral and written discourse (not repeatable).

SPA 4632 RHETORIC OF SOCIAL CHANGE (3) PR: SPA 2303 or SPA 3681. This course examines how social change is symbolized and motivated in the rhetorics of institutions, campaigns, social movements and individuals. Open to majors and non-majors.
laboratory course (SPA 3380L) to be taken concurrently. Open to all majors.

SPA 3380L BASIC AMERICAN SIGN LANGUAGE LABORATORY (1)
A laboratory designed to offer additional practice in sign language by means of videotapes. Concurrent enrollment at each level of sign language is required. There are no prerequisites. May be repeated up to 2 credit hours.

SPA 4000 COMMUNICATION DISORDERS IN THE PUBLIC SCHOOLS
PR: Cl. An examination of the speech, language and hearing problems affecting school-age children and the classroom teacher's role in the detection, prevention and amelioration of communication disorders. (Non-major course only).

SPA 4050 INTRODUCTION TO THE CLINICAL PROCESS (3)
Observation and participation in speech-language pathology and audiology practicum in the University clinical laboratory.

SPA 4201 PHONOLOGICAL DEVELOPMENT AND DISORDERS (3)
PR: Cl. An examination of normal and deviant articulatory acquisition and behavior. Presentation of major theoretical orientations and the therapeutic principles based upon them.

SPA 4210 VOCAL DISORDERS (3)
PR: Cl. A comprehensive study of the medical and physical aspects of voice disorders. Primary emphasis is on therapeutic management.

SPA 4222 FLUENCY DISORDERS (3)
PR: Cl. A comprehensive study of disfluent speech behavior. Differential diagnosis, principles of therapeutic intervention, procedures for children and adults will be studied. Major theories and models of the development and origin of stuttering are also presented.

SPA 4331 FUNDAMENTALS OF FINGERSPELLING (2)
PR: Cl. A concentrated study of technique in fingerspelling emphasizing clarity and rhythm in expression as well as receptive understanding.

SPA 4332 STRUCTURE OF SIGN LANGUAGE (3)
PR: Cl. Semiotic and linguistic consideration of American Sign Language (ASL). Includes aspects of phonology, syntax, semantics, and discourse in ASL.

SPA 4335 SIGN LANGUAGE CODES (3)
PR: Cl. A review of the sign systems (SEE I, SEE II, L.O.V.E., and Signed English) used to code messages through the use of sign. The student will have the opportunity to practice one of the sign systems.

SPA 4363 NATURE AND NEEDS OF HEARING IMPAIRED (3)
A study of the effects of auditory disorders upon the organization and expression of behavioral patterns as they relate to the educational, emotional and social adjustment of the hearing impaired student. (Not-major course only).

SPA 4382 INTERMEDIATE AMERICAN SIGN LANGUAGE (3)
PR: SPA 3380, SPA 3380L, and Cl. A continuation of the basic course which expands the student's signing skills and introduces American Sign Language (ASL) idioms. Provides a greater opportunity for skill development in ASL structure and idiomatic usage. One hour laboratory course (SPA 4382L) to be taken concurrently.

SPA 4382L INTERMEDIATE AMERICAN SIGN LANGUAGE LABORATORY (1)
PR: SPA 3380 and SPA 3380L. A laboratory designed to offer additional practice in sign language by means of videotapes. Concurrent enrollment in SPA 4382 of sign language. May be repeated up to 2 credit hours.

SPA 4383 ADVANCED AMERICAN SIGN LANGUAGE (3)
PR: Cl. and SPA 4382L, SPA 4382L, and Cl. A continuation of the study of American Sign Language (ASL) at the advanced skill level. Added emphasis on idioms, body language, and facial expression as an integral part of ASL. A one hour laboratory course (SPA 4383L) is to be taken concurrently. Open to all majors.

SPA 4383L ADVANCED AMERICAN SIGN LANGUAGE LABORATORY (1)
PR: Cl. A laboratory course designed to offer students added practice with the material presented in the ASL coursework through video and audio tapes. To be taken concurrently with Advanced American Sign Language (SPA 4383).
CCJ 3210 CRIMINAL LAW I
PR: CCJ 3020, POS 2041 or Cl. Examines the historical basis of the American criminal law system, the substantive elements of the crime, and court procedures.

CCJ 3610 THEORIES OF CRIMINAL BEHAVIOR
PR: CCJ 3020. Provides a basic understanding of the complex factors related to crime, with concentration on principal theoretical approaches to the explanation of crime.

CCJ 3621 PATTERNS OF CRIMINAL BEHAVIOR
Reviews the nature and extent of the crime problem. The course will concentrate on major patterns of offender behavior including crimes against the person, property crimes, violent crimes, economic/white collar offense, syndicated (organized) crimes, consensual crimes, female crime, political crime, and will examine criminal career data.

CCJ 3701 RESEARCH METHODS IN CRIMINAL JUSTICE I
PR: Junior standing and CCJ 3020 or Cl. Introduces the student to some of the fundamentals of knowledge-generating processes in criminal justice.

CCJ 4110 AMERICAN LAW ENFORCEMENT SYSTEMS
Provides a comprehensive examination of the American law enforcement system at the federal, state, and local levels and an assessment of career opportunities within the community.

CCJ 4210 CRIMINAL LAW II
Emphasizes the Constitutional issues and rules that are applied and enforced by the courts while processing criminal cases.

CCJ 4331 ALTERNATIVES TO INCARCERATION
PR: Junior standing or CCJ 4360 or Cl. This course explores a variety of alternatives to imprisoning the offender, including probation, parole, diversion, and other community-based intervention approaches.

CCJ 4340 INTERVENTION TECHNIQUES AND STRATEGIES
PR: Senior standing or Cl. Introduces the student to theories and methods underlying treatment modalities currently employed in corrections.

CCJ 4360 AMERICAN CORRECTIONAL SYSTEMS
PR: Junior standing plus CCJ 3610 or Cl. Analysis of the different treatment philosophies and techniques currently in use in the field with special attention to experimental and demonstration programs.

CCJ 4450 CRIMINAL JUSTICE ADMINISTRATION
This course is designed to provide an in-depth examination of both the practical and theoretical aspects of the administration of criminal justice agencies. The major focus will be on law enforcement and correctional agencies.

CCJ 4501 JUVENILE JUSTICE SYSTEMS
PR: CCJ 3020 or Cl. Provides coverage of the juvenile and family courts, their clientele, and the complex of human services agencies and facilities that contribute to efforts at juvenile correctional intervention.

CCJ 4604 ABNORMAL BEHAVIOR AND CRIMINALITY
PR: CCJ 3610, or Cl. A systematic introduction to the relationship between mental illness and criminality, with focus on psychiatric labeling of deviant behavior and its implications for the handling of the criminal offender.

CCJ 4700 STATISTICAL RESEARCH METHODS IN CRIMINAL JUSTICE II
PR: Junior standing or Cl. Beginning with the scientific method, the tools commonly used to analyze criminal justice data will be emphasized. Recommended for students who intend to continue on the doctoral level beyond the B.A. Required of students attending the MA program in CCJ at USF. This course may not be taken for credit if the student has already successfully completed STA 3122 or GEB 3121.

*CCJ 4900 DIRECTED READINGS
PR: Cl. This course is specifically designed to enable advanced students the opportunity to do in-depth independent work in the area of criminal justice. Each student will be under the direct supervision of a faculty member of the program. No more than five hours of CCJ 4900, CCJ 4910 or any combination of the two will be accepted toward the minimum number of hours required for the major.

*CCJ 4910 DIRECTED RESEARCH(1-3)
PR: Cl. This course is designed to provide students with a research experience in which they will work closely with faculty on the development and implementation of research projects in the area of criminal justice. No more than five hours of CCJ 4910, CCJ 4900 or any combination of the two will be accepted toward the minimum number of hours of the major.

NOTE: CCJ 4900 & CCJ 4910. (a) Students wishing to enroll must make arrangements with a faculty member during the enrollment period prior to the major course, (b) a minimum of four (4) CCJ courses must have been completed satisfactorily prior to enrollment, (c) first consideration will be given to Criminalology majors, and (d) individual faculty members may add additional requirements at their discretion.

CCJ 4934 SEMINAR IN CRIMINAL JUSTICE
PR: Senior standing and Cl. This variable topic seminar will consider the various changes occurring in the field of criminal justice with added emphasis on career responsibilities in the field.

CCJ 4940 INTERNSHIP FOR CRIMINAL JUSTICE MAJORS
PR: Senior standing. The internship will consist of placement with one or more of the agencies comprising the criminal justice system. This course will enable the students to gain meaningful field experience related to their future careers. The three-hour block of credit will consist of ten hours of work per week within the host agencies in addition to any written work or reading assignments. See requirements for the B.A. degree in Criminalology for the number of hours required. (S/U only.)

CJT 4100 CRIMINAL INVESTIGATION
Covers the major components of criminal investigation, with special attention to the scientific aspects of criminal investigation and the management of major cases.

CJT 4820 PRIVATE SECURITY SYSTEMS
PR: Junior standing plus CCJ 4110 or Cl. Examines some of the principal methods and techniques currently used to reduce or prevent losses due to theft and casualty.

ENGLISH

AML 3031 AMERICAN LITERATURE FROM THE BEGINNINGS TO 1860
A study of representative works from the period of early settlement through American Romanticism, with emphasis on such writers as Cooper, Irving, Bryant, Hawthorne, Emerson, Melville, Thoreau, and Poe, among others.

AML 3032 AMERICAN LITERATURE FROM 1860 TO 1912
A study of representative works of selected American Realists and early Naturalists, among them Whitman, Dickinson, Twain, James, Howells, Crane, Dreiser, Wharton, Robinson, Dunbar, and Johnson.

AML 3051 AMERICAN LITERATURE FROM 1912-1945
A study of poetry, drama, and fiction by such writers as Pound, Stein, Fitzgerald, Hemingway, Faulkner, Porter, Toomer, Cummings, Williams, Anderson, Steinbeck, Wright, West, Stevens, Henry Miller, and others.

AML 3271 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. Dubois, Jean Toomer, Langston Hughes, Richard Wright, Ralph Ellison, LeRoi Jones, and Nikki Giovanni.

AML 4101 NINETEENTH-CENTURY AMERICAN NOVEL
A study of the American novel from its beginnings through 1900, including such novelists as Cooper, Hawthorne, Melville, Twain, Crane, and Dreiser, among others.

AML 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, Wharton, Fitzgerald, Faulkner, West,Mailer, Bellow, Ellison, Donleavy, Updike, Vonnegut, and others.

AML 4261 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, Tate, Davidson, and Dickey.
AML 4300 SELECTED AMERICAN AUTHORS (3)
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 will vary. May be repeated twice for credit.

CRW 2100 NARRATION AND DESCRIPTION -6A (3)
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.

CRW 3111 FORM AND TECHNIQUE OF FICTION -6A (3)
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.

CRW 3112 FICTION I -6A (3)
PR: CRW 3111. An introduction to fiction writing, beginning with a practical study of the various elements of fiction and proceeding through the many processes of revision to arrive at a completed short story. May be repeated up to 8 credit hours. American or British writers. Students participating in a workshop wherein students are expected to create works. May be repeated twice for credit. PR: Admission to the University’s Honors Program.

CRW 3311 FORM AND TECHNIQUE OF POETRY (3)
A study of the techniques employed in fixed forms from the couplet through the sonnet to such various forms as the Rondel, ballad, villanelle, sestina, etc. Principles in the narrative, dramatic, and lyric modes are also explored.

CRW 3312 POETRY I (3)
PR: CRW 3311. An introduction to poetry writing utilizing writing exercises employing poetic language and devices; the exercises prepare the student for writing both rhymed and unrhymed metrical and non-metrical forms.

CRW 3321 POETRY II (3)
PR: CRW 3311, CRW 3312. A poetry workshop which provides individual and peer guidance and direction for student writing and which also attempts to encourage the development of critical skills.

CRW 4120 FICION III (3)
PR: CRW 3111, CRW 3112, CRW 3121. An advanced fiction workshop wherein works may be carried over from CRW 3121 or longer forms such as the novel may be begun. May be taken twice for credit.

CRW 4320 POETRY III (3)
PR: CRW 3311, CRW 3312, CRW 3321. An advanced poetry workshop wherein students are expected to create works exhibiting a firm knowledge of the principles explored in the preceding courses. May be taken twice for credit.

CRW 4930 SELECTED TOPICS IN CREATIVE WRITING (1-4)
PR: 12 hours of CRW courses or CI. The focus of the course will be governed by student demand and instructor interest. Topics to be covered may include writing the literary essay, writing in mixed genres, and utilizing popular conventions in serious writing. May be repeated up to 8 credit hours.

ENG 1101, 1102 FRESHMAN ENGLISH -6A (3,3)
Instruction and practice in the skills of writing and reading. Courses must be taken in numerical sequence.

ENG 1121 FRESHMAN ENGLISH: HONORS (3)
Honors Section of ENG 1101. Reserved for students in the University’s Honors Program.

ENG 1122 FRESHMAN ENGLISH II: HONORS (3)
PR: ENC 1121. Honors Section of ENC 1102. Reserved for students in the University’s Honors Program.

ENG 3210 TECHNICAL WRITING -6A (3)
Effective presentation of technical and semi-technical information.

ENG 3213 PROFESSIONAL WRITING -6A (3)
Introduction to the techniques and types of professional writing, including correspondence and reports most often found in business, technical, and scientific communities.

ENC 3310 EXPOSITORY WRITING -6A (3)
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.

ENG 3310 ADVANCED TECHNICAL WRITING (3)
PR: ENC 3210, or ENC 3310, or GEB 3211, or CI. Advanced Technical Writing 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.

ENC 4311 ADVANCED COMPOSITION (3)
PR: ENC 3310 or CI. Instruction and practice in writing effective, lucid, and compelling prose, with special emphasis on style, logical argumentation, and critical thinking.

ENC 4931 SELECTED TOPICS IN PROFESSIONAL AND TECHNICAL WRITING (3)
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. The course also explores why important changes took place, and considers how and why many screenwriters and filmmakers today use techniques, ideas and situations drawn from the popular arts.

ENG 3105 MODERN LITERATURE, FILM, AND THE POPULAR ARTS (3)
A study of some modern and contemporary dramatists as Ibsen, Strindberg, Chekhov, Pirandello, Shaw, O’Neill, Pinter, Stoppard, Brecht, Beckett, and Ionesco.

ENG 4013 LITERARY CRITICISM (3)
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 4060 HISTORY OF THE ENGLISH LANGUAGE (3)
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 which influenced them.

ENG 4906 INDIVIDUAL RESEARCH (1-4)
Directed study in special projects. Special permission of chairperson required.

ENG 4907 DIRECTED READING (3)
Readings in special topics.

ENG 4935 HONORS SEMINAR I (3)
PR: Admission to English Honors Program (should be taken concurrently with ENG 4936). A study of two or more major American or British writers. Students will be expected to participate in class discussion, make formal presentations, and complete a major research project.

ENG 4936 HONORS SEMINAR II (3)
PR: Admission to English Honors Program (should be taken concurrently with ENG 4935). A study of critical theory from Aristotle to the present. Students will be expected to participate in class discussion, make formal presentations, and complete a major research project.

ENG 4970 HONORS THESIS SEMINAR (3)
PR: ENG 4935 and ENG 4936. For students writing honors theses. Class time will be devoted to exchange of research findings, instructor and peer critique of method, structure, and the rhetoric of individual projects.

ENG 5067 HISTORY OF THE ENGLISH LANGUAGE (3)
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.

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 3925 BRITISH LITERATURE 1780-1900
The poetry and politics 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, and others.

ENL 3331 EARLY SHAKESPEARE
A study of from six to eight of Shakespeare’s comedies, histories, and early tragedies, ending with Hamlet. Special attention to developing the student’s ability to read and interpret the text.

ENL 3332 LATE SHAKESPEARE
A critical analysis of Shakespeare’s problem plays, major tragedies, and late romances. Special attention to developing the student’s ability to read and interpret the text.

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 4123 BRITISH NOVEL: CONRAD TO THE PRESENT
A critical study of the major works of Conrad 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, and others.

ENL 4303 SELECTED 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 ADVANCED STUDIES IN SHAKESPEARE
PR: ENL 3331 or ENL 3332, 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 2340 ENGLISH GRAMMAR AND USAGE
A course in the basics of traditional English grammar designed as a complement to our composition and creative writing courses, as a review for those students who will take preprofessional exams, and as a basic course for students interested in improving their knowledge of English.

LIN 4340 TRADITIONAL ENGLISH GRAMMAR
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 4374 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.

LIT 2010 INTRODUCTION TO FICTION -6A
A study of the short story and novel as literary forms; not restricted to any historical period. Will not be counted toward the English major.

LIT 2015 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 2030 INTRODUCTION TO POETRY -6A
A study of the poem as literary form; not restricted to any historical period. Will not be counted toward the English major.

LIT 2040 INTRODUCTION TO DRAMA -6A
A study of the major forms of drama as literature; not restricted to any historical period. 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 2931 SELECTED TOPICS IN ENGLISH STUDIES -1-4
Variable from semester to semester, the course examines in depth a predominant literary theme or the work of a select group of writers.

LIT 3000 INTRODUCTION TO LITERATURE -6A
The nature and significance of literature in its various forms: fiction, drama, poetry; emphasis on the techniques of reading literature for informed enjoyment. 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, among 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 -6A
A study in English of the great works of Western Literature from its beginnings through the Renaissance, including the Bible, Hellenistic, Sophocles, Plato, Euripides, Virgil, Cicero, Dante, Petrarch, Machiavelli, and Rabelais, among others.

LIT 3102 LITERATURE OF THE WESTERN WORLD SINCE THE RENAISSANCE -6A
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 Chatterly’s Lover, Exodus, and Catcher in the Rye, which have sold in excess of 5,000,000 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, H.G. Wells, Ray Bradbury, C. S. Lewis, and 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. Fall Semester, Old Testament; Spring
Semester, New Testament. Course may be repeated for credit with change of content; may be counted only once toward the English major.

**LIT 3383 THE IMAGE OF WOMEN IN LITERATURE (3)**
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 (3)**
Theological and philosophical ideas, allusions, and symbols in the writings of Dostoevsky, Nietzsche, Mann, Joyce, Eliot, Camus, Sartre, among others.

**LIT 3451 LITERATURE AND THE OCCULT (3)**
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 (3)**
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 of a general liberal education program.

**LIT 4011 THEORY OF FICTION (3)**
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 (1-4)**
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 with different topics.

**REA 1105 ADVANCED READING (3)**
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 1602 LEARNING STRATEGIES WITHIN ACADEMIC DISCIPLINES (2)**
To provide within any academic discipline the necessary learning strategies needed for success related to academic coursework. Practice of learning strategies will be within the framework of the student's coursework, providing direct transfer to academic area material.

**REA 2405 SPEED READING DEVELOPMENT (2)**
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 2505 VOCABULARY (3)**
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.

### GEOGRAPHY

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>GEA 3000 WORLD REGIONAL GEOGRAPHY (4)</td>
<td>Comparative and analytical analysis of representative regions of the world with emphasis on cultural, political, economic, and physical diversity.</td>
</tr>
<tr>
<td>GEA 3009 GENERAL GEOGRAPHY (4)</td>
<td>Selected topics in regional and topical geography offered as survey courses. Open to all students.</td>
</tr>
<tr>
<td>GEA 3194 REGIONAL GEOGRAPHY (4)</td>
<td>Variable title course to systematically study and compare special regions identified by the instructor.</td>
</tr>
<tr>
<td>GEA 3202 GEOGRAPHY OF ANGLO-AMERICA (4)</td>
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<tr>
<td>GEA 3300 GEOGRAPHY OF MIDDLE AMERICA (4)</td>
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<td>GEA 3400 GEOGRAPHY OF LATIN AMERICA (4)</td>
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<tr>
<td>GEA 3500 GEOGRAPHY OF EUROPE (4)</td>
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<tr>
<td>GEA 3554 GEOGRAPHY OF THE USSR (4)</td>
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<tr>
<td>GEA 3600 GEOGRAPHY OF AFRICA (4)</td>
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<tr>
<td>GEA 3703 GEOGRAPHY OF ASIA (4)</td>
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<tr>
<td>GEO 1930 GEOGRAPHY OF CURRENT EVENTS (4)</td>
<td>Application of basic geographic principles of the analysis of contemporary events in various parts of the world.</td>
</tr>
<tr>
<td>GEO 3013 SYSTEMATIC GEOGRAPHY (4)</td>
<td>Principles and concepts of the discipline; maps, earth-sun relations, weather, and climate.</td>
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<tr>
<td>GEO 3014 SYSTEMATIC GEOGRAPHY (4)</td>
<td>PR: GEO 3013. Continuation of GEO 3013; soil, water, rocks, minerals, and landforms.</td>
</tr>
<tr>
<td>GEO 3402 HUMAN GEOGRAPHY (4)</td>
<td>Systematic treatment of man's activities on earth; population, settlement, agriculture, industry, trade, transportation, and political aspects are among those considered.</td>
</tr>
<tr>
<td>GEO 3901 ELEMENTS OF GEOGRAPHY (1)</td>
<td>Independent study; various topics in physical and cultural geography. (S/U only.)</td>
</tr>
<tr>
<td>GEO 3931C WEATHER AND MAN (4)</td>
<td>The interrelationship between the atmospheric environment and man.</td>
</tr>
<tr>
<td>GEO 4040C MAP INTERPRETATION (4)</td>
<td>PR: GEO 3014. Analysis and synthesis of various types of maps and map projections.</td>
</tr>
<tr>
<td>GEO 4100C CARTOGRAPHY (4)</td>
<td>PR: GEO 3014. Map compilation and graphic presentation.</td>
</tr>
<tr>
<td>GEO 4114C GEOGRAPHIC TECHNIQUES AND METHODOLOGY (4)</td>
<td>PR: GEO 3014. Selected topics in various geographic techniques and methodologies and their application.</td>
</tr>
<tr>
<td>GEO 4124C AIR PHOTO INTERPRETATION (4)</td>
<td>PR: GEO 3014. Detection, identification, and analysis of objects on the earth’s surface. Techniques other than photographic are also considered.</td>
</tr>
<tr>
<td>GEO 4154C QUANTITATIVE METHODS (4)</td>
<td>PR: GEO 3014. Statistical analysis in geographic research.</td>
</tr>
<tr>
<td>GEO 4201C PHYSICAL GEOGRAPHY (4)</td>
<td>PR: GEO 3014 Intensive study of a topic selected from physical geography.</td>
</tr>
<tr>
<td>GEO 4280C HYDROLOGY (4)</td>
<td>PR: GEO 3014. Hydrologic cycle; precipitation, evapotranspiration, water budget, streamflow, and probability analysis.</td>
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<tr>
<td>GEO 4340 MAN AND NATURAL HAZARDS (4)</td>
<td>The impact of hurricanes, tornadoes, earthquakes, sink holes, tidal waves, fire, freezes, and droughts on people; attempts to overcome or avoid these hazards.</td>
</tr>
<tr>
<td>GEO 4372 CONSERVATION (4)</td>
<td>The distribution, exploitation, and conservation of physical and human resources, ecology.</td>
</tr>
<tr>
<td>GEO 4390 WATER RESOURCES (4)</td>
<td>A general overview of the hydrologic cycle and the impact of cultural development of its various components. May also include a survey of regional water problems.</td>
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<tr>
<td>GEO 4421 CULTURAL GEOGRAPHY (4)</td>
<td>PR: GEO 3014. The interrelationships of culture and nature, from prehistoric times to the present.</td>
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<tr>
<td>GEO 4440 POPULATION GEOGRAPHY (4)</td>
<td>An analysis of contemporary patterns in world and regional distributions of people and geographical factors underlying these patterns and their changes.</td>
</tr>
<tr>
<td>GEO 4460 HISTORICAL GEOGRAPHY (4)</td>
<td>Survey of evolving landscapes through time; analysis is made by means of systematic and regional methods in order to reconstruct the changing culture-nature equation.</td>
</tr>
<tr>
<td>GEO 4470 POLITICAL GEOGRAPHY (4)</td>
<td>PR: GEO 3014. The geographic factors underlying political decisions and influencing their outcome; the geographic consequences of these decisions; geopolitics.</td>
</tr>
</tbody>
</table>
GEO 4502 ECONOMIC GEOGRAPHY
PR: GEO 3014. The spatial organization of economic production, consumption, and exchange systems.

GEO 4602 URBAN GEOGRAPHY
PR: GEO 3014. Spatial analysis of urban areas; growth, location, spacing and size. Development, site, situation, internal structure, and hinterland are considered.

GEO 4700 TRANSPORTATION GEOGRAPHY
PR: GEO 3014. Interrelationships between freight and passenger transportation and land use, in terms of site, traffic generation, and circulation.

GEO 4900 DIRECTED READING
PR: 20 hours in geography and CC prior to registration. May be repeated.

GEO 4910 INDIVIDUAL RESEARCH
PR: 20 hours in geography and CC prior to registration. May be repeated.

GEO 5058 GEOGRAPHIC LITERATURE AND HISTORY
PR: Senior or graduate standing in geography, or CI. The origins and development of the discipline as revealed through an examination of the principal written sources. Special attention paid to leading personalities and modern periodicals.

MET 4002 CLIMATOLOGY
PR: GEO 3013 or CI. An introductory course which includes an examination of climatic classification systems, problem climates, and the application of climate to selected topics such as world agriculture, housing and health.

MET 4010C METEOROLOGY
PR: GEO 3013 or CI. The earth's atmosphere and its processes; weather forecasting and analysis; instrumentation.

URP 4052 URBAN AND REGIONAL PLANNING
The geographic foundations of the modern city, metropolitan development, and the trend toward megalopolis. Examined are the political problems of conflicting jurisdictions at the local, state, county, state, national, and international levels.

GEOLOGY

GLY 2010 DYNAMIC EARTH: INTRODUCTION TO PHYSICAL GEOLOGY
Study of minerals, rocks, and processes of the earth's crust. Introduction to origin and classification of earth's materials and landforms.

GLY 2010L DYNAMIC EARTH LABORATORY
PR: GLY 2010 or concurrent registration. Laboratory study of earth materials, landforms, geologic structures, topographic and geologic maps. Lec-lab-field trips. Required for Geology majors; open to non-majors.

GLY 2030 ENVIRONMENTAL GEOLOGY
A first course in geology emphasizing environmental aspects of the earth's crust, such as earthquakes, depletion of the earth's resources, water supply problems, and geologic land use and planning. No credit for geology majors.

GLY 2050 SCIENCE, EARTH AND LIFE
The nature, history and philosophy of science intended primarily for non-science majors. Consideration of science as a way of knowing through examples taken primarily from historical geology and biology (e.g., extinction of the dinosaurs, continental drift, evolution), but also from physics and astronomy. Consideration of the social relevance of science. Does not count toward geology major.

GLY 2100 HISTORY OF THE EARTH AND LIFE
PR: A course in geology. Study of the physical and biological history of the earth including evolution of the major groups of organisms, continental drift, and interpretation of ancient environments.

GLY 2100L EARTH HISTORY LABORATORY
Laboratory study of the history of the earth and life. Required for Geology majors; open to non-majors.

GLY 2930 SELECTED TOPICS IN GEOLOGY
Topical courses in geology of general interest. Does not count toward the geology major.

GLY 3200 MINERALOGY
PR: GLY 2010, one year of chemistry, or CI. Principles of crystal chemistry, crystallography and mineralogy with emphasis on common rock-forming minerals. Lec.-lab.

GLY 3220 OPTICAL MINERALOGY
PR: GLY 2010, one year of chemistry, or CI. Principles and theory of the behavior of light within minerals and the identification of minerals using the polarizing microscope. Lec.-lab. Restricted to majors and minors in geology.

GLY 3400C STRUCTURAL GEOLOGY
PR: 12 hours of geology, MAC 2132 or equivalent or CI. Study of the origin and development of structural features of the earth's crust. Applications of principles of geology, physics, and mathematics to understanding relationships of strata and interpreting structural features. Study of regional tectonics and major structural provinces. Lec.-lab.

GLY 3610 INTRODUCTION TO INVERTEBRATE PALEONTOLOGY
PR: GLY 2100. BSC 2100C or equivalent strongly encouraged as background. Lectures cover principles and applications of paleontology, including biostratigraphy, taphonomy, paleoecology, and micro- and macroevolutionary patterns and processes. Labs survey the invertebrate phyla comprising the bulk of the fossil record.

GLY 3830 GEOLOGY FOR ENGINEERS
PR: Junior standing in College of Engineering or CI. An examination of geologic maps, sedimentary sequences, and geologic processes designed for engineering students; classification and properties of earth materials, surface processes, site investigation techniques, applications of geology to the solution of engineering problems. (No credit toward the geology major, or for those with credit for GLY 2010.)

GLY 4310 PETROLOGY
PR: GLY 3200, GLY 3220, CI. The formation of igneous and metamorphic rocks in varying tectonic environments. Emphasis is placed on the identification of igneous and metamorphic rocks in hand specimens and thin sections. Lec-lab.

GLY 4511 STRATIGRAPHY AND PETROLEUM GEOLOGY
PR: GLY 4550. Emphasis on classical principles of litho- and biostratigraphy, basin analysis, geophysical well logging, origin and occurrence of petroleum. Exploration methods are emphasized. Lec-lab.

GLY 4550 DEPOSITIONAL SYSTEMS
PR: GLY 3200, GLY 3220, or concurrent registration. Study of modern sedimentary environments and their relationships to one another in order to understand environments preserved in the rock record. Physical, chemical and biological aspects of terrestrial, transitional and marine sedimentary environments will be examined in light of their eventual preservation in rocks. Laboratory experience will include textural mineralogical analysis of sediments and sedimentary rocks as well as exercises involving sequences of sedimentary strata.

GLY 4555C SEDIMENTOLOGY
PR: GLY 4220, GLY 4550 or CI. Analysis of sedimentary rocks and sedimentary structures as related to their environments of deposition. Textural and mineralogical study of sediments and statistical applications to sediment analysis. Lec-lab-field trips.

GLY 4700 GEOMORPHOLOGY
PR: Senior or advanced junior standing and CI. Origin, evolution and distribution of land forms and soils. Dynamics of the earth's surface. Lec-lab-field trips.

GLY 4730 MARINE GEOLOGY
PR: 12 hours of geology or CI. General survey of the geology of the ocean floor from beaches to ocean trenches including sediments, processes, tectonics and history.

GLY 4791 FIELD CAMP PART I - FIELD METHODS
PR: CI. Senior standing. Linked with Field Camp II. Basic field methods; use of pocket transits, techniques of field location, plot and compass traversing, techniques for lithological and structural data collection, fundamentals of geological data presentation and map making. Field camp is located in northern New Mexico. Requires camping and vigorous physical activity. Lec-field work.
GLY 4792 FIELD CAMP PART II - FIELD GEOLOGY (3)
PR: Cl. Senior standing. Linked with Field Camp I. Fundamentals of regional field geology; mapping sedimentary, metamorphic and igneous rocks on topographic base maps; interpretation of depositional environments; interpretation of deformational and metamorphic histories. Requires camping and vigorous physical activity. Lec.-field work.

GLY 4822 INTRODUCTION TO HYDROGEOLOGY (4)
PR: GLY 2010, advanced junior or senior standing, one year each physics and calculus or Cl. Ground water flow systems, ground water geology, introduction to numerical and analytical methods of water flow. Lec.-lab.-field trips.

GLY 4905 INDEPENDENT STUDY (1-3)
PR: Cl. Specialized independent study determined by the student's needs and interests. May be repeated. (S.U. only)

GLY 4915 UNDERGRADUATE RESEARCH (1-3)
PR: Senior or advanced junior standing and written permission of department prior to registration. Individual experimental investigations with faculty supervision. (S.U. only)

GLY 4920 GEOLGY COLOQUIUM (1)
PR: Senior standing in Geology. Weekly topical lectures by faculty, graduate students and invited speakers. Required of all senior geology majors, to be repeated for a total of two credit hours. (S.U. only)

GLY 4930 SELECTED TOPICS IN GEOLOGY (1-4)
Each topic is a course under the direction of a faculty member with the content depending on the interests of the students and faculty involved. All areas of geology included. Departmental permission required prior to registration.

GLY 4970 UNDERGRADUATE HONORS THESIS (3)
Open to seniors admitted to the Geology undergraduate honors program. Students will complete an independent research project under supervision of a faculty member, and present results in a formal written thesis and a public presentation.

GLY 5246 GENERAL GEOCHEMISTRY (3)
PR: One year college chemistry, GLY 4200 or Cl. Applications of basic chemical concepts are used to investigate and explain geological processes, the age and formation of the earth, and environmental conditions.

GLY 5285C ANALYTICAL TECHNIQUES IN GEOLOGY (4)
PR: One year college chemistry, GLY 4220 or Cl. Use and application of modern analytical methods including X-ray, atomic absorption, and other geochemical techniques. Interpretation and statistical analysis of data acquired. Lec.-lab.

GLY 5315C IGNEOUS AND METAMORPHIC PETROLOGY (4)
PR: GLY 4220. Systematic study of igneous and metamorphic rocks and complexes, including origin, composition, and classification. Use of the polarizing microscope for thin-section analysis will be emphasized, and other modern methods of study will be employed. Lec.-lab.

GLY 5475C PRINCIPLES OF APPLIED GEOPHYSICS (4)
PR: Senior standing, one year of college physics and calculus, or Cl. Survey of modern exploration geophysics, including gravimetric, magnetic, electric, and seismic methods as applied to resource exploration and site investigations. Lec.-lab.-field trips.

GLY 5752 GEOLOGICAL FIELD EXCURSION (2)
PR: GLY 3400, GLY 4550, and GLY 4752. Lectures and 2-week geological field excursion to study regional geology, structure and lithogenesis of geologically complex terrain. Mapping and outcrop description techniques are emphasized. Destination of trip varies. Trip requires camping and vigorous physical activity. Lec.-field trip.

GLY 5827C ADVANCED HYDROGEOLOGY (4)
PR: GLY 4822, MAC 3282 or MAC 3312 or Cl. Flow systems, analytical and numerical solutions to ground water flow problems. Emphasis on the theoretical aspects of ground water flow systems and their interaction with the geologic framework. Lec.

GLY 5865 STATISTICAL MODELS IN GEOLOGY (3)
PR: STA 3023 or equivalent or Cl. Application of statistical methods to geological problems. Emphasis on sampling plans, nature of geologic distributions, and application of analyses of variance to solving geological problems. Lec.

GLY 5932 SELECTED TOPICS IN GEOLOGY (1-4)
PR: Senior or advanced junior standing and Cl. Each topic is a course in directed study under supervision of a faculty member. All areas of geology included. Departmental permission required prior to registration.

OCE 3001 INTRODUCTION TO OCEANOGRAPHY (3)
Overview of biological, chemical, geological, and physical oceanography. Does not count as a Geology elective. (Also listed under Marine Science.)

GERONTOLOGY

GEY 3000 INTRODUCTION TO GERONTOLOGY (3)
This course is designed to be an introduction to the study of aging. The aging process is viewed from a multi-disciplinary perspective including the biological, psychological, and sociological aspects of aging.

GEY 3601 BEHAVIOR CHANGES IN LATER LIFE (3)
PR: GEY 3000, or Cl. A survey of physical and psychological aspects of aging from middle age through older age. Course emphasis will be on basic age-related changes and their implications for behavior in later age.

GEY 3625 SOCIOCULTURAL ASPECTS OF AGING (3)
PR: GEY 3000 or Cl. Consideration of human aging in a broad sociocultural context. Course emphasis will be on historical, philosophic, and demographic aspects of aging, theories of social gerontology, attitudes toward aging and the aged, cross-cultural perspectives on aging, the sociology of retirement, and aging and the community.

GEY 4327 LONG-TERM CARE ADMINISTRATION I (3)
PR: GEY 3000, ACG 2011. A survey of Long Term Care (LTC) environments. Explored are such issues as definitions of LTC, physiological conditions of LTC use, the institutional setting, the sociopsychological context, and methods of evaluation and intervention.

GEY 4328 LONG-TERM CARE ADMINISTRATION II (3)
PR: GEY 4327. Administration of long-term care institutions from a group dynamics perspective. Emphasis on informed problem solving and decision-making via analysis of the psychosocial and sociocultural environment in the nursing home community. Course objective is to create efficient and humane living and working conditions in nursing homes.

GEY 4329 LONG-TERM CARE ADMINISTRATION III (3)
PR: GEY 4328. This course will familiarize the student with the basic aspects of LTC home administration through the practical application of management theory and concepts.

GEY 4360 GERONTOLOGICAL COUNSELING (3)
PR: Cl. An introduction to the study of the major mental health problems of the elderly. Current approaches to counseling the elderly in community and institutional settings are discussed.

GEY 4401 RESEARCH METHODS IN GERONTOLOGY (3)
PR: STA 3122 or equivalent. Restricted to Gerontology majors, others by departmental permission. Methods and techniques of social research in gerontology. Design of gerontological studies, collection and analysis of data, interpretation of results, and preparation of reports.

GEY 4640 DEATH AND DYING (3)
PR: GEY 3000 or Cl. A broad overview of the basic concepts and psychosocial issues relating to the meaning of loss and death, the process of death, and the experience of grieving. Health care practices are considered along with community resources.

GEY 4900 DIRECTED READINGS (1-3)
PR: Cl. A reading program with topics in gerontology conducted under the supervision of a faculty member.

GEY 4930 SENIOR SEMINAR (2)
PR: Cl. This course will provide upper level students with a seminar experience in discussing topics of interest and social relevance in the field of aging. Each student will be required to prepare a seminar paper and present it.

GEY 4935 SPECIAL TOPICS IN GERONTOLOGY (3)
Courses on topics such as preretirement, mental health, human services organization, nursing home administration, the older woman, and elder abuse will be offered. May be repeated up to 6 credit hours.
GEY 4945 FIELD PLACEMENT (6-8)
PR: CI. Internship in an agency or community setting. A full-time assignment to an agency or organization, engaged in planning or administering programs for older people if in the BA program, or to a nursing home if in the BS program.

GEY 5620 SOCIOLOGICAL ASPECTS OF AGING (3)
PR: CI. Examines, within a sociological frame of reference, the interrelationships between the aged (or aging) and the structure and function of the social systems and its major institutionalized subsystems.

GEY 5630 ECONOMICS AND AGING (3)
PR: CI. Examines basic economic systems as they impact the aged. Emphasis on applied aspects of economic planning, pensions, insurance, social security, and other support systems.

GEY 5642 PERSPECTIVES ON DEATH AND DYING (3)
PR: CI. Study of the various psychological, medical, legal, and religious problems caused by dying and death, and of how individuals and groups have responded in the past and present.

HISTORY

AHF 3100 AFRICAN HISTORY TO 1850 (3)
An outline survey of pre-colonial African history including a preface to the use of primary sources (such as archaeology, oral tradition, cultural anthropology, comparative linguistics, documents) in reconstructing the African past. (Also offered under Afro-American Studies.)

AHF 3200 AFRICAN HISTORY SINCE 1850 (3)
Survey of the Colonial and post-colonial history of Africa. Emphasis on the impact of European and other alien influences on the continent, emergence of independent African states, and post-independence problems of nation building and economic development. (Also offered under Afro-American Studies.)

AMH 2010, 2020 AMERICAN HISTORY I, II (3,3)
A history of the United States with attention given to relevant developments on the Western Hemisphere. AMH 2010: European origins to 1877; AMH 2020: 1877 to present.

AMH 3110 AMERICAN COLONIAL HISTORY TO 1750 (4)
A study of the evolution of American society from the Age of Reconciliation to 1750. Attention is given to the transformation from colonies to provinces with emphasis on ethnocultural conflict, religion, labor systems, and political culture.

AMH 3130 THE AMERICAN REVOLUTIONARY ERA (4)
Emphasis on the causes of the American revolution, the nature of Constitution-making, and the establishment of the federal system. Also examines the significance of loyalty, violence, and slavery in American society from 1750-1789.

AMH 3140 THE AGE OF JEFFERSON (4)
A comprehensive study of American society and political culture from 1789-1828. Focuses on demographic trends, party systems, expansionism, Indian policy, labor, and ethno-cultural conflicts.

AMH 3160 THE AGE OF JACKSON (4)
The United States from 1828-1850, with emphasis on social and political conflict. Consideration of evangelicalism, reform, labor movements, urbanization, and political activity in the ante-bellum era.

AMH 3170 THE CIVIL WAR AND RECONSTRUCTION (4)
An examination of political, social, and economic climate of the 1850's that led to the American Civil War. The course does focus upon the war itself in its military, diplomatic, and political consequences through the end of the Reconstruction (1877).

AMH 3201 THE UNITED STATES, 1877-1929 (4)
A study of America from the end of Reconstruction to the stock market crash. Focus is on social and political developments, the course covers industrialization, reform, imperialism, feminism, race relations and World War I.

AMH 3252 THE UNITED STATES SINC E 1929 (4)
The United States from the Great Depression to the present. Covering political, social and diplomatic developments, examines the New Deal, World War II, the Cold War, Viet Nam, civil rights, feminism and Watergate.

AMH 3402 THE OLD SOUTH (4)
A study of the American South from its colonial origins to the fall of the Confederacy in 1865. Emphasis on slavery and race, the Southern frontier, the development of sectional consciousness, and the coming of the Civil War.

AMH 3403 THE SOUTH SINCE 1865 (4)
Southern history since the surrender at Appomattox. Topics covered include Reconstruction, the Populist revolt, race relations, demography and disfranchisement, Southern women, and the Civil Rights Movement.

AMH 3421 EARLY FLORIDA (4)
A history of colonial Florida under the Spanish and English. Florida as an area of discovery, colonization, and imperial conflict; the emergence of Florida within the regional setting.

AMH 3423 MODERN FLORIDA (4)
An historical survey of Florida from the territorial period to the modern era. An examination of the social, political, and economic changes occurring in Florida between 1821 and the 1980's.

AMH 3500 AMERICAN LABOR HISTORY (4)
A study of American workers from the colonial period to the present. Examines the changing nature of work, its effects of workers (including minorities and women), and their responses as expressed in strikes, unions, and political action.

AMH 3510 U.S. DIPLOMATIC HISTORY TO 1898 - 6A (3)
The development of American Foreign Relations in the Agricultural era.

AMH 3511 U.S. DIPLOMATIC HISTORY IN THE 20TH CENTURY - 6A (3)
A history of American Foreign Relations in the Industrial era.

AMH 3530 IMMIGRATION HISTORY (4)
A study of the composition and character of the 'American' peoples, with emphasis on the period from 1840s to the 1920s. Examines old world backgrounds of immigrants and their responses to the new world's social, economic and political conditions.

AMH 3540 UNITED STATES MILITARY HISTORY (4)
A study of American military policy and practices from colonial days to the present. Attention is given both to tactics and to strategy in the unfolding formulation and development of American armed might.

AMH 3545 WAR AND AMERICAN EMPIRE (4)
The U.S. evolved in 200 years from 13 colonies to the number one power in the world. To achieve this goal we utilized war to achieve empire. This course will examine the link between American War and empire from the Revolution through Viet Nam.

AMH 3561 AMERICAN WOMEN I (4)
A study of women in the evolution of American society from European origins to 1877. Women's roles in the family, economy, politics, wars, and reform movements will be examined. (May also be taken for credit in Women's Studies.)

AMH 3562 AMERICAN WOMEN II (4)
A study of women in the evolution of American society from 1877 to the present. Women's roles in the family, economy, politics, immigration, wars, religion and reform movements will be examined. (May also be taken for credit in Women's Studies.)

AMH 3800 HISTORY OF CANADA (4)
A study of Canadian experience from its French origins through the British conquest to its present. Attention will also be given to the forces of nationalism, separatism, and regionalism.

ASH 3404 MODERN CHINA (4)
Political, economic, and social history of China from the time of the first major Western contacts (17th-18th Centuries) through the consolidation of socialism in the late 1950's, and the Great Leap Forward.

ASH 3501 HISTORY OF INDIA (4)
A study of the major themes of Indian history from the Indus culture to the present. Emphasis will be given to the Classical, Mogul and British periods as well as the modern independent sub-continent.
EUH 2011, 2012 ANCIENT HISTORY I, II (3,3)
An introductory survey of ancient history. EUH 2011 treats the ancient Near East and Greece from the origins of civilization to the full development of the Hellenistic kingdoms prior to conflict with Rome. EUH 2012 deals with Rome through the Regal, Republican, and Imperial periods, from the beginnings of civilization in Italy to the division of the Roman Empire. A.D. 395.

EUH 2021, 2022 MEDIEVAL HISTORY I, II (3,3)
A thematic survey of the Middle Ages. EUH 2021 deals with the nascent, Christian civilization of Europe, circa 300-1050 A.D.; EUH 2022 treats the mature medieval civilization of Europe, circa 1050-1300.

EUH 2030, 2031 MODERN EUROPEAN HISTORY I, II (3,3)
A thematic survey of Europe in the modern age. EUH 2030 treats the period from the Renaissance to the French Revolution; EUH 2031, from the French Revolution to the present.

EUH 3142 RENAISSANCE AND REFORMATION (4)
A history of Europe from the Renaissance to the Thirty Years' War (1400-1618). The cultural, social, and economic characteristics will provide the framework for artistic, philosophical, religious, and political developments.

EUH 3181 MEDIEVAL CULTURE (4)
A survey of thought, culture, and art in the Middle Ages. Medieval attitudes as manifested in literature, art, philosophy, education, and religion; with emphasis upon Medieval man's changing perception of himself and his world.

EUH 3185 VIKING HISTORY (4)
The role of the Vikings in the shaping of Western history. A comprehensive survey of their institutions, outlook and daily life. Viking expansion into Europe and North America.

EUH 3188 MEDIEVAL SOCIETY (4)
A study of the daily life and attitudes of the medieval nobleman, peasant, townsmen, and the agrarian-urban economy and society which affected their lives.

EUH 3189 MEDIEVAL POLITICS (4)
A study into the nature, distribution, and use of political power during the Middle Ages, in such institutions as feudalism, monarchy, cities, and the church.

EUH 3202 HISTORY OF 17TH AND 18TH CENTURY EUROPE (4)
A history of Europe from the beginning of the Thirty Years' War to the outbreak of the French Revolution. Political and intellectual developments will be assessed in the light of society and the economy.

EUH 3205 HISTORY OF NINETEENTH CENTURY EUROPE (4)
A comparative study of economic, political, social, and intellectual developments in nineteenth-century Europe.

EUH 3206 HISTORY OF TWENTIETH CENTURY EUROPE (4)
A comparative study of economic, political, social, and intellectual developments in twentieth-century Europe.

EUH 3300 BYZANTINE HISTORY (4)
A survey of the Byzantine (Eastern Roman) Empire from its foundation in A.D. 330 to its collapse in 1453. Emphasis on the relationship between the Byzantine Empire and the course of Byzantine history and the cultural heritage of this Empire.

EUH 3401 CLASSICAL GREECE (4)
A study of ancient Greece focusing on the brilliant period following the Persian Wars, but embracing as well the formative Bronze, Middle and Archaic ages, and the decline culminating in the conquest of Greece by Philip II of Macedon in 338 B.C.

EUH 3402 AGE OF ALEXANDER (4)
A study focusing on the career of Alexander the Great and on the Greek and Macedonian conquest of Imperial Persia. Also treated are the great hellenistic kingdoms prior to Rome's conquest of the eastern Mediterranean.

EUH 3412 ROMAN REPUBLIC (4)
A study of the Roman Republic from 509 B.C. to the assassination of Julius Caesar in 44 B.C., with a prelude treating Rome's early development under royal rule. Political growth and change provide the framework for the treatment.

EUH 3413 ROMAN EMPIRE (4)
A study of Imperial Rome from the assassination of Julius Caesar in 44 B.C. to the death of the emperor Constantine in A.D. 337. Emphasized is Rome's government of a vast Mediterranean empire including much of the near East and Europe.

EUH 3461 GERMAN HISTORY TO 1870 (4)
A political, social, and cultural approach to the history of the Germanies from 1500 through 1870, with emphasis on the Protestant Reformation, the rise of Brandenburg-Prussian, and the unification under Bismarck.

EUH 3462 GERMAN HISTORY 1870 TO PRESENT (4)
A political, social, and cultural approach to the history of the German Empire from 1870 through the 1970's. The nation's two attempts to try for world power status are highlighted, as well as the division of Germany into a Federal Republic, prototype of the embattled democracy.

EUH 3501 BRITISH HISTORY TO 1688 (4)
A study of major developments in British history from the 15th century to 1688.

EUH 3502 BRITISH HISTORY 1688 TO PRESENT (4)
A study of the major themes of British history since the Glorious Revolution, including social, political, and economic developments leading to the creation of the modern democratic welfare state.

EUH 3530 BRITISH EMPIRE AND COMMONWEALTH (4)
A study of the development of the British Empire from the age of initial expansion overseas to the creation of the multinational commonwealth. Included are examinations of theory and myth of colonialism as well as the literature of imperialism.

EUH 3571 RUSSIAN HISTORY (4)
A survey of the social, political, economic, and cultural development of Russia from the year 800 to 1865. Topics include the personality of Russian rulers, the origins of Russian Socialism, and Russia's relationship to the West.

EUH 3572 RUSSIAN HISTORY 1865 TO PRESENT (4)
An analysis of the tradition from late imperial society to the contemporary Soviet system. Emphasis will be placed on continuity and change in the economic, political, and cultural aspects of Russia from 1865 to present.

HIS 2931 SPECIAL TOPICS (3)
This course emphasizes a selected historical problem or issue. A variety of instructional approaches will be taken, and topics may vary.

HIS 3474 SCIENCE AND CIVILIZATION - 6A (4)
A thematic study of the interrelationship of science and society in modern history emphasizing the institutional forms, value structures, and social relations in science as they have developed from the scientific revolution to the present.

HIS 3930 SPECIAL TOPICS (3-4)
This course is designed to emphasize a selected historical problem or issue. It is meaningful and challenging to the student. A variety of instructional approaches will be taken to the material. Topics will be changed each semester.

HIS 4104 THEORY OF HISTORY (4)
Recommended to be taken during the senior year. Required of all history majors. An analysis of the foundations of historical knowledge and historical methodology. Includes a survey of historical thinking and writing from ancient times to the present.

HIS 4900 DIRECTED READING (1-4)
PR: Cl. Arrangement with instructor prior to registration. Readings in special topics.

HIS 4920 COLLOQUIUM IN HISTORY (2-4)
Reading and discussion of selected topics in the various fields of history. The subject and scope of inquiry will be determined by the instructor for each section. May be repeated for credit.

HIS 4936 PRO-SEMINAR IN HISTORY (4)
PR: Cl. Advanced topics in the various fields of history. Emphasis on discussion of assigned readings and on research and writing of a major paper. Required of all history majors. May be repeated up to 12 credit hours.

HIS 5215 HISTORICAL WRITING (2)
A course for graduate and advanced undergraduates to combine history, archival research, and writing skills with an examination of various writing styles. Analytic and synthetic skills are stressed in writing articles, reviews and essays.

LAH 3130 COLONIAL LATIN AMERICA (4)
A study of the Spanish and Portuguese Colonial empires in the
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAH 3200</td>
<td>MODERN LATIN AMERICA</td>
<td>(4)</td>
<td>A study of the emergence of the Latin American states. The course will examine developments in Latin America during the nineteenth and twentieth centuries. Special attention is given to the Third World character of the region.</td>
</tr>
<tr>
<td>LAH 3430</td>
<td>HISTORY OF MEXICO</td>
<td>(4)</td>
<td>Mexican history from pre-Columbian cultures to the twentieth century. Emphasis falls on the colonial political economy, social development, the wars of independence, development of the 19th century Mexican state and the Mexican revolution.</td>
</tr>
<tr>
<td>LAH 3470</td>
<td>HISTORY OF THE CARIBBEAN</td>
<td>(4)</td>
<td>A thematic study of the circum-Caribbean from pre-Columbian cultures to the twentieth century, emphasizing the development of the Caribbean political economy with emphasis on monoculture, plantation society, and colonial/neocolonial relationships.</td>
</tr>
<tr>
<td>LAH 3480</td>
<td>HISTORY OF CUBA</td>
<td>(4)</td>
<td>Cuban history from pre-Columbian cultures to the Cuban Revolution. Emphasis on colonization, the sugar economy, the struggles for independence, the political economy of the Republic, and the 20th century revolutionary process.</td>
</tr>
<tr>
<td>WST 3210</td>
<td>WOMEN IN WESTERN CIVILIZATION I - 6A</td>
<td>(3)</td>
<td>Survey of women in the ancient Near East, ancient Greece, ancient Rome, early Middle Ages. Origins of Western attitudes toward sex roles, female sexuality, relation of power to gender. (May also be taken for credit in Women's Studies.)</td>
</tr>
<tr>
<td>WST 3220</td>
<td>WOMEN IN WESTERN CIVILIZATION II</td>
<td>(3)</td>
<td>Survey of European women from the late Middle Ages to the twentieth century: differing consequences of historical change for women and men. (May also be taken for credit in Women's Studies.)</td>
</tr>
<tr>
<td>WST 4309</td>
<td>THE FEMALE EXPERIENCE IN AMERICA</td>
<td>(4)</td>
<td>PR: WST 2010, or WST 3011, or CI. The female experience in America, in historical context, viewed through the writings of various classes, races, ethnic groups. Current research on American women by feminist historians. (May also be taken for credit in Women's Studies.)</td>
</tr>
<tr>
<td>WST 4310</td>
<td>FEMINISM IN AMERICA</td>
<td>(4)</td>
<td>PR: WST 2010, or WST 3011, or CI. Emergence of the women's movement in 19th century America: origins, theoretical and practical issues, relation to European feminism. Sources, issues, implications of 20th century feminism. (May also be taken for credit in Women's Studies.)</td>
</tr>
<tr>
<td>HUS 3001</td>
<td>INTRODUCTION TO HUMAN SERVICES</td>
<td>(3)</td>
<td>An introduction to the field of human services. Study of the professions and agencies involved in providing human services. Analysis of the values and ethics of various professional associations.</td>
</tr>
<tr>
<td>HUS 4020</td>
<td>THE LIFE CYCLE</td>
<td>(4)</td>
<td>An examination of individuals and the physiological and psychosocial changes which occur during infancy, childhood, adolescence, young adulthood, middle age and old age.</td>
</tr>
<tr>
<td>HUS 4100</td>
<td>INTERVIEWING</td>
<td>(3)</td>
<td>PR: HUS 3001 or CI. The principles and techniques of interviewing. Use of interviewing in information gathering, research and helping relationships and developing skills in communication across cultural, social and age barriers.</td>
</tr>
<tr>
<td>SOW 4332</td>
<td>COMMUNITY ORGANIZATION AND DEVELOPMENT</td>
<td>(3)</td>
<td>PR: HUS 3001 or CI. An interdisciplinary approach to community organization and development. A synthesis of social, cultural, psychological, economic, and political information concerning community structure and change.</td>
</tr>
<tr>
<td>HUM 2930</td>
<td>SELECTED TOPICS</td>
<td>(1-4)</td>
<td>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 credit with change of content. May be repeated up to 8 credit hours.</td>
</tr>
<tr>
<td>HUM 3024</td>
<td>THE ARTS</td>
<td>(3)</td>
<td>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-level Humanities courses at a future date.</td>
</tr>
<tr>
<td>HUM 3214</td>
<td>STUDIES IN CULTURE: THE CLASSICAL AND MEDIEVAL PERIODS</td>
<td>(3)</td>
<td>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.</td>
</tr>
<tr>
<td>HUM 3243</td>
<td>STUDIES IN CULTURE: THE RENAISSANCE AND THE NINETEENTH CENTURY</td>
<td>(3)</td>
<td>Analyses of selected fiction, drama, painting, architecture, music and other art forms.</td>
</tr>
<tr>
<td>HUM 3251</td>
<td>STUDIES IN CULTURE: THE TWENTIETH CENTURY</td>
<td>(3)</td>
<td>Analyses of selected works of twentieth century art, primarily emphasizing film, with secondary emphasis on painting and fiction.</td>
</tr>
<tr>
<td>HUM 3271</td>
<td>THE CULTURE OF THE EAST AND WEST I</td>
<td>(4)</td>
<td>Masterpieces of music, visual arts, theatre, literature, and philosophy in varying cultural and historical situations.</td>
</tr>
<tr>
<td>HUM 3273</td>
<td>THE CULTURE OF THE EAST AND WEST II</td>
<td>(4)</td>
<td>Masterpieces of music, visual arts, theatre, literature, and philosophy in varying cultural and historical situations.</td>
</tr>
<tr>
<td>HUM 4402</td>
<td>HUMANITIES IN THE ORIENT: INDIA</td>
<td>(4)</td>
<td>PR: Sophomore standing or CI. Examples from the arts and letters of India and the relationship of these arts to the Hindu and Buddhist philosophies and religions.</td>
</tr>
<tr>
<td>HUM 4404</td>
<td>HUMANITIES IN THE ORIENT: CHINA</td>
<td>(4)</td>
<td>PR: Sophomore standing or CI. 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.</td>
</tr>
<tr>
<td>HUM 4405</td>
<td>HUMANITIES IN THE ORIENT: JAPAN</td>
<td>(4)</td>
<td>PR: Sophomore standing or CI. Examples from the arts and letters of Japan, their relationship to Zen Buddhism and other Japanese philosophies and religions; Western influences on twentieth century Japanese arts and letters.</td>
</tr>
<tr>
<td>HUM 4433</td>
<td>CLASSICAL ARTS AND LETTERS I</td>
<td>(4)</td>
<td>PR: Sophomore standing or CI. A study of the poetry, drama, philosophy, historical writing, painting, sculpture and architecture of ancient Greece, including such authors as Homer, Sophocles, and Plato, and monuments such as the Parthenon.</td>
</tr>
<tr>
<td>HUM 4434</td>
<td>CLASSICAL ARTS AND LETTERS II</td>
<td>(4)</td>
<td>PR: Sophomore standing or CI. A study of the poetry, drama, philosophy, historical writing, painting, sculpture and architecture of ancient Rome, including such authors as Virgil, Livy, and Cicero, the monuments of Rome, Pompeii, and Herculaneum.</td>
</tr>
<tr>
<td>HUM 4435</td>
<td>MEDIEVAL ARTS AND LETTERS I</td>
<td>(4)</td>
<td>PR: Sophomore standing or CI. A study of the culture of Europe and the Mediterranean world from the 4th to 11th centuries through readings of early Medieval historians, poets, and theologians, as well as the study of illuminated manuscripts, mosaics, painting, and architecture.</td>
</tr>
<tr>
<td>HUM 4436</td>
<td>MEDIEVAL ARTS AND LETTERS II</td>
<td>(4)</td>
<td>PR: Sophomore standing or CI. A study of the culture of Western Europe from the 9th to 14th centuries. Readings will include poetry and religious works; examples of painting, architecture, sculpture and music will be studied.</td>
</tr>
<tr>
<td>HUM 4437</td>
<td>RENAISSANCE ARTS AND LETTERS I</td>
<td>(4)</td>
<td>PR: Sophomore standing or CI. A study of the Italian Renaissance, 1300-1580, emphasizing Humanism, painting, architecture, literature, music and sculpture. Special study will be done of Petrarca, Giotto, DaVinci, and Michelangelo.</td>
</tr>
<tr>
<td>HUM 4438</td>
<td>RENAISSANCE ARTS AND LETTERS II</td>
<td>(4)</td>
<td>PR: Sophomore standing or CI. A study of the Northern Renaissance, 1400-1580, as exemplified in Germany, France, the Netherlands, England, and Spain. The course includes painting, architecture, literature and music, with special study of Durer, Van Eyck, El Greco, and Bosch.</td>
</tr>
</tbody>
</table>
HUM 4440 ARTS AND LETTERS IN THE 17TH AND 18TH CENTU RIES (4)
PR: Sophomore standing or CI. This course includes the arts, literature, and music of the Baroque, Rococo, and Neo-Classical periods with special study of Rubens, Rembrandt, Bach, Haydn, and Mozart.

HUM 4442 ARTS AND LETTERS OF THE ROMANTIC PERIOD (4)
PR: Sophomore standing or CI. Continental masterworks of fiction, painting, and music in the context of European cultural history from the French Revolution to the Revolutions of 1848.

HUM 4444 NINETEENTH CENTURY ARTS AND LETTERS (4)
PR: Sophomore standing or CI. A study of continental literary, musical, and artistic masterworks from the Revolutions of 1848 until the outbreak of World War I.

HUM 4445 TWENTIETH CENTURY ARTS AND LETTERS I (4)
PR: Sophomore standing or CI. Analysis of selected works of twentieth century art. The course will focus on a particular phase in the development of modernism, a set of themes, or certain stylistic aspects of the various arts of the twentieth century.

HUM 4446 TWENTIETH CENTURY ARTS AND LETTERS II (4)
PR: Sophomore standing or CI. Analysis of selected works of twentieth century art. The course will focus on a particular phase in the development of modernism, a set of themes, or certain stylistic aspects of various arts of the twentieth century.

HUM 4452 HUMANITIES IN AMERICA I (4)
PR: Sophomore standing or CI. Study of selected works of art, tracing the course of westward expansion in civilization, and the interaction between the arts and the sciences in American ways of life and work, 1790-1890.

HUM 4453 HUMANITIES IN AMERICA II (4)
PR: Sophomore standing or CI. Study of selected works, tracing the course of expansion in the production and enjoyment of works of art, and interaction between the idealistic and pragmatic concerns for development of the arts in the 20th century.

HUM 4462 LATIN AMERICAN ARTS AND LETTERS I (4)
PR: Sophomore standing or CI. Analysis of selected Latin American works of art in their cultural context, with emphasis on major art forms selected from the Pre-Columbian period.

HUM 4464 LATIN AMERICAN ARTS AND LETTERS II (4)
PR: Sophomore standing or CI. Analysis of selected Latin American works of art in their cultural context, with emphasis on major art forms selected from the colonial through contemporary periods.

HUM 4905 DIRECTED STUDY (1-4)
PR: CI. 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 1920s. 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. (Fall term only.)

HUM 4941 STUDY ON LOCATION (1-4)
Prerequisites: 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.

INTERDISCIPLINARY SOCIAL SCIENCES

ISS 3010 INTRODUCTION TO THE SOCIAL SCIENCES (3)
An introduction to the fields within the social sciences. Emphasis is placed on the concepts, theories methodologies and applications used in the social sciences. Course may be taken by non-majors.

ISS 3930 SELECTED TOPICS IN THE SOCIAL SCIENCES (1-4)
Interdisciplinary studies with course content dependent on student demand and instructor's interest. May be repeated as topics vary.

ISS 4162 THE CITY AND URBANIZATION (3)
An interdisciplinary perspective will be used to analyze the emergence of the city and the urban revolution. Urban planning and governance will be examined in looking at how urban areas deal with social and physical problems.

ISS 4164 URBAN SOCIAL ISSUES: AN INTERDISCIPLINARY APPROACH (3)
This course is designed to examine current social issues from an interdisciplinary perspective. Topic selection will be within the broad framework of technological changes, economic conditions, political ideologies, and their impact on changing social patterns.

ISS 4900 DIRECTED READINGS (1-3)
PR: CI. A supervised program of intensive reading in interdisciplinary materials in areas of specific interest. May be repeated.

ISS 4910 DIRECTED RESEARCH (1-3)
PR: CI. A supervised program of interdisciplinary research in areas of specific interest. May be repeated.

ISS 4935 SEMINAR IN THE SOCIAL SCIENCES (3)
PR: Senior standing and ISS 3010. A capstone course designed to provide an in-depth study of topical areas related to the social sciences. Course may be taken by non-majors.

ISS 5934 SELECTED TOPICS (1-3)
PR: CI. Plus senior standing or graduate status. Interdisciplinary studies with course content dependent on student demand and instructor's interest. May be repeated as topics vary.

STA 3122 SOCIAL SCIENCE STATISTICS -6A
(3)
This course is designed to introduce concepts, theories, and assumptions that underlie specific techniques used in the social sciences. Emphasis is placed on selection of appropriate techniques given the research design to be utilized.

INTERNATIONAL STUDIES

AREA STUDIES
Area study courses are multi-disciplinary in nature and deal with one or more countries of a region. Each course combines some measure of political, economic, historical, religious, geographic, anthropological, and sociological analysis in dealing with salient features and current problems. The same course may be repeated, but only when the countries of concentration differ. The regularly offered area study courses are:

ASN 3030 THE MIDDLE EAST
EUS 3000 EUROPE
LAS 3002 LATIN AMERICA
AFA 4190 AFRICA AND THE UNITED STATES
ASN 3012 JAPAN TODAY
ASN 3014 CHINA TODAY
EUS 3022 RUSSIA
INR 1211 WORLD PERSPECTIVE
EUS 3085 WORLD TENSIONS
INR 2930 SELECTED TOPICS
INR 3003 INTRODUCTION TO INTERNATIONAL STUDIES
INR 3005 INTERNATIONAL WEALTH AND POWER
INR 3300 ACTORS IN THE INTERNATIONAL SYSTEM
<table>
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<th>Description</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>INR 3082</td>
<td>ISSUES IN THE INTERNATIONAL SYSTEM</td>
<td>A study which emphasizes the problems and processes of international actors. Focuses on issues related to war and peace, political economy, and social welfare topics.</td>
<td>3</td>
</tr>
<tr>
<td>INR 3141</td>
<td>INTERNATIONAL NUCLEAR POLICY</td>
<td>A study of nuclear issues (such as system development, proliferation, control, strategic policy and war) as they relate to contemporary international politics.</td>
<td>3</td>
</tr>
<tr>
<td>INR 3242</td>
<td>INTERNATIONAL TERRORISM</td>
<td>A study of contemporary international terrorism and its causes, ranging from national liberation movements to networks of philosophical anarchists.</td>
<td>3</td>
</tr>
<tr>
<td>INR 3261</td>
<td>WORLD IDEOLOGIES</td>
<td>A course which details and examines the ideologies of today's independent countries; analyzing them in their political, social, cultural and historical context.</td>
<td>3</td>
</tr>
<tr>
<td>INR 3336</td>
<td>INTELLIGENCE AND U.S. FOREIGN POLICY</td>
<td>An examination of the role of intelligence and the intelligence community in U.S. foreign policy, with emphasis on the period since World War II.</td>
<td>3</td>
</tr>
<tr>
<td>INR 3770</td>
<td>COMPARATIVE MILITARY SYSTEMS</td>
<td>A comparative study of the military institutions of various nations organized and interact with politics, societies and economies.</td>
<td>3</td>
</tr>
<tr>
<td>INR 4250</td>
<td>THE POLITICAL ECONOMY OF THE SOUTHERN NATIONS</td>
<td>A multidisciplinary study of the efforts of the nations in the South (Africa, Asia, Latin America and the Middle East) to improve their status through political and economic development.</td>
<td>3</td>
</tr>
<tr>
<td>INR 4900</td>
<td>DIRECTED READINGS</td>
<td>PR: Cl. A supervised program of intensive reading of interdisciplinary materials in areas of specific interest. May be repeated.</td>
<td>1-3</td>
</tr>
<tr>
<td>INR 4910</td>
<td>DIRECTED RESEARCH</td>
<td>PR: Cl. A supervised program of interdisciplinary research in areas of specific interest. May be repeated.</td>
<td>1-3</td>
</tr>
<tr>
<td>INR 4931</td>
<td>SELECTED TOPICS</td>
<td>Interdisciplinary studies with course content dependent on student demand and instructor's interest. May be repeated as topics vary</td>
<td>1-4</td>
</tr>
<tr>
<td>INR 4936</td>
<td>SENIOR SEMINAR</td>
<td>PR: International Studies major and senior standing. A variable topics seminar integrating concepts and analyses relating to the academic background of INT majors. Should be taken in the student's final semester.</td>
<td>3</td>
</tr>
<tr>
<td>WFT 3775</td>
<td>WOMEN IN THE DEVELOPING WORLD</td>
<td>A comparative study of women's status in various developing nations with that in various industrialized states. (Also offered under Women's Studies Program.)</td>
<td>3</td>
</tr>
</tbody>
</table>

**LANGUAGE**

**General Foreign Languages**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOL 3100</td>
<td>GENERAL FOREIGN LANGUAGE</td>
<td>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.</td>
<td>1-4</td>
</tr>
<tr>
<td>FOL 4101</td>
<td>GENERAL FOREIGN LANGUAGE II</td>
<td>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.</td>
<td>1-3</td>
</tr>
<tr>
<td>FOL 4905</td>
<td>DIRECTED STUDY</td>
<td>Departmental approval required.</td>
<td>1-3</td>
</tr>
<tr>
<td>FOL 5906</td>
<td>DIRECTED STUDY</td>
<td>PR: FOL 4101 or equivalent.</td>
<td>1-3</td>
</tr>
</tbody>
</table>

**Arabic**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARA 1120</td>
<td>MODERN ARABIC I</td>
<td>An intensive study of basic skills: pronunciation, listening comprehension, speaking and some composition.</td>
<td>4</td>
</tr>
<tr>
<td>ARA 1121</td>
<td>MODERN ARABIC II</td>
<td>PR: ARA 1120 or its equivalent. A continuation of ARA 1120. More sophisticated oral/aural skills are attained. Basic reading skills are acquired.</td>
<td>4</td>
</tr>
</tbody>
</table>

**Chinese**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHI 1120</td>
<td>MODERN CHINESE I</td>
<td>Mandarin. An intensive study of basic skills: pronunciation, listening, comprehension, speaking, and some composition.</td>
<td>4</td>
</tr>
<tr>
<td>CHI 1121</td>
<td>MODERN CHINESE II</td>
<td>Mandarin. PR: CHI 1120 or equivalent. A continuation of CHI 1120. More sophisticated oral/aural skills are attained. Basic reading skills are acquired.</td>
<td>4</td>
</tr>
</tbody>
</table>

**French**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRE 1040</td>
<td>FRENCH FOR READING</td>
<td>Designed to provide a reading ability in French that will support research in other disciplines. Primarily for graduate students.</td>
<td>3</td>
</tr>
<tr>
<td>FRE 1120</td>
<td>BEGINNING FRENCH I</td>
<td>The first course in the study of elementary French. Emphasis on the development of basic skills in comprehension, speaking and reading.</td>
<td>4</td>
</tr>
<tr>
<td>FRE 1170</td>
<td>OVERSEAS STUDY-ELEM. FRENCH</td>
<td>Elementary-level French taught in France. In lieu of FRE 1120 and FRE 1121. No credit toward a major or minor in French. May be repeated up to 8 credit hours.</td>
<td>4</td>
</tr>
<tr>
<td>FRE 2201</td>
<td>BEGINNING FRENCH II</td>
<td>PR: FRE 1120 or equivalent. A continuation of FRE 1120.</td>
<td>3</td>
</tr>
<tr>
<td>FRE 2210</td>
<td>FRENCH IV</td>
<td>PR: FRE 1121 or equivalent. Readings in French on the intermediate level. May be taken concurrently with FRE 2201.</td>
<td>3</td>
</tr>
<tr>
<td>FRE 2241</td>
<td>CONVERSATION I</td>
<td>PR: FRE 1121. For development of basic conversational skills.</td>
<td>3</td>
</tr>
<tr>
<td>FRE 2270</td>
<td>OVERSEAS STUDY-INTR. FRENCH</td>
<td>Two semesters of university-level French or equivalent proficiency. At USF, this equates to FRE 1120 (4 credits) plus FRE 1121 (4 credits) or FRE 1170. May be repeated up to 6 credit hours.</td>
<td>3-6</td>
</tr>
<tr>
<td>FRE 2320</td>
<td>READING IN FRENCH LITERATURE AND CULTURE</td>
<td>PR: FRE 2201 or equivalent. This course is designed to build reading skills in French while giving students a broad background in culture which will serve them in all subsequent courses.</td>
<td>3</td>
</tr>
<tr>
<td>FRE 3240</td>
<td>CONVERSATION II</td>
<td>PR: FRE 2241 or equivalent proficiency. Conversation practice with concentration on current idiomatic usage.</td>
<td>3</td>
</tr>
<tr>
<td>FRE 3420</td>
<td>COMPOSITION I</td>
<td>A fundamental composition course for students who have completed FRE 2200 or FRE 2201.</td>
<td>3</td>
</tr>
<tr>
<td>FRE 3440</td>
<td>FRENCH FOR BUSINESS</td>
<td>PR: FRE 1121 or equivalent. An introduction to the French language in ordinary business transactions.</td>
<td>3</td>
</tr>
<tr>
<td>FRE 3470</td>
<td>OVERSEAS STUDY</td>
<td>An intensive study-travel project in France. Prior approval and early registration required. May be repeated up to 12 credit hours.</td>
<td>1-6</td>
</tr>
<tr>
<td>FRE 3500</td>
<td>FRENCH CIVILIZATION</td>
<td>Readings and discussion on the cultural history of France.</td>
<td>3</td>
</tr>
<tr>
<td>FRE 4421</td>
<td>COMPOSITION II</td>
<td>Continuation of French composition. This course is designed to follow FRE 3420.</td>
<td>3</td>
</tr>
<tr>
<td>FRE 4470</td>
<td>ADVANCED OVERSEAS STUDY</td>
<td>PR: FRE 3470 or Cl. Intensive language study in France. Departmental approval required.</td>
<td>1-6</td>
</tr>
<tr>
<td>FRE 4700</td>
<td>FRENCH LINGUISTICS</td>
<td>PR: LIN 3010 and FRE 2201 or equivalent. An introduction to the phonological, morphological and syntactic structure of French.</td>
<td>3</td>
</tr>
<tr>
<td>FRE 4905</td>
<td>DIRECTED STUDY</td>
<td>Departmental approval required.</td>
<td>1-3</td>
</tr>
</tbody>
</table>
FRE 4930 SELECTED TOPICS
Study of an author, movement or theme. (1-3)

FRE 5425 ADVANCED WRITTEN EXPRESSION
PR: FRE 4421, or equivalent. Course is designed to give advanced training in free composition in French. (3)

FRE 5566 CONTEMPORARY FRANCE
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 discussions in French. (3)

FRW 4100 INTRODUCTION TO FRENCH NOVEL
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. (3)

FRW 4101 INTRODUCTION TO FRENCH DRAMA AND POETRY
A study of the history of drama and poetry. Will include medieval drama, Racine, Corneille, Moliere, Anouilh, Sartre, Ionesco and others. Will also include Villon, Ronsard, DuBellay, Lamartine, Hugo, Vigny, Musset, Baudelaire, Mallarme, Rimbaud, Valery, Puyat, Eliard, Apollinaire, Char, and others. Course content may vary from year to year. (3)

FRW 4310 CLASSICAL DRAMA
PR: FRW 4101. Corneille, Moliere, and Racine. (3)

FRW 5222 CLASSICAL PROSE AND POETRY
PR: FRW 4101. Emphasis on Malherbe, La Fontaine, Boileau, Descartes, and Pascal. (3)

FRW 5226 20TH CENTURY POETRY AND THEATRE
PR: FRW 4101. Valery, Claudel, Anouilh, Claudel, Sartre, Ionesco. (3)

FRW 5286 THE 20TH CENTURY NOVEL
PR: FRW 4100. Proust, Gide, Maucler, Malraux, Camus, Robbe-Grillet. (3)

FRW 5415 LITERATURE OF THE MIDDLE AGES
PR: FRW 4100 or 4101. Major genres, including epic, Arthurian romances, drama and lyric poetry. Reading in modern French translation. (3)

FRW 5425 LITERATURE OF THE RENAISSANCE
PR: FRW 4100 or 4101. A study of Renaissance French humanism including Rabelais, Montaigne, and Pierre de la Rambe. (3)

FRW 5445 18TH CENTURY LITERATURE
PR: FRW 4100. The classical period and the new currents of thought in the Age of Enlightenment. (3)

FRW 5528 PRE-ROMANTICISM
PR: FRW 4100 or 4101. The precursors of romanticism. Emphasis on Rousseau, Bernardin de St. Pierre, Chenier, and Chateaubriand. (3)

FRW 5535 ROMANTICISM
PR: FRW 4101. A study of the romantic and early realistic movements with emphasis on Lamartine, Vigny, Musset, Hugo and Balzac. (3)

FRW 5556 REALISM AND NATURALISM
PR: FRW 4100 or 4101. A detailed study of realism and naturalism with emphasis on Flaubert, Zola, les Goncourt, Maupassant, and Daudet. (3)

FRW 5934 SELECTED TOPICS
PR: Upper-level or graduate standing. Study of an author, movement or theme. (1-3)

German
GER 1120 BEGINNING GERMAN I
Development of basic skills in listening and reading comprehension, speaking and writing of German. (4)

GER 1121 BEGINNING GERMAN II
PR: GER 1120 or equivalent. Continued development of basic skills in listening and reading comprehension, speaking and writing German. (4)

GER 2200 GERMAN III
PR: GER 2120 or equivalent. A review of the basic structure of spoken and written German. May be taken concurrently with GER 2201. (3)

GER 2201 GERMAN IV
PR: GER 1121 or equivalent. Readings in German on the intermediate level. May be taken concurrently with GER 2200. (3)

GER 3244 CONVERSATION I
PR: GER 1121. For development of basic conversational skills. (3)

GER 3245 COMPOSITION I
A fundamental course for students who have completed GER 2200 or GER 2201. (3)

GER 3500 GERMAN CIVILIZATION
PR: GER 2200 or GER 2201. Readings in German on the cultural history of Germany. (3)

GER 4410 CONVERSATION II
Free conversation based on the current German idiom. (3)

GER 4421 COMPOSITION II
Practical training in modern German usage and differences of style. (3)

GER 5845 HISTORY OF THE GERMAN LANGUAGE
A diachronic approach to the study of the German language. The course traces the history and development of the language from Indo-European through Germanic, Old, Middle, and New High German. (3)

GEW 4100 SURVEY OF GERMAN LITERATURE I
Old High German and Middle High German literature in modern German translation; the literature of Humanism and Baroque, the classical period. (3)

GEW 4101 SURVEY OF GERMAN LITERATURE II
The romantic period, 19th and 20th centuries. (4)

GEW 4900 DIRECTED STUDY
Departmental approval required. (1-3)

GEW 4930 SELECTED TOPICS
Study of an author, movement or theme. (1-3)

GEW 5475 20TH CENTURY LITERATURE TO 1945
A study of major styles in German literature from 1900 to WW II with emphasis on Hauptmann, Schnitzler, Hofmannsthal, George Rilke, Kaiser, Heym, Trakl, Thomas Mann, Hesse, Kafka, Benn, Brecht. (3)

GEW 5489 20TH CENTURY LITERATURE: 1945 TO PRESENT
Study of major trends in German literature since WW II with emphasis on Borchert, Frisch, Durrenmatt, Boll, Uwe, Johnson, Grass, Aichinger, Eich Enzensberger, Bachmann. (3)

GEW 5515 THE ENLIGHTENMENT
Selected dramas and critical writings by Lessing, Wieland, Kant. (3)

GEW 5545 ROMANTICISM
Jenaer circle and Heidelberg circle; the late romantic period, the writers between Classicism and Romanticism. (3)

GEW 5555 REALISM
Selected works by Grillparzer, Grabbe, Buchner, Hebbel, Heine, Immungen, Stifter, Keller, Meyer, Storm, Raabe, Hulshoff, and Monke. (3)

GEW 5605 GOETHE
Selected novels, poems: Werther, Wahlverwandtschaften, Wilhelm Meister, Westöstlicher Divan. (3)

GEW 5606 FAUST
Sources, form, content, and literary significance of Urfaust and Faust. (3)

GEW 5615 SCHILLER
Selected dramas, philosophical and aesthetic writings. (3)

GEW 5934 SELECTED TOPICS
PR: Upper-level or graduate standing. Study of an author, movement or theme. (1-3)

Hebrew
HBR 1120 MODERN HEBREW I
An intensive study of basic skills: pronunciation, listening comprehension, speaking, and some composition. (4)

HBR 1121 MODERN HEBREW II
PR: HBR 1120 or equivalent. A continuation of HBR 1120. More sophisticated oral/aural skills are attained. Basic reading skills are acquired.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>JPN 1120</td>
<td>BEGINNING JAPANESE I</td>
<td>(4)</td>
<td>The first course in the study of elementary Japanese. Emphasis is on the development of basic skills in comprehension, speaking, and reading.</td>
</tr>
<tr>
<td>ITA 2200</td>
<td>INTERMEDIATE ITALIAN II</td>
<td>(3)</td>
<td>The second course in the study of elementary Italian. Emphasis is on the development of basic skills in comprehension, speaking and reading.</td>
</tr>
<tr>
<td>ITA 2200</td>
<td>PR: ITA 1121 or equivalent. Readings in Italian on the elementary level. A review of the basic structure of spoken and written Italian.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITA 3240</td>
<td>ITALIAN CONVERSATION I</td>
<td>(4)</td>
<td>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 idiomatic expressions expanded.</td>
</tr>
<tr>
<td>ITA 3420</td>
<td>COMPOSITION</td>
<td>(3)</td>
<td>A fundamental composition course for students who have completed ITA 2200 and ITA 2201.</td>
</tr>
<tr>
<td>ITA 4241</td>
<td>ITALIAN CONVERSATION II</td>
<td>(4)</td>
<td>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 signals.</td>
</tr>
<tr>
<td>ITW 4100</td>
<td>SURVEY OF ITALIAN LITERATURE I</td>
<td>(4)</td>
<td>A survey of Italian literature from the earliest monuments through the classicism of the 18th century.</td>
</tr>
<tr>
<td>ITW 4101</td>
<td>SURVEY OF ITALIAN LITERATURE II</td>
<td>(4)</td>
<td>A survey of Italian literature beginning with the Classicism of the 18th century and continuing to present.</td>
</tr>
<tr>
<td>ITW 4905</td>
<td>DIRECTED STUDY</td>
<td>(1-3)</td>
<td>Departmental approval required.</td>
</tr>
<tr>
<td>JPN 1120</td>
<td>MODERN JAPANESE I</td>
<td>(4)</td>
<td>An intensive study of basic skills: pronunciation, listening comprehension, speaking, and some composition.</td>
</tr>
<tr>
<td>JPN 1121</td>
<td>BEGINNING JAPANESE II</td>
<td>(4)</td>
<td>PR: JPN 1120 or equivalent. A continuation of JPN 1120. More sophisticated oral/aural skills are attained. Basic reading skills are acquired.</td>
</tr>
<tr>
<td>JPN 2200</td>
<td>MODERN JAPANESE III</td>
<td>(3)</td>
<td>PR: JPN 1121 or equivalent. Continuing study to attain basic proficiency in Japanese.</td>
</tr>
<tr>
<td>JPN 2201</td>
<td>MODERN JAPANESE IV</td>
<td>(3)</td>
<td>PR: JPN 2200 or equivalent. Continuation of JPN 2200. Practice of writing, speaking, and listening skills to attain basic proficiency.</td>
</tr>
<tr>
<td>JPN 4905</td>
<td>DIRECTED STUDY</td>
<td>(1-5)</td>
<td>Permits study options in Japanese not available in regularly scheduled curriculum at departmental discretion. Departmental approval required. May be repeated up to 10 credit hours.</td>
</tr>
<tr>
<td>JPN 4930</td>
<td>SELECTED TOPICS</td>
<td>(1-5)</td>
<td>Course permits study options in Japanese not available in the regularly scheduled curriculum at departmental discretion. Departmental approval required. May be repeated up to 10 credit hours.</td>
</tr>
<tr>
<td>POL 1120</td>
<td>BEGINNING POLISH I</td>
<td>(4)</td>
<td>This course features all four major skills: listening, reading, speaking, and writing. Grammar exercises, dictation, readings and vocabulary-building are central in this first course. Knowledge of Russian can help. S/U available.</td>
</tr>
<tr>
<td>POL 1121</td>
<td>BEGINNING POLISH II</td>
<td>(4)</td>
<td>PR: POL 1120 or equivalent by examination. This course continues the four basic skills of POL 1120, with continued emphasis on structures, dialogues, readings, dictation, and vocabulary-building. Knowledge of Russian can help. S/U available.</td>
</tr>
<tr>
<td>POR 1120</td>
<td>BEGINNING PORTUGUESE I</td>
<td>(4)</td>
<td>Development of basic skills in listening and reading comprehension, speaking and writing of Brazilian Portuguese.</td>
</tr>
<tr>
<td>POR 1121</td>
<td>BEGINNING PORTUGUESE II</td>
<td>(4)</td>
<td>PR: POR 1120 or equivalent. Continued development of basic skills in listening and reading comprehension, speaking and writing of Brazilian Portuguese.</td>
</tr>
<tr>
<td>RUS 1120</td>
<td>BEGINNING RUSSIAN I</td>
<td>(4)</td>
<td>The first course in the study of elementary Russian. Emphasis on the development of basic skills in comprehension, speaking and reading.</td>
</tr>
<tr>
<td>RUS 1121</td>
<td>BEGINNING RUSSIAN II</td>
<td>(4)</td>
<td>PR: RUS 1120 or Cl. The second course in the study of elementary Russian. Emphasis on the development of basic skills in comprehension, speaking and reading.</td>
</tr>
<tr>
<td>RUS 2200</td>
<td>RUSSIAN III</td>
<td>(4)</td>
<td>PR: First year Russian or equivalent. Review and development of basic skills in conversation, composition, and reading.</td>
</tr>
<tr>
<td>RUS 2201</td>
<td>RUSSIAN IV</td>
<td>(4)</td>
<td>PR: RUS 2200 or equivalent. Review and development of basic skills in conversation, composition, and reading.</td>
</tr>
<tr>
<td>RUS 2270</td>
<td>OVERSEAS STUDY</td>
<td>(3)</td>
<td>Intensive study of the Russian language in Russia involving at least 20 hours per week of classroom instruction and cultural excursions conducted in Russian around Moscow and other parts of Russia. May be repeated up to 12 credit hours.</td>
</tr>
<tr>
<td>RUS 3420</td>
<td>RUSSIAN CONVERSATION I</td>
<td>(4)</td>
<td>PR: Second year Russian or equivalent. Development of basic conversational skills.</td>
</tr>
<tr>
<td>RUS 3500</td>
<td>RUSSIAN CIVILIZATION -6A</td>
<td>(3)</td>
<td>A survey of the cultural history of Russia.</td>
</tr>
<tr>
<td>RUS 4241</td>
<td>RUSSIAN CONVERSATION II</td>
<td>(4)</td>
<td>PR: Previous course in series or equivalent. Development of conversational skills.</td>
</tr>
<tr>
<td>RUS 4402</td>
<td>ADVANCED RUSSIAN CONVERSATION &amp; COMPOSITION I</td>
<td>(4)</td>
<td>PR: RUS 4241 or Cl. Third year Russian.</td>
</tr>
<tr>
<td>RUS 4403</td>
<td>ADVANCED RUSSIAN CONVERSATION &amp; COMPOSITION II</td>
<td>(4)</td>
<td>PR: RUS 4241 or Cl. Third year Russian.</td>
</tr>
<tr>
<td>RUS 4700</td>
<td>RUSSIAN LINGUISTICS</td>
<td>(3)</td>
<td>PR LIN 3010 or equivalent or Cl. An introduction to Russian Linguistics content: Phonology, Morphology, Word-formation, Syntax.</td>
</tr>
<tr>
<td>RUS 4900</td>
<td>SELECTED TOPICS</td>
<td>(1-3)</td>
<td>Study of an author, movement or theme.</td>
</tr>
<tr>
<td>RUT 3110</td>
<td>RUSSIAN CLASSICS IN TRANSLATION -6A</td>
<td>(3)</td>
<td>Masterpieces of 19th century Russian literature in English. The major works of Pushkin, Lermontov, Gogol, Turgenev, Dos-toevsky, Tolstoy, and Chekhov. Elective for all students in all departments.</td>
</tr>
<tr>
<td>RUT 3111</td>
<td>TWENTIETH-CENTURY RUSSIAN LITERATURE IN TRANSLATION -6A</td>
<td>(3)</td>
<td>Masterpieces of 20th century Soviet literature in English. The</td>
</tr>
</tbody>
</table>
major works of Bely, Olesha, Babel, Zamyatin, Bulgakov, Pasternak, and Solzhenitsyn. Elective for all students in all departments.

Spanish

SPN 1120 BEGINNING SPANISH I
Development of basic skills in listening and reading comprehension, speaking and writing in Spanish.

SPN 1121 (BEGINNING SPANISH II)
PR: SPN 1120 or equivalent. Continued development of basic skills in listening and reading comprehension, speaking and writing of Spanish.

SPN 1130 ACCELERATED SPANISH FOR NEAR-NATIVE SPEAKERS AND OTHERS
PR: CI. Accelerated course for near-native speakers and others with some knowledge of Spanish capable of making rapid progress.

SPN 2200 SPANISH III
PR: SPN 1121 or equivalent. A review of the basic structure of spoken and written Spanish. May be taken concurrently with SPN 2201.

SPN 2201 SPANISH IV
PR: SPN 1121 or equivalent. Readings in Spanish on the intermediate level. May be taken concurrently with SPN 2200.

SPN 2240 CONVERSATION I
PR: SPN 1121. For development of basic conversational skills.

SPN 2241 CONVERSATION II
PR: SPN 2240 or equivalent. To improve fluency in spoken Spanish.

SPN 2440 SPANISH BUSINESS
PR: SPN 2201 or equivalent. An introduction to the Spanish language as used in undertaking ordinary business transactions.

SPN 3300 COMPOSITION
PR: SPN 2200-2201. A study of syntax, grammar and writing.

SPN 3470 OVERSEAS STUDY
PR: SPN 1121. An intensive study-travel program in a Spanish-speaking country. Prior departmental approval and early registration are required.

SPN 3500 SPANISH CIVILIZATION
PR: SPN 1121. The culture and civilization of Spain.

SPN 3520 SPANISH AMERICAN CIVILIZATION
Readings and discussions on the culture and civilization of Spanish America. For majors and non-majors.

SPN 4400 EXPOSITORY WRITING
PR: SPN 3300. Practical training in contemporary Spanish structure, usage and stylistic devices.

SPN 4410 ADVANCED CONVERSATION
PR: SPN 3241 or equivalent. Intensive practice in the formulation and expression of ideas in standard Spanish.

SPN 4470 ADVANCED OVERSEAS STUDY

SPN 4700 SPANISH LINGUISTICS
PR: LIN 3010 or equivalent (may be taken concurrently with CI) and SPN 2201 or equivalent. An introduction to Hispanic linguistics: Phonology, morphology, syntax, and lexicography.

SPN 5525 MODERN SPANISH AMERICAN CIVILIZATION
PR: SPN 3520 or equivalent or graduate standing. Advanced readings and discussions dealing with Spanish American civilization and culture, including a study of social, artistic and political trends, from Colonial Times to the present. Texts and discussions in Spanish.

SPN 5567 MODERN SPANISH CIVILIZATION
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.

SPW 3030 INTRODUCTION TO HISPANIC LITERATURE
PR: SPN 2201 or equivalent. Prose fiction, drama, poetry, and essay; techniques of literary analysis.

SPW 4100 SURVEY OF SPANISH LITERATURE I
PR: SPW 3030 or equivalent. A study of Spanish literature from its origins through the 17th century.

SPW 4101 SURVEY OF SPANISH LITERATURE II
PR: SPW 3030 or equivalent. A study of the later periods of Spanish literature.

SPW 4131 SURVEY OF SPANISH-AMERICAN LITERATURE
PR: SPW 3030 or equivalent. An introduction to the study of Spanish-American literature from the Modernism period to the present. Emphasis on modern writers since Dario.

SPW 4900 DIRECTED STUDY
Departmental approval required.

SPW 4930 SELECTED TOPICS
Study of an author, movement or theme.

SPW 5135 COLONIAL SPANISH AMERICAN LITERATURE
PR: SPW 4131. An introduction to Colonial Spanish American Literature from the Discovery through the Romantic Period.

SPW 5355 SPANISH AMERICAN DRAMA & POETRY
PR: SPW 4131. Major writers of all genres. Emphasis on modern writers.

SPW 5387 SPANISH AMERICAN PROSE
PR: SPW 4131. Emphasis on the gaucho theme and contemporary prose fiction.

SPW 5588 GOLDEN AGE POETRY AND DRAMA
PR: SPW 4100. Lope de Vega, Alarcon, Tirso, Calderon, and others.

SPW 5405 MEDIEVAL LITERATURE
PR: SPW 4100 or equivalent. Course gives an in-depth study of principal works and authors of the period such as El Poema de Mio Cid, Libro de Buen Amor and La Celestina.

SPW 5445 19TH CENTURY LITERATURE
PR: SPW 4101. Poetry and drama of the first half of the 19th century.

SPW 5605 CERVANTES
Cervantes' masterpiece Don Quijote de la Mancha.

SPW 5725 GENERATION OF 1898
PR: SPW 4101. The major figures of the period and their main followers.

SPW 5726 VANGUARD LITERATURE OF 1918 AND 1936

SPW 5934 SELECTED TOPICS
PR: Upper-level or graduate standing. Study of an author, movement or theme.

Yoruba

YOR 1120 YORUBA I
This course is designed to familiarize students with modern orthography and to develop skills in reading, writing, speaking, and understanding spoken Yoruba. Pronunciation in Yoruba and achieving basic communicative competence in the language are among the skills to be attained in the course.

YOR 1121 YORUBA II
A continuation of Yoruba 1120, this course delves further into the structure of Yoruba and its grammatical functions. Also covered is practice in reading elementary texts with emphasis on grammar, vocabulary, and an appreciation for style. Also included is composition and drills in oral work. May be repeated up to 8 credit hours.

LIBRARY AND INFORMATION SCIENCE

LIS 2001 USE OF THE LIBRARY
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
PR: Upper level standing or CI. Basic skills in designing and preparing audiovisual materials for a wide variety of instructional and communicative purposes.

LIS 5315 INSTRUCTIONAL GRAPHICS
PR: CI. Theoretical aspects, planning and production of instructional graphic material. The Theory of graphic communications. Interpreting needs for instructional materials appropriate for given behavioral objectives.
LIN 3010 LANGUAGE AND MEANING -6A
A survey introduction for non-specialists to the basic principles of semantics and the way language conveys ideas. This course is also available on WUSF-TV Channel 16 by the O.U. Program.

LIN 4040 DESCRIPTIVE LINGUISTICS
PR: LIN 3010 or Cl. 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 4371 METHODOLOGY OF TEACHING ENGLISH OVERSEAS
PR: Upper-level standing. Designed to introduce and prepare the enrollee in the various facets of teaching English as a Foreign Language in the overseas setting. It will include aspects of teaching verbal skills and comprehension as well as writing. It involves a practicum at the International Language Institute on campus.

LIN 4575 LANGUAGE TYPES OF THE WORLD
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
PR: LIN 3010. 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 4710 LANGUAGE AND COMMUNICATION: ACQUISITION AND DEVELOPMENT
PR: LIN 3010. A survey of current research and theory in the processes of normal acquisition and development of language and communication in children. The acquisition and development of phonology, syntax, semantics, pragmatics, and nonverbal communication and the role of language in general cognitive development.

LIN 4903 DIRECTED READING
PR: Cl. Readings in special topics. Must be arranged prior to registration.

LIN 4930 SELECTED TOPICS
PR: Cl. Course content depends upon students’ needs and instructor’s interest and may range over the entire field of linguistics.
storyboard preparation, time buying and selling techniques, audience research methods, and basic production concepts.

ADV 3300 ADVERTISING MEDIA STRATEGY (3)

ADV 3700 RETAIL ADVERTISING PLANNING AND EXECUTION (3)
PR: ADV 3000 and ADV 3101. A study of retail advertising, including management decisions, processes, procedures, media planning, production techniques, and problems affecting the development of advertising to fulfill retail objectives.

ADV 4400 ADVISING CAMPAIGNS (3)
PR: ACG 2001, ADV 3101, ADV 3300, MMC 4420, ECO 2013, ECO 2023, and MAR 3023. Advanced advertising course requiring planning and production of complete general advertising campaign, including research, production methods, budgeting, and media schedules.

ADV 4940 ADVERTISING PRACTICUM (1)
PURPOSE: An exposure to advertising sequence majors. Practical experience outside the classroom in a live advertising situation where the student works for academic credit under the tutelage of a professional practitioner. (S/U only.)

FIL 3004 THE FILM AS MASS COMMUNICATION: SYNTAX (3)
PR: MMC 3100 and MMC 3602. The language, conventions, elements, and patterns of the film medium as related to current models of effective mass communication and new theories of nonverbal communication. Concurrent laboratory experiences in sound and editing.

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 PHOTO-METRICS (3)
PR: FIL 3004. The materials and processes of cinema photo; response of materials to development and exposure.

FIL 4404 SOCIAL HISTORY OF THE FILM, 1945 TO THE PRESENT (3)
PR: MMC 3100 and MMC 3602. The development of the film from 1945 to the present.

JOU 3006 MAGAZINE PRACTICUM (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, newsgathering, 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 (may be taken concurrently), 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 3300 MAGAZINE ARTICLE AND FEATURE WRITING (3)
PR: CRW 2100, 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 personal columns.

JOU 3400 REPORTING PRACTICUM (1)
PR: JOU 3101 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 the 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, court house, city hall, courts, society, and other special assignments. Emphasis is on coverage of major governmental units at 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 3010. 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 4206 NEWSPAPER DESIGN AND TYPOGRAPHY (3)
PR: 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 4941 EDITING PRACTICUM (1)
PR: Senior standing, JOU 4200 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 3100 WRITING FOR THE MASS MEDIA (3)
PR: Sophomore standing; 2.7 GPA; grade of "C" in ENC 1101, ENC 1102, 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)
PR: Sophomore standing. A survey of the history, theory processes, and philosophy of mass communications and the mass media in the United States, and their relationship to the other major institutions of American society.

MMC 4123 MEDIA SCRIPT WRITING (3)
PR: MMC 3100 and MMC 3602. An introduction to the techniques of writing scripts for photographic and multi-media presentation, electronic media, and industrial and documentary film.

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 4203 COMMUNICATION ETHICS (3)
PR: MMC 3602 and MMC 3100 or CI. A study of the fundamental principles and philosophies of ethics and their application to the decision-making process in the various professions of mass communications.

MMC 4420 RESEARCH METHODS IN MASS COMMUNICATIONS (3)
PR: MMC 3100, MMC 3602. An introduction to the theory and practice of quantitative and historical research methods as applied to the study of media and mass communications. Emphasis on survey research, evaluation of data, and report writing.
MMC 4900 DIRECTED READING IN MASS COMMUNICATIONS (1-3)
PR: Junior standing, CC and CI. Reading and directed study in special topics.

MMC 4919 INDIVIDUAL RESEARCH IN MASS COMMUNICATIONS (1-3)
PR: CC and CI. The course provides means for a student to do independent study in an area not covered by a numbered course.

MMC 4936 SELECTED TOPICS IN MASS COMMUNICATIONS STUDIES (1-3)
PR: Junior standing. Courses designed to meet current or specific topics of interest to instructors and students.

MMC 4945 MEDIA INTERNSHIP-SEMINAR (3)
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.)

PGY 3610 PHOTOJOURNALISM I (3)
PR: MMC 3100 and MMC 3602. Camera operation, darkroom techniques, picture composition; editing, ethics, history, and laws in connection with photojournalism.

PGY 3620 PHOTOJOURNALISM II (3)
PR: PGY 3610. Advanced process and practice of photography for publication. Content includes advanced camera and laboratory techniques, publication requirements and theory of photo-chemical color separation used in magazine and newspaper. Emphasis is placed on student production.

PGY 4110C COLOR PHOTOGRAPHY (3)
PR: PGY 3620. 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.

PUR 3000 PRINCIPLES OF PUBLIC RELATIONS (3)
PR: 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.

PUR 4001 ADVANCED PUBLIC RELATIONS (3)
PR: PUR 4401, PUR 4100, and MMC 4420. 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.

PUR 4100 WRITING FOR PUBLIC RELATIONS (3)
PR: JOU 3100, PUR 3000. Persuasive writing techniques unique to public relations and the relationships of public relations to the communication and ethical practices to problem-solving situations drawn from case studies; writing formats used in promotional and publicity literature.

PUR 4401 PUBLIC RELATIONS: ISSUES, PRACTICES AND PROBLEMS (3)
PR: PUR 3000. The theory of public relations practice and its application in the real world. The role of the public relations practitioner in business, government and social institutions, and the nature of specialized areas of the practice. Identification of public issues, analysis of potential impact on organizations and development of strategies to deal with them successfully and responsibly. Communication techniques and trends.

PUR 4700 PUBLIC RELATIONS PRACTICUM (1)
PR: Senior standing and CI. For selected Public Relations Sequence majors. Practical experience outside the classroom in a professional public relations situation where the student works for academic credit under the tutelage of a professional practitioner.

RTV 3000 INTRODUCTION TO BROADCASTING (3)
PR: MMC 3100 and MMC 3602. A survey of the organization, structure, and function of the broadcasting industry.

RTV 3100 WRITING FOR RADIO AND TV (3)
PR: ENC 3310 or CRW 2100, RTV 3000. The writing of radio and television scripts such as documentaries, children's programs, commercials, dramas, talks, and demonstrations.

RTV 3210 RADIO PRODUCTION AND DIRECTION (3)
PR: RTV 3000. Radio production and direction; laboratory and broadcast experiences.

RTV 3225 VIDEO WORKSHOP (1)
PR: MMC 3100 and MMC 3602. An introduction to the techniques and applications of field television production and electronic editing.

RTV 3230 BROADCASTING ANNOUNCING (3)
PR: ORI 3000, RTV 3000, SPC 2023 or SPC 2050. Development of skills required for effective announcing and other appearances before microphone and camera.

RTV 3310 BROADCAST NEWS (4)
PR: RTV 3000. The study and methods in gathering, writing, and editing newscasts for radio and television.

RTV 3941 RADIO PRACTICUM (1)
PR: RTV 3210 and CI. The study, rehearsal, and production of radio programs and materials. (S/U only.)

RTV 4220 TV PRODUCTION AND DIRECTION (3)
PR: RTV 3000, and junior standing. A basic course in the techniques of producing and directing TV programs.

RTV 4301 TV NEWS FILM (3)
PR: RTV 3300 and RTV 3225. Techniques in writing and filming for television news.

RTV 4320 ELECTRONIC FIELD PRODUCTION (3)
PR: RTV 3300 or RTV 3225. Advanced producing, scripting, lighting, camera, and editing for video production on location. Introduction to complex editing and graphics.

RTV 4500 THE BROADCAST PROGRAM (3)
PR: RTV 3000. Program concepts, resources, costs, selection and scheduling. Analysis of programming in terms of structures, appeals and strengths.

RTV 4700 BROADCAST LAW (3)
PR: for Broadcast News Option: RTV 3000, RTV 3300, MMC 4220, POS 3142 or POS 2112; for Programming Option: RTV 3000, RTV 4500, RTV 3100 or RTV 3300, and Senior standing. A study of broadcasting industry from the perspective of governmental regulation and the political process with special emphasis on how regulatory policy is determined.

RTV 4942 TV PRACTICUM (1)
PR: RTV 4220 and CI. The study, rehearsal and production of television programs and materials. (S/U only.)

VIC 3000 INTRODUCTION TO VISUAL COMMUNICATIONS (3)
PR: MMC 3100 and MMC 3602. The survey of visual communication theory, techniques, and their contemporary application and social influences as applied to the visual media with emphasis on still photography, motion pictures, video tape, and graphic art.

VIC 3943 VISUAL COMMUNICATION PRACTICUM (1)
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.)

MATHEMATICS

CGS 3422 COMPUTER APPLICATIONS OF MATHEMATICS -6A (3)
CR: MAS 3103. Introduction to FORTRAN (WATFIV) with special emphasis on its applications to Mathematics.

COP 4210 MATHEMATICAL PROBLEM SOLVING USING PASCAL -6A (3)
PR: MAS 3103, and the ability to program at least one other language. The highly structured programming language PASCAL is used to solve numerical and non-numerical problems in mathematics involving graph theory, combinatorics, and number theory. Non-numerical data structures and algebraic manipulation are emphasized.

MAA 4211 MULTIVARIATE CALCULUS -6A (4)
PR: MAC 3313 or MAC 3283 with a grade of "C" or better, MAS 4301 and MAS 3103. Vector-valued functions, multiple integrals, line and surface integrals.

COLLEGE OF ARTS AND SCIENCES
MA 4212 INTERMEDIATE ANALYSIS -6A (4)
PR: MA 4211. A theoretical treatment of differential and integral calculus of one and several variables. Emphasis on techniques of proof.

MA 5306 REAL ANALYSIS I (3)
PR: MA 4212. Uniform convergence, Riemann-Stieltjes integration, differentiation and integration in n-space, Lebesgue measure and integration on the real line.

MA 5307 REAL ANALYSIS II (3)

MA 5405 APPLIED COMPLEX ANALYSIS (3)
PR: Cl. Complex numbers, analytic and harmonic functions, Series, Contour integrals, residue theory. Conformal mappings. (A survey course emphasizing techniques and applications.)

MAC 2102 COLLEGE ALGEBRA -6A (3)
PR: Passing score on placement test. Real numbers and their properties, algebraic expressions, equations and inequalities, functions, polynomials, exponential and logarithmic functions. No credit for math majors. (No credit for students with credit in MAC 2132.)

MAC 2114 COLLEGE TRIGONOMETRY -6A (2)
PR: Passing score on placement test. Angles, Trigonometric functions, properties and graphs of trigonometric functions, right triangles, laws of sines and cosines, polar coordinates. (No credit for students with credit in MAC 2132.)

MAC 2132 COLLEGE ALGEBRA and TRIGONOMETRY -6A (4)
PR: Passing score on placement test. Real numbers and their properties, algebraic expression, equations and inequalities, functions, polynomials, exponential and logarithmic functions. Angles, trigonometric functions, properties and graphs of trigonometric functions, right triangles, laws of sines and cosines, polar coordinates. (No credit for MAC 2132 for students with credit in MAC 3233-MAC 3234.

MAC 3233 ELEMENTARY CALCULUS I -6A (4)
PR: Passing score on placement test. Differentiation and integration of algebraic functions with applications, exponential and logarithmic functions. MAC 3233-MAC 3234 are primarily for students from Biological Sciences, Social Sciences and Business. (No credit for math majors or students with credit in MAC 3281 or MAC 3311.)

MAC 3234 ELEMENTARY CALCULUS II -6A (4)
PR: MAC 3233. Techniques of integration, differential equations, functions of several variables, series and Taylor polynomials. (No credit for Mathematics majors or students with credit in MAC 3282 or MAC 3312.)

MAC 3281 ENGINEERING CALCULUS I -6A (3)
PR: Pass placement tests in algebra and trigonometry. Differentiation, limits or parents, extrema, inflection integral. (No credit for students with credit in MAC 3233 or MAC 3311.)

MAC 3282 ENGINEERING CALCULUS II -6A (3)
PR: MAC 3281 or CC. Definite integral, trigonometric functions, log, exponential, series, applications. (No credit for students with credit in MAC 3234 or MAC 3312.)

MAC 3283 ENGINEERING CALCULUS III -6A (3)
PR: MAC 3282 or CC. Techniques of integration, numerical methods, analytic geometry, polar coordinates, Vector algebra, applications. (No credit for students with credit in MAC 3313.)

MAC 3311 CALCULUS I -6A (4)
PR: Pass placement tests in algebra and trigonometry. Limits, derivatives, applications. No credit for students with credit in MAC 3233 or MAC 3281.

MAC 3312 CALCULUS II -6A (4)
PR: MAC 3311 with a grade of "C" or better or CC. Antiderivatives, the definite integral, applications, series, log, exponential and trig functions. (No credit for students with credit in MAC 3234 or MAC 3282.)

MAC 3313 CALCULUS III -6A (4)
PR: MAC 3312 with a grade of "C" or better or CC. Integration, polar coordinates, conic sections, vectors, indeterminate forms and improper integrals. (No credit for students with credit in MAC 3283.)

MAD 3100 DISCRETE MATHEMATICS -6A (3)
PR: MAC 3281 or MAC 3311. An introduction to some of the aspects of discrete mathematics that are fundamental to digital computing. Topics include sets, numbers, algorithms, Boolean algebra, computer arithmetic, elementary combinatorics and an introduction to graph theory.

MAD 4401 NUMERICAL ANALYSIS -6A (4)
PR: MAS 3103; ability to program a digital computer. Interpolation and quadrature, finite differences, numerical solution of algebraic and transcendental equations, numerical solution of differential equations, computer techniques.

MAD 5101 LISP: PROGRAMMING WITH ALGEBRAIC APPLICATIONS (3)
PR: MHF 5306 or MAD 6510 or MAS 5311 or Cl. Programming in LISP, functional languages, foundations of Lambda Calculus and algebraic applications (theorem proving and game playing).

MAD 5305 INTRODUCTION TO GRAPH THEORY (3)
PR: Cl. Brief introduction to classical graph theory (4-color theorem, etc.), directed graphs, connected digraphs, condensations, incidence matrices, Polyá's Theorem, networks.

MAD 5875 ABSTRACT ALGEBRA FOR TEACHERS (3)
PR: MAS 3103 and MAS 4301 and bachelor's degree or CC. Groups, fields, vector spaces as they relate to high school algebra and geometry. (No credit for Mathematics majors.)

MAD 5877 MATHEMATICAL ANALYSIS FOR TEACHERS (3)
PR: MAC 3313 and bachelor's degree or CC. Advanced consideration of limits, continuity, derivatives, differentials. (No credit for Mathematics majors.)

MAP 4302 DIFFERENTIAL EQUATIONS -6A (3)
PR: MAC 3283 or MAC 3313. First order linear and nonlinear differential equations, higher order linear equations, applications.

MAP 5205 MATHEMATICAL OPTIMIZATION THEORY I (3)
PR: MAS 3103 and MAC 4211, or equivalent. Content: Unconstrained and linear constrained extremum linear and nonlinear programming, application to matrices and quadratic forms, Lagrange multiplier rule for equality constraints.

MAP 5316 ORDINARY DIFFERENTIAL EQUATIONS I (3)
PR: MAP 4302, MA 4211, or Cl. Existence and uniqueness theory, properties of solutions, linear systems, stability theory, Sturm-Liouville theory.

MAP 5317 ORDINARY DIFFERENTIAL EQUATIONS II (3)
PR: MAP 5316 and MAC 5307 or Cl. Topics selected from fixed point theory, comparison theory, oscillation theory, Poincare-Bendixson Theory, Lyapunov functions, eigenfunction expansions.

MAP 5345 APPLIED PARTIAL DIFFERENTIAL EQUATIONS (3)
PR: MAP 5407 or Cl. Separation of variables, the heat equation, wave equation, Laplace's equation, classification, Green's functions, solutions with emphasis on applications.

MAP 5407 METHODS OF APPLIED MATHEMATICS (3)
PR: MAP 4302 or Cl. Sturm-Liouville theory, Fourier series, Green's functions, matrix methods for linear systems of ordinary differential equations, and topics from calculus of variations, control theory, numerical solutions of differential equations.

MAS 3102 LINEAR ALGEBRA -6A (3)

MAS 4124 NUMERICAL LINEAR ALGEBRA -6A (3)
PR: MAS 3103. This course will consider efficient and stable numerical methods for dealing with matrix computations such as the solution of systems of equations, calculation eigenvalues and vectors, least squares, and so on.

MAS 4156 VECTOR ANALYSIS -6A (3)
PR: MAC 3313 or MAC 3283 or Cl. The algebra and calculus of vectors, line and surface integrals, Divergence Theorem, Stokes' Theorem, generalized coordinates, applications. (No credit for both MA 4211 and MAS 4156.)

MAS 4301 ELEMENTARY ABSTRACT ALGEBRA -6A (3)
PR: MAC 3311 or MAC 3281. An introduction to basic set theory: sets, functions, and relations. An introduction to the basic
algebraic structures: groups, rings, and fields. Homomorphisms and isomorphisms. A rigorous treatment of the real and complex number systems.

**MAS 5107 ADVANCED LINEAR ALGEBRA** (3)
PR: MAS 3103, MAS 4301 (or MHF 4102) or CI. CR: MAS 5311. The study of finite dimensional vector spaces over arbitrary fields. Topics covered included dual spaces, canonical forms for linear transformations, inner product spaces, orthogonal, unitary and self-adjoint operators and quadratic forms.

**MAS 5215 NUMBER THEORY** (3)
PR: MAS 3103 and MAS 4301, or CI. Fundamental theorem of arithmetic, modular arithmetic, Chinese remainder theorem, Mersenne primes, perfect numbers, Euler-Fermat theorem, p-symmetric roots, law of quadratic reciprocity, factorization and primality testing algorithms.

**MAS 5311 ALGEBRA I** (3)
PR: MAS 3103 and MAS 4301, or CI. Group theory: Sylow theorems; classification of groups of small order. Ring theory: ideals, quotient rings, polynomial rings, Euclidean domains, principal ideal domains and unique factorization.

**MAS 5312 ALGEBRA II** (3)
PR: MAS 5311 or CI. Continuation of MAS 5311. Finitely generated modules over a principal ideal domain, basic field theory, finite fields, Galois theory.

**MAT 2930 SELECTED TOPICS IN MATHEMATICS** (1–4)
PR: Permission of the instructor. Course content will depend on the interest of faculty members and student demand.

**MAT 4906 INDEPENDENT STUDY -6A** (1–4)
PR: CI. Specialized independent study determined by the student’s needs and interests. The written contract required by the College of Arts and Sciences specifies the regulations governing independent study. May be repeated. (S/U only.)

**MAT 4930 SELECTED TOPICS IN MATHEMATICS -6A** (1–4)
PR: CI. The course content will depend on the interest of faculty members and student demand.

**MAT 4937 MATHEMATICS MAJORS SEMINAR -6A** (1)
Directed discussions on a variety of topics of interest to math majors, including career opportunities in mathematics. May be repeated up to 2 credit hours. (S/U only.)

**MAT 4950 INDEPENDENT STUDY -6A** (1–4)
PR: Admission to Mathematics Honors Program or CC. Directed discussions on a variety of topics of mathematical interest. May be repeated up to 8 credit hours. (S/U only.)

**MAT 4970 MATHEMATICS SENIOR THESIS -6A** (3)
PR: Admission to Mathematics Honors Program and CC. Course restricted to mathematics majors. (S/U only.)

**MAT 5937 SELECTED TOPICS** (1–4)
PR: CI. Each course covers a single topic outside the usual curriculum.

**MGF 2130 MODERN MATHEMATICS WITH MICROCOMPUTERS -6A** (4)
PR: Passing score on placement test. Topics in finite math, real vs. computer number systems, inequalities, functions, graphs, introduction to BASIC programming and microcomputers, exact and approximate solutions of algebraic equations, probability, computer simulations of models.

**MGF 2202 FINITE MATHEMATICS -6A** (3)
PR: Passing score on placement test. Linear functions, matrices and systems of linear equations, linear programming, logic sets, permutations and combinations, introduction to statistics, introduction to probability.

**MHF 4102 LOGIC AND SET THEORY -6A** (3)
PR: MAC 3311 or MAC 3281, or CI. First half: An introduction to the Propositional and Predicate Calculi, concentrating on proofs. Second half: An introduction to naive set theory, up to cardinal numbers, concentrating on sets of numbers.

**MHF 4403 THE EARLY HISTORY OF MATHEMATICS** (3)
PR: MAC 3912. A study of the history and development of mathematics from the formation of number systems to the Renaissance.

**MHF 5306 MATHEMATICAL LOGIC AND FOUNDATIONS** (3)
PR: MAS 4301 or CI. Two-course sequence covering: predicate calculus and classical model theory; transfinite set theory and the system ZFC; recursion theory and decidability.

**MHF 5405 HISTORY OF MODERN MATHEMATICS** (3)
PR: MAC 3313. Traces the development of mathematical ideas in Western culture. Special emphasis is placed on those concepts which led to the Calculus. This course is open to majors and non-majors alike.

**MTG 4212 GEOMETRY -6A** (4)
PR: MAC 3311. Emphasis on axiomatics, advanced Euclidean geometry, elements of projective geometry, non-Euclidean geometries.

**MTG 5316 TOPOLOGY I** (3)

**MTG 5317 TOPOLOGY II** (3)
PR: MTG 5316. The fundamental group; elements of homotopy theory and homology theory.

**STA 3023 INTRODUCTORY STATISTICS I -6A** (4)
PR: Passing score on placement test. Hypothesis testing; estimation; normal, Chi-square, E, F, binomial, multinomial distributions; ANOVA, CR, RCB designs; single df, regression, correlation, contingency tables. Students who successfully complete this course may not also receive credit for GEI 2111 or STA 3122. (No credit for Mathematics Majors.)

**STA 3024 INTRODUCTORY STATISTICS II -6A** (3)
PR: STA 3023 or CC. Factorials, ANCOV; multiple curvilinear regression; response surfaces; Latin squares, incomplete designs; distribution free methods.

**STA 4321 INTRODUCTION TO STATISTICS -6A** (3)

**STA 4322 INTRODUCTION TO PROBABILITY -6A** (3)
PR: MAC 3313, MAC 4301. Introduction to probability theory using calculus. Basic ideas of probability and random variables, discrete probability functions, continuous probability densities including normal, gamma, x (Greek letter Chi), and Weibull, and transformations of random variables.

**STA 5165 COMPUTATIONAL STATISTICS I** (3)
PR: STA 4321, CGS 3422 or CC. Statistical Analysis of data by means of statistics package programs. Regression, ANOVA, discriminant analysis, and analysis of categorical data. Emphasis is on inter-relation between statistical theory, numerical methods, and analysis of real life data.

**STA 5325 MATHEMATICAL STATISTICS** (4)
PR: STA 5446. Sample distribution theory, point and interval estimation, optimality theory, statistical decision theory and hypothesis testing.

**STA 5446 PROBABILITY THEORY I** (3)
PR: STA 4442 and MAA 4212 or CI. Axioms of probability, random variables in Euclidean spaces, moments and moments generating functions, modes of convergence, limit theory for sums of independent random variables.

**STA 5526 NON-PARAMETRIC STATISTICS** (4)
PR: STA 5326. CC. Theory and methods of non-parametric statistics, order statistics, tolerance regions and their applications.

### MEDICAL TECHNOLOGY

**MLS 3031 INTRODUCTION TO MEDICAL TECHNOLOGY** (1)
PR: Senior standing and acceptance into an approved affiliated hospital. An introduction to the principles and practices of medical technology and their relationship to patient care. A hospital internship course for medical technology majors.

**MLS 4861 CLINICAL MICROSCOPY II** (4)
PR: Senior standing and acceptance into an approved affiliated hospital. A continuation of MLS 4860. A hospital internship course for medical technology majors.
MLS 4862 HEMATOLOGY
PR: Senior standing and acceptance into an approved affiliated hospital. Lecture and laboratory instruction in the methods of study of hematological disorders. A hospital internship course for medical technology majors.

MLS 4863 CLINICAL BACTERIOLOGY
PR: Senior standing and acceptance into an approved affiliated hospital. Instruction in lecture and laboratory on the various aspects of morphology, physiology, and classification of bacteria, especially those related to disease. A hospital internship course for medical technology majors.

MLS 4864 CLINICAL CHEMISTRY I
PR: Senior standing and acceptance into an approved affiliated hospital. Instruction in the techniques and procedures for use in clinical chemical analyses. A hospital internship course for medical technology majors.

MLS 4865 CLINICAL CHEMISTRY II
PR: Senior standing and acceptance into an approved affiliated hospital. A continuation of MLS 4864, including procedures required for serology, transfusions, blood preservation, and antibody studies. A hospital internship course for medical technology majors.

MLS 4866 CLINICAL LABORATORY INSTRUMENTAL ANALYTICAL TECHNIQUES
PR: Senior standing and acceptance into an approved affiliated hospital. Instruction in the use of special laboratory instruments such as automated instruments, use of radioisotopes, and techniques of measuring basal metabolism. A hospital internship course for medical technology majors.

PHILOSOPHY

PHI 3000 INTRODUCTION TO PHILOSOPHY-6A
An introduction to selected philosophical problems and traditions.

PHI 3062 HISTORY OF PHILOSOPHY: ANCIENT AND MEDIEVAL
A survey of Western philosophy from the pre-Socratics to the end of the Middle Ages.

PHI 3420 HISTORY OF PHILOSOPHY: MODERN
A survey of Western philosophy from the end of the Middle Ages to the nineteenth century.

PHI 3440 CONTINENTAL PHILOSOPHY
A study of developments in post-Kantian European philosophy.

PHI 4600 CONTEMPORARY PHILOSOPHY-6A
Selected schools of twentieth century thought such as idealism, positivism, pragmatism, realism, and existentialism.

PHI 4700 AMERICAN PHILOSOPHY -6A
Major traditions in American thought, Puritanism, the Enlightenment, Transcendentalism, Idealism, Pragmatism, and Analytic Philosophy in relation to American culture.

PHI 1041 GREAT PHILOSOPHERS OF THE WESTERN WORLD
Lectures and discussions of the great philosophers since Plato, focusing on particular problems.

PHI 1010 PHILOSOPHIC CONTROVERSIES
A discussion of central controversies in philosophy such as the nature of love, violence, freedom, truth, morality, etc.

PHI 1103 CRITICAL THINKING
Methods of thinking that lead to reliable conclusions, with emphasis on concrete cases in ordinary thinking and the sciences.

PHI 2100 INTRODUCTION TO FORMAL LOGIC -6A
An elementary study of propositional, predicate, class and syllogistic logic with some attention to basic problems of logical theory.

PHI 3404 SCIENTIFIC METHOD
Probability, inductive inference, the hypothetico-deductive method, experimentiation, and selected topics in the philosophy of science.

PHI 3600 ETHICAL THEORY
A study of ethical theories, concepts, problems and methods.

PHI 3601 CONTEMPORARY MORAL ISSUES
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 3631 ETHICS AND BUSINESS
An application of traditional ethical theories to contemporary problems in business.

PHI 3634 BIOMEDICAL ETHICS
This course will focus on the ethical issues arising from advances in medical practice, delivery of health care, and scientific research.

PHI 3640 ENVIRONMENTAL ETHICS
A study of alternative theories of environmental ethics, including the application of these theories to contemporary environmental problems, such as pollution, resource depletion, species extinction, and land use.

PHI 3700 PHILOSOPHY OF RELIGION -6A
Analysis of religious experience and activity and examination of principal religious ideas in light of modern philosophy.

PHI 3905 DIRECTED STUDY
PR: CI. Individual study directed by a faculty member. Approval slip from instructor required.

PHI 3930 SELECTED TOPICS
PR: CI. Selected topics according to the needs of the student.

PHI 4300 THEORY OF KNOWLEDGE -6A
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 4320 PHILOSOPHY OF MIND -6A
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 4800 AESTHETICS -6A
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
PR: CI. Individual study directed by a faculty member. Approval slip from instructor required.

PHI 4930 SELECTED TOPICS
PR: CI. Selected topics according to the needs of the senior students. Approval slip from instructor required.

PHI 5135 SYMBOLIC LOGIC
PR: PHI 2100 or CI. Study of topics such as the following: Metatheory of propositional and predicate logic, related metatheoretic results, alternative logics.

PHI 5225 PHILOSOPHY OF LANGUAGE
PR: Eight hours of philosophy, major in linguistics, or CI. An examination of semantical, syntactical, and functional theories of language with special attention given to the problems of meaning, linguistic reference, syntactical form, and the relations between scientific languages and ordinary linguistic usage.

PHI 5913 RESEARCH
PR: CI. Individual research supervised by a faculty member. Approval slip from instructor required.

PHI 5934 SELECTED TOPICS
PR: CI. Selected topics according to the needs of the student. Approval slip from instructor required.

PHM 3021 PHILOSOPHIES OF LOVE AND SEX
Discussion of Philosophies of Love/Sex of Plato, Aristotle, Epicurus, Aquinas, Hume, Kant, Schopenhauer, Russell, Sartre, Marx, etc.

PHM 3100 SOCIAL PHILOSOPHY -6A
An analysis of rival theories of social order and their philosophical foundations.

PHM 3400 INTRODUCTION TO PHILOSOPHY OF LAW
A study of the fundamental concepts of law from a philosophic standpoint including crime, justice, punishment, free speech, insanity, etc.
PHM 4324C ELECTRICITY AND MAGNETISM II
PR: PHY 3290 or MAC 3283 or MAC 3313. Electrostatic circuits; resistance, capacitance, inductance, direct and alternating current circuits, thermoelectricity, and instrumentation. Laboratory. First semester of sequence PHY 3323C, PHY 4324C.

PHY 4324 OPTICS
PR: PHZ 3101 or PHY 3049; CR: MAC 3283 or MAC 3313. Reflection, refraction, dispersion, interference, diffraction, polarization, and Polarimeter.

PHY 3822L INTERMEDIATE LABORATORY
PR: PHZ 3101 or PHY 3049 or equivalent; CR: PHY 3101 Experiments in modern physics, including the area of atomic, nuclear, solid state and wave phenomena.

PHYSICS

PHY 2020 CONCEPTUAL PHYSICS
A qualitative, non-mathematical investigation of physics, emphasizing its influence on life today. (No credit for physics or mathematics majors.)

PHY 2038 ENERGY AND HUMANITY
Social, economic, and political aspects of energy, including energy conservation, energy alternatives, personal use of solar energy, and changing life styles. Field trips and audiovisual presentations play important roles.

PHY 3048, 3048L GENERAL PHYSICS AND LABORATORY
PR: MAC 3281 or MAC 3311. First semester of a two semester sequence of general physics (mechanics, wave motion, sound, thermodynamics, geometrical and physical optics, electricity, and magnetism) and laboratory for physics majors and engineering students. Must be taken concurrently and, if dropped, then dropped simultaneously.

PHY 3049, 3049L GENERAL PHYSICS AND LABORATORY
PR: MAC 3282 or MAC 3312, PHY 3048, PHY 3048L. Second semester of general physics and laboratory for physics majors and engineering students. Must be taken concurrently and, if dropped, then dropped simultaneously.

PHY 3053, 3053L GENERAL PHYSICS AND LABORATORY
First semester of a two semester sequence of general physics (mechanics, heat, wave motion, sound, electricity, magnetism, optics, modern physics) and laboratory for science students. Must be taken concurrently and, if dropped, then dropped simultaneously.

PHY 3054, 3054L GENERAL PHYSICS AND LABORATORY
PR: PHY 3053, PHY 3053L. Second semester of general physics and lab for science students. Must be taken concurrently and, if dropped, then dropped simultaneously.

PHY 3101 MODERN PHYSICS

PHY 3221 MECHANICS I
PR: MAC 3283 or MAC 3313 and either PR: PHY 3048 or PHZ 3101. First semester of a two semester sequence. Review of vector algebra and vector calculus. Dynamics of single particles and systems of particles; central forces; rotation about an axis; statics; and virtual work.

PHY 3523C ELECTRICITY AND MAGNETISM I
PR: PHY 3049, MAC 3283 or MAC 3313. Electromagnetic circuits; resistance, capacitance, inductance, direct and alternating current circuits, thermoelectricity, and instrumentation. Laboratory. First semester of sequence PHY 3323C, PHY 4324C.

PHY 4410 KANT
Lecture and discussion of Kant’s philosophy, especially The Critique of Pure Reason.

PHY 4471 FUNDAMENTAL ACOUSTICS
PR: PHY 3221 or CR: MAP 4302. Electrostatic fields, magnetic fields of steady currents, dielectrics and magnetic materials, Maxwell’s equations. Second semester of sequence PHY 3323C, PHY 4324C.

PHY 4573 QUANTUM MECHANICS I
PR: PHY 3323 or Cr. CR: MAP 4302. Continuation of PHY 3221. Completion of theoretical and practical course. Mathematical methods and applications.

PHY 4753 ELECTRICITY AND MAGNETISM II
PR: PHY 3323 or Cr. CR: MAP 4302. Continuation of PHY 3221. Completion of theoretical and practical course. Mathematical methods and applications.

PHY 4905 INDEPENDENT STUDY
PR: CI. Specialized, independent study determined by the student’s need and interest. The written contract required by the College of Arts and Sciences specifies the regulations governing independent study. May be repeated. (SU only.)

PHY 4910 UNDERGRADUATE RESEARCH
PR: Senior or advanced junior standing and CC. An individual
PHY 4930 PHYSICS SEMINAR (1)
PR: Senior or advanced junior standing or CC. All undergraduate physics majors must enroll in this course at least once and are expected to attend all semesters (PHY 4930 S/U only.)

PHY 5493 SELECTED TOPICS IN PHYSICS (1-4)
PR: Senior or advanced junior standing and CC. Each topic is a course in directed study and under the supervision of a faculty member.

PHY 5624 QUANTUM MECHANICS II (3)
PR: PHY 4604 or CI. Symmetries, identical particles, scattering approximation methods, Dirac equation, field quantizations.

PHY 5720C ELECTRONICS FOR RESEARCH (4)
PR: A rigorous introduction to the fundamentals of analog and digital electronics. Theoretical circuit analysis and weekly labs introduce practical diodes, transistors, analog and digital ICs, breadboarding techniques and electronic test instrumentation.

PHY 5937 SELECTED TOPICS IN PHYSICS (1-4)
PR: Senior or advanced standing and CC. Each topic is a course in directed study and under the supervision of a faculty member.

PHZ 3101 MATHEMATICAL ANALYSIS OF PROBLEMS IN MECHANICS AND ELECTRICITY (2)
PR: One year of non-calculus general physics. CR: MAC 3283 or MAC 3313. Designed for students who have not had the general physics sequence using calculus. Review of mechanics and electricity emphasizing problems which involve the use of calculus.

PHZ 3102 PROBLEMS IN GENERAL PHYSICS I (1)
CR: PHY 3048. First semester of two semester sequence of general physics problems. A course designed to allow those interested students to investigate problems not covered in the general physics course.

PHZ 3103 PROBLEMS IN GENERAL PHYSICS II (1)

PHZ 5115 METHODS OF THEORETICAL PHYSICS I (3)
PR: MAP 4302 or CI. Applications of mathematical techniques to classical and modern physics. Vector spaces including Hilbert space, orthogonal functions, generalized functions, Fourier analysis, transform calculus, and variational calculus.

PHZ 5116 METHODS OF THEORETICAL PHYSICS II (3)
PR: MAP 4302 or CI. Applications of mathematical techniques to classical and modern physics. Selected topics in complex analysis, differential and integral equations, numerical methods, and probability theory.

PHZ 5304 NUCLEAR PHYSICS (3)
PR: PHY 4604 or CI. Nuclear forces, nuclear models, nuclear structure, decay, nuclear reaction, and high energy physics.

PHZ 5405 SOLID STATE PHYSICS I (3)
PR: MAP 4302. Crystal structure, x-ray and electron diffraction, mechanical and thermal properties of solids, electrical and magnetic properties of metals, band theory of metals, insulators, and semiconductors. First semester of sequence PHZ 5405, PHZ 6426.

PHZ 5505 PLASMA PHYSICS I (3)
PR: PRY 4324C or CI. Introduction to Boltzmann, magnetohydrodynamic, and orbit approaches to plasmas. Longitudinal and electromagnetic waves in plasmas. Collisions and radiation. Instabilities.

POLITICAL SCIENCE
CPO 3002 INTRODUCTION TO COMPARATIVE POLITICS (3)
Comparison and analysis of representative European and non-Western political systems.

CPO 4034 POLITICS OF THE DEVELOPING AREAS (3)
An analysis of the ideologies, governmental structures, and political processes of selected nations of the non-Western world.

CPO 4930 COMPARATIVE GOVERNMENT AND POLITICS OF SELECTED COUNTRIES OR AREAS (3)
Studies political systems with common elements. Structure, process, domestic and foreign politics, and regional roles are considered. May be repeated up to 9 credit hours as topics vary.

CPO 5934 SELECTED TOPICS IN COMPARATIVE POLITICS (3)
Studies specific substantive areas in comparative politics such as political economy or the politics of specific countries or regions. May be repeated for credit as topics vary.

INR 3002 INTRODUCTION TO INTERNATIONAL RELATIONS (3)
Concepts and analytical tools applied to events such as politics among nations, control of foreign policies, types of actors, war and peace.

INR 3102 AMERICAN FOREIGN POLICY (3)
Analysis of the development and scope of United States foreign policy, emphasizing goals and objectives, policy formulation and implementation, themes and issues.

INR 4035 INTERNATIONAL POLITICAL ECONOMY (3)
Analysis of the development and politics of the international economic system, focusing on questions of cooperation and conflict in trade, aid, and investment relationships.

INR 4334 DEFENSE POLICY (3)
Analytic institutional factors contributing to formulation of defense policy and the impact of such policy on international relations.

INR 4403 INTERNATIONAL LAW (3)
Examines essential components of the international legal system; recognition; succession; sea, air and space law, treaties, diplomats, International Court of Justice; laws of war, etc. Introduces the student to legal reasoning as employed in the international context.

INR 4502 INTERNATIONAL ORGANIZATIONS (3)
Study of the operations and structure of international organizations and effects on world politics; background and achievement of the UN; regional organizations and multi-national corporations.

INR 5086 ISSUES IN INTERNATIONAL RELATIONS (3)
Explore specific topics and provides the student with an opportunity for in-depth study of historical and contemporary problems in international politics. May be repeated for credit as topics vary.

POS 2041 AMERICAN NATIONAL GOVERNMENT (3)
Analysis of basic principles and procedures of the American governmental system with emphasis on current issues and trends.

POS 2112 STATE AND LOCAL GOVERNMENT AND POLICY (3)
Analysis of the structure and function of state and local governments, of the social and political influences that shape them, and of the dynamics of their administrative processes.

POS 3142 INTRODUCTION TO URBAN POLITICS AND GOVERNMENT (3)
Governmental and political structures and processes as they function in urban areas, with special focus on municipalities and locally based services.

POS 3145 GOVERNING METROPOLITAN AREAS (3)
Examines governmental units and interactions in metropolitan areas, proposals for changes in governance, and policy areas of area-wide concern, such as human services.

POS 3173 SOUTHERN POLITICS (3)
Examines changes in electoral politics in the South, and the role of interest groups and the state and federal government in facilitating change.

POS 3182 FLORIDA POLITICS AND GOVERNMENT (3)
A study of Florida political culture, political parties and elections, the legislative, executive, and judicial systems, and policy patterns.

POS 3273 PRACTICAL POLITICS (3)
PR: POS 2041 or POS 3453 or CI. Coordinated scholarly and practical activity through class lecture and supervised field work in local political parties and election campaigns.

POS 3283 JUDICIAL PROCESS AND POLITICS (3)
The organization, development, and functioning of American court systems and the causes and consequences of judicial behavior from an empirical perspective.

POS 3453 POLITICAL PARTIES AND INTEREST GROUPS (3)
Analysis and understanding of role, functions, structure, and
PO5 3691 INTRODUCTION TO LAW AND POLITICS (3)
Nature of law, legal process, relationship to political life of constitutional law, administrative law, the judicial process, and private law.

PO5 3713 EMPIRICAL POLITICAL ANALYSIS (3)
Fundamentals of empirical political inquiry: systematic data collection and quantitative analysis techniques. Laboratory exercises using the computer are required.

PO5 3931 SELECTED TOPICS (3)
Selected topics in political science with course content based upon student demand and instructor's interest. May be repeated for up to 6 credits as topics vary.

PO5 4165 COMMUNITY LEADERS AND POLITICS (3)
Analysis of the roles and powers of mayors, city managers, council members, and interest and ethnic groups; distribution of community power.

PO5 4204 POLITICAL BEHAVIOR, PUBLIC OPINION, AND ELECTIONS (3)
Analysis of economic and socio-psychological factors influencing mass and elite political behavior; voting behavior, public opinion, and political activism.

PO5 4413 THE AMERICAN PRESIDENCY-6A (3)
The presidency as a political institution; analysis of powers; legislative, administrative, political, and foreign policy leadership; crisis management and decision making; White House staffing; limits on the president.

PO5 4424 THE AMERICAN CONGRESS (3)
Organization, procedures, committee system, party leadership, relations with governmental and nongovernmental organizations and agencies, oversight, decision-making processes, House/Senate comparisons.

PO5 4624 CONSTITUTIONAL LAW I (3)
PR: PO 2041. Leading social problems, principle institutions, and the scope of powers. Analysis of Supreme Court decisions, scholarly commentaries, and the writings of leading public figures.

PO5 4624 CONSTITUTIONAL LAW II (3)
PR: PO 2041. Analysis of Supreme Court decisions and scholarly commentaries on the constitutional rights of individuals.

PO5 4693 WOMEN AND LAW I (3)
Introduction to issues concerning the legal aspects of sex and sex-based discrimination as embodied in statutory and case law, focusing on constitutional and family law and reproductive freedom issues. (May also be taken for credit in Women's Studies.)

PO5 4694 WOMEN AND LAW II (3)
PR: PO 4693 or CL. Legal position of women in American society and remedies available to challenge current laws and practices, with special emphasis on employment and education issues as they relate to both women and men. (May also be taken for credit in Women's Studies.)

PO5 4905 INDEPENDENT STUDY (1-3)
PR: 3.0 average in Political Science and CL. Specialized study determined by the student's needs and interests. (S/U option)

PO5 4910 INDIVIDUAL RESEARCH (1-3)
PR: 3.0 average in Political Science and CL. Investigation of some aspect of political science culminating in the preparation of an original research paper.

PO5 4936 SENIOR SEMINAR (3)
PR: Senior standing and CL. An opportunity to work with others in a seminar format, exploring specialized topics.

PO5 4941 FIELD WORK (3)
PR: 3.0 average in Political Science and CL. Opportunity for students to obtain practical experience as aides to agencies of government and political parties.

PO5 4970 HONOR THESIS (3)
PR: Admission to Honor option. Writing of honor thesis under direction of faculty members.

PO5 5094 ISSUES IN AMERICAN NATIONAL AND STATE GOVERNMENT (3)
Selected topics of study in American government. May be repeated for credit as topics vary.

PO5 5155 ISSUES IN URBAN GOVERNMENT AND POLITICS (3)
Selected issues and topics in Urban Government and politics. May be repeated for credit as topics vary.

PO5 5736 POLITICAL RESEARCH METHODS (3)
A survey of methods, problems, and issues in political research and analysis for the advanced student.

POT 3003 INTRODUCTION TO POLITICAL THEORY (3)
Examines various kinds of theory used in political science for understanding political life: normative theory, empirical theory, historistic theory, analytical theory, and critical theory.

POT 3013 CLASSICAL POLITICAL THEORY (3)
Analysis of basic ideas of Plato, Aristotle, Cicero, St. Thomas, and other leading pre-modern political philosophers.

POT 4054 MODERN POLITICAL THEORY (3)
Analysis of modern political ideas of Machiavelli, Hobbes, Locke, Rousseau, Burke, and other modern philosophers.

POT 4064 CONTEMPORARY POLITICAL THOUGHT (3)
Examines various political views and political phenomena in the nineteenth and twentieth centuries. Diverse theoretical types and salient political phenomena will be presented.

POT 4204 AMERICAN POLITICAL THOUGHT (3)
Examines political writings in the U.S. and responses to critical periods in history, beginning with the Founding Fathers, and culminating in recent contributions and understanding contemporary political problems and solutions.

POT 5932 ISSUES IN POLITICAL PHILOSOPHY AND LAW (3)
PR: Graduate or senior standing and CL. Selected topics in political philosophy and law. May be repeated as topics vary.

PUP 4323 WOMEN AND POLITICS (3)
An introduction to the impact of gender on power and influence in American society, and women's changing role in the political process. Open to majors and non-majors. (May also be taken for credit in Women's Studies.)

PUP 5507 PUBLIC POLICY AND HEALTH CARE (3)
The study of health care policy as it relates to the policy process in the American setting.

URP 4050 CITY PLANNING AND COMMUNITY DEVELOPMENT (3)
An introduction to the development, role, and components of city planning, and the political and actual policies of government in attempting to regulate or control urbanization.

PSYCHOLOGY

CBH 4004 COMPARATIVE PSYCHOLOGY (3)
PR: PSY 3213 with a grade of C or better, psychology major or CL. The study of the evolution of behavior, similarities, and differences in capacities for environmental adjustment and for behavioral organization among important types of living beings.

CLP 3003 PSYCHOLOGY OF ADJUSTMENT (3)
Genetic, organic, and learned factors involved in the processes of personal adjustment: applications of mental health principles to everyday living. Not for major credit.

CLP 4413 ABNORMAL PSYCHOLOGY (3)
PR: PSY 3213 with a grade of C or better, psychology major or CL. Descriptions, theoretical explanations, research evidence, and treatment of maladaptive behavior.

CLP 4414 BEHAVIOR MODIFICATION (3)
PR: PSY 3213 with a grade of C or better, psychology major or CL. Introduction to behavior analysis, and application of learning principles, behavioral measurement, research designs, and interventions in treatment settings.

CLP 4433 PSYCHOLOGICAL TESTS AND MEASUREMENT (3)
PR: PSY 3213 with a grade of C or better, psychology major or CL. A consideration of the instruments for intellectual and personality assessment including their applications, development, and potential abuses. Students may not receive credit for both CLP 4433, and EDF 4430.

DEP 3103 CHILD PSYCHOLOGY (3)
Developmental and psychosocial aspects of childhood, including hereditary, maturational, psychological, and social determinants
of child behavior. Not for major credit.

DEP 4005 DEVELOPMENTAL PSYCHOLOGY (3)  
PR: PSY 3213 with a grade of C or better, psychology major or Cl. Survey of methods, empirical findings, and theoretical interpretations in the study of human and animal development.

DEP 4135 PSYCHOLOGY OF LANGUAGE DEVELOPMENT (3)  
PR: PSY 3213 with a grade of C or better, psychology major or Cl. Available both to majors and non-majors. Surveys the course of language processes underlying normal language development. Presents data and theory on phonological, semantic, syntactic, and pragmatic development.

EXP 4104 SENSORY PROCESSES (3)  
PR: PSY 3213 with a grade of C or better, psychology major or Cl. Available to both majors and non-majors. Psychophysical and neurophysiological data and theory underlying sensory processes. Visual, auditory, chemical, and somatosensory systems, with particular emphasis on visual processes.

EXP 4204C PERCEPTION (3)  
PR: PSY 3213 with a grade of C or better, psychology major or Cl. How man perceives his environment. Topics include sensory basis of perception, physical correlates of perceptual phenomena, and the effects of individual and social factors on perception.

EXP 4304 MOTIVATION (3)  
PR: PSY 3213 with a grade of C or better, psychology major or Cl. An examination of human and animal motivations from both physiological and psychological viewpoints.

EXP 4404 PSYCHOLOGY OF LEARNING (3)  
PR: PSY 3213 with a grade of C or better, psychology major or Cl. Survey of methods, empirical findings, and theoretical interpretations in conditioning and instrumental learning.

EXP 4523C COGNITIVE PSYCHOLOGY (3)  
PR: PSY 3213 with a grade of C or better, psychology major or Cl. Survey of methods, empirical findings, and theoretical interpretations of human learning, information processing, and verbal learning.

INP 3101 APPLIED PSYCHOLOGY (3)  
The application of psychological principles and the functions of psychologist in education, government, industry, and clinical practice.

INP 4004 INDUSTRIAL PSYCHOLOGY (3)  
PR: PSY 3213 with a grade of C or better, psychology major or Cl. Applications of psychological principles to industry. Topics include: selection, training, motivation, job satisfaction, supervision, and group dynamics.

PPE 4004 PERSONALITY (3)  
PR: PSY 3213 with a grade of C or better, psychology major or Cl. Methods and findings of personality theories and an evaluation of constitutional, biosocial, and psychological determinants of personality.

PSB 4103 NEUROPSYCHOLOGY (3)  
PR: PSY 3213 with a grade of C or better, psychology major or Cl. Gross neural and physiological components of behavior. Structure and function of the central nervous system as related to emotion, motivation, learning, and theory of brain functions.

PSY 2012 AN INTRODUCTION TO CONTEMPORARY PSYCHOLOGY (3)  
A broad survey of psychology for both majors and non-majors with special emphasis on the more applied areas of psychology (e.g., social psychology, abnormal psychology, personality, and developmental psychology.)

PSY 3044 EXPERIMENTAL PSYCHOLOGY (3)  
PR: PSY 3012, psychology major or Cl. Designed as an in-depth examination of the basic principles and concepts of psychology. Extensive coverage will be given to the areas of learning, perception, and neuropsychology.

PSY 3022 CONTEMPORARY PROBLEMS IN PSYCHOLOGY (3)  
The content of this course varies depending on the needs and interest of students and faculty. Offerings include in-depth coverage of specialized aspects of psychology applied to contemporary problems not studied in general introductory courses.

PSY 3213 RESEARCH METHODS IN PSYCHOLOGY (4)  
PR: PSY 3044, psychology major, or Cl. This course considers the logic of experimental design, concept of control and the analysis of experimentally obtained data. The laboratory section provides experience applying the concepts discussed in lecture. Two lectures plus two-hour lab. May be taken concurrently with PSY 3044.

PSY 4205 EXPERIMENTAL DESIGN AND ANALYSIS (3)  
PR: PSY 3213 with grade of C or better, psychology major, or Cl. Detailed coverage of those research designs and statistical techniques having the greatest utility for research problems in psychology. Emphasis on topics from analysis of variance.

PSY 4604 SYSTEMATIC PSYCHOLOGY (3)  
PR: PSY 3213 with a grade of C or better, psychology major or Cl. The historical roots of modern psychological theories, investigation of the various schools of psychology such as behaviorism, Gestalt psychology, psychoanalysis, and phenomenological psychology.

PSY 4913 DIRECTED STUDY (1-3)  
PR: Upper level standing, psychology major and Cl. The student plans and conducts an individual research project or program of directed readings under the supervision of a faculty member. May be repeated with a maximum of 3 semester hours. (S/U Only.)

PSY 4931 SELECTED TOPICS: SEMINAR (3)  
PR: Upper level standing, psychology major and Cl. Graduate-type seminar designed to provide the advanced undergraduate student with an in-depth understanding of a selected sub-area within psychology. May be repeated with a maximum of six (6) hours credit.

PSY 4970 HONORS THESIS (3)  
PR: Admission to honors program in psychology and Cl. The student under supervision of a faculty member will formalize, conduct, analyze, and report in writing a research project in psychology. May be repeated with a maximum of 6 credit hours.

SOP 3742 PSYCHOLOGY OF WOMEN (3)  
An examination of theories of female personality in historical perspective. Current research on sex differences, socialization, sexuality, psychology of reproduction. Emerging roles of women as related to social change and developmental tasks of the life cycle. (Also offered under Sociology's Studies.)

SOP 4004 SOCIAL PSYCHOLOGY (3)  
PR: PSY 3213 with a grade of C or better, psychology major or Cl. Survey of methods, empirical findings, and theoretical interpretations in the study of an individual's behavior as it is affected by others.

SOP 4714C ENVIRONMENTAL PSYCHOLOGY (3)  
PR: PSY 3213 or PSY 3044, psychology major or Cl. Explores the influences of environment on behavior. Topics considered include crowding, privacy, territorial behavior, environmental design, and pollution effects. Designed for both psychology majors and non-majors.

PUBLIC ADMINISTRATION

PAD 3003 INTRODUCTION TO PUBLIC ADMINISTRATION (3)  
Examination of organizational behavior and change, policy process, public management, financial administration, and personnel management from the perspective of public and social delivery.

PAD 4202 PUBLIC FINANCIAL ADMINISTRATION (3)  
Analysis of problems in the growth and development of public budgetary theory and Federal budgetary innovations.

PAD 5055 ISSUES IN PUBLIC ADMINISTRATION AND PUBLIC POLICY (3)  
Selected issues and topics in Public Administration and Public Policy. May be repeated for credit as topics vary.

PAD 5333 CONCEPTS AND ISSUES IN PUBLIC PLANNING (3)  
PR: URP 4050 or URP 6056. Analysis of basic concepts, issues,
An examination of the constitutional and statutory bases and limitations of the administrative process, administrative adjudication, rule making, and the judicial review of such actions.

Analysis of the regulatory functions and processes in the American political system: regulatory commissions, their functions, powers, management, reforms, and relationship with other branches of government.

This course provides the student with the fundamental skills and knowledge of how research is designed, implemented, analyzed, and utilized in public sector agencies. Available to majors and non-majors.

Analysis of the role of the administrator at the municipal level; the division of functions; policy formation; alternative governmental structures; effects on the administrative process.

How organizations and managers perform within a particular environment, potential impact of innovation, and how service is accomplished in a variety of socio-economic environments.

This introductory course (1) surveys the theories, concepts, and attitudes involved in helping disabled or unable persons become increasingly able. (2) provides initial experiences with these counseling perspectives and methods and their personal application.

An overview of research methods and their personal application.

A course designed to allow the student to survey the wide spectrum of contemporary sects and cults and learn what motivates their development.

An introduction to the study of the Hebrew Scriptures against the background of the ancient Near East, with attention to its history and religion of the Hebrew people. REL 3210 and REL 4221 may not both be credited toward the major.

An introduction to the study of the New Testament in context of Christian beginnings in the first century A.D. REL 3240 and REL 4244 may not both be credited toward the major.

An in-depth examination of the archaeological data relating to the background and content of the Bible, including ancient customs, Biblical sites and cities, Biblical history, and material culture of the Biblical period. Special attention will also be given to excavation methods and interpretation of archaeological evidence.

An introduction to and a comparison of the ideas, the literature and institutions of the major religions of the world including Judaism, Christianity, Islam from the Near East and Hinduism, Taoism, Confucianism, and Buddhism from the Far East. General comparison of Western and Eastern beliefs.

All religions of the world came to India and all became Indian. What is this "Indianess" which stems from Hinduism, Buddhism, Jainism and Sikhism, but extended itself to include Judaism, Christianity, Islam, Zoroastrianism and Baha'i. Readings from classical texts and modern literature.

This course will investigate the philosophy of ancient China and its two major interpreters, Lao Tzu and Confucius. It will also look at the native Japanese Shinto religion.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>REL 3420</td>
<td>CONTEMPORARY RELIGIOUS THOUGHT</td>
<td>(3)</td>
<td></td>
<td>An examination of the central ideas of recent theological thinkers; such men as Barth, Brunner, Bultmann, Bonhoeffer, Rahner, Tillich, Cox, Altizer, Buber, Niebuhr.</td>
</tr>
<tr>
<td>REL 3500</td>
<td>HISTORY OF CHRISTIANITY</td>
<td>(4)</td>
<td></td>
<td>The historical development of Christianity, its ideas and institutions, from the first century to the rise of religious modernism in the 19th century.</td>
</tr>
<tr>
<td>REL 3600</td>
<td>INTRODUCTION TO JUDAISM -6A</td>
<td>(3)</td>
<td></td>
<td>An introduction to Judaism: its religious tenets; its codes of ethics; its rites and customs. This course is intended as a description of what it means to be a Jew.</td>
</tr>
<tr>
<td>REL 3602</td>
<td>CLASSICS OF JUDAISM -6A</td>
<td>(3)</td>
<td>PR: One course in Religious Studies. How to read the principal documents of Judaism beyond the Old Testament, particularly the Mishnah, Talmuds, and Midrash.</td>
<td></td>
</tr>
<tr>
<td>REL 3611</td>
<td>HISTORY OF JUDAISM I</td>
<td>(3)</td>
<td></td>
<td>A study of the evolution of the religion of ancient Israel from the Exodus to the end of the second century of our era, seen against the background of its historical, geographical, political, social and spiritual setting.</td>
</tr>
<tr>
<td>REL 3612</td>
<td>HISTORY OF JUDAISM II</td>
<td>(3)</td>
<td></td>
<td>A study of the history of Judaism and the Jews from the third century of our era through the Middle Ages to the Emancipation in the 19th century. Taking History of Judaism I first is advantageous.</td>
</tr>
<tr>
<td>REL 3613</td>
<td>MODERN JUDAISM</td>
<td>(2)</td>
<td></td>
<td>A study of Jewish life in the West since 1789, emphasizing Jewish beliefs, practices, and institutions.</td>
</tr>
<tr>
<td>REL 3900</td>
<td>DIRECTED READINGS</td>
<td>(1-4)</td>
<td>PR: CI. Individual guidance in concentrated reading on a selected topic.</td>
<td></td>
</tr>
<tr>
<td>REL 3921</td>
<td>COLLOQUIUM</td>
<td>(1)</td>
<td></td>
<td>This colloquium will be held at least 3 times each semester in order to bring all religious studies faculty and undergraduate majors together to discuss research of a particular faculty member, student, or guest scholar. May be repeated up to 3 semester hours. (S/U only.)</td>
</tr>
<tr>
<td>REL 3936</td>
<td>SELECTED TOPICS</td>
<td>(1-4)</td>
<td>PR: CI. Course contents depend on students' needs.</td>
<td></td>
</tr>
<tr>
<td>REL 4161</td>
<td>RELIGION, TECHNOLOGY AND SOCIETY</td>
<td>(3)</td>
<td></td>
<td>This course will explore the roots of science and the history of its development, special emphasis will be given to the value questions raised by modern technology. Open to majors and non-majors.</td>
</tr>
<tr>
<td>REL 4162</td>
<td>RELIGION, SCIENCE AND SOCIETY</td>
<td>(3)</td>
<td></td>
<td>This course will explore the religious roots of science and the history of its development, special emphasis will be given to the value questions raised by modern technology. Open to majors and non-majors.</td>
</tr>
<tr>
<td>REL 4171</td>
<td>CONTEMPORARY CHRISTIAN ETHICS -6A</td>
<td>(3)</td>
<td>PR: Jr. standing or CI. This course will survey several major approaches to contemporary Christian ethics and their application to a number of ethical issues peculiar to personal and social life in contemporary society. Open to majors and non-majors.</td>
<td></td>
</tr>
<tr>
<td>REL 4193</td>
<td>COMPARATIVE MYSTICISM</td>
<td>(4)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>REL 4221</td>
<td>HEBREW BIBLE I/OLD TESTAMENT-LAW AND HISTORY</td>
<td>(4)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>REL 4224</td>
<td>HEBREW BIBLE II/PROPHETS AND WRITINGS</td>
<td>(4)</td>
<td>PR: REL 3210 or REL 4221 or CI.</td>
<td>An investigation of the prophetic movement and the historical and cultic writings in Israel from the point of view of theological developments, history presupposed, and the religious institutions depicted. Special attention is given to a theme such as Job and the problem of evil.</td>
</tr>
<tr>
<td>REL 4244</td>
<td>NEW TESTAMENT I: GOSPELS, ACTS</td>
<td>(4)</td>
<td></td>
<td>An exploration of the Gospels and Acts, including their backgrounds in Judaism and pagan religion, literary and form criticism, historical Jesus research, and the social history of earliest Christianity.</td>
</tr>
<tr>
<td>REL 4933</td>
<td>HINDUISM</td>
<td>(4)</td>
<td></td>
<td>The philosophy of the saints; the complex rituals of the Brahmins; these and its temple; the physiology and psychology of yoga; the social rigidity of the caste system; the esoteric science of meditation; the ascetic activism of Mahatma Gandhi—all of these are Hinduism, and more. Close readings of classical texts, philosophic systems and medieval poems.</td>
</tr>
<tr>
<td>REL 4934</td>
<td>BUDDHISM IN INDIA, SRI LANKA, AND SOUTH EAST ASIA</td>
<td>(4)</td>
<td></td>
<td>The life and teachings of the Buddha; the order of monks and nuns; the Buddhist Emperor Ashoka; schisms; the rise of the Great Vehicle and the philosophy of emptiness; Buddhist missions; Buddhist art and culture; Buddhism and national liberation; contemporary social and political issues.</td>
</tr>
<tr>
<td>REL 4938</td>
<td>FROM MYTH TO CHRISTIANITY</td>
<td>(4)</td>
<td></td>
<td>Study of the religions/mythologies of the ancient Middle East and Eastern Mediterranean and how their influences shaped the theology and practices of Christianity up to the end of the fourth century; influences many of which continue to be evident in the traditional Roman and Eastern Orthodox churches.</td>
</tr>
<tr>
<td>REL 4939</td>
<td>JUDAISM AND CHRISTIANITY AFTER THE HOLOCAUST -6A</td>
<td>(4)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>REL 4939</td>
<td>UNDERGRADUATE RESEARCH</td>
<td>(1-4)</td>
<td>PR: Junior standing and CI. Individual investigations with faculty supervision.</td>
<td></td>
</tr>
<tr>
<td>REL 4931</td>
<td>SEMINAR IN RELIGION</td>
<td>(3)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>REL 4936</td>
<td>SELECTED TOPICS</td>
<td>(1-4)</td>
<td>PR: Junior standing and CI. Individual investigations with faculty supervision.</td>
<td></td>
</tr>
<tr>
<td>REL 4939</td>
<td>THE DEVELOPMENT OF RELIGIOUS STUDIES</td>
<td>(3)</td>
<td>Course designed for senior majors (and minors) in religious studies to complement REL 4931 (Senior Seminar). Discussion of key issues and methodological advances in the development of the field from the 18th century to the present, with readings of classics in the development.</td>
<td></td>
</tr>
<tr>
<td>CLA 3000</td>
<td>ANCIENT CIVILIZATIONS</td>
<td>(4)</td>
<td></td>
<td>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.</td>
</tr>
</tbody>
</table>
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 4150 EGYPTIAN CIVILIZATION
(3)
Study of the Ancient Egyptian civilization, including customs, religion, art and architecture, language and literature, science and the calendar, and an introduction to hieroglyphic writing. (Alternate years.)

CLA 4171 MESOPOTAMIAN CIVILIZATION
(3)
Study of the Ancient Mesopotamian (Sumerian-Babylonian) civilization, including customs, religion, art and architecture, languages and literatures, science and the calendar, and an introduction to cuneiform writing. (Alternate years.)

CLA 4900 DIRECTED READINGS
(1-4)
PR: Consent of coordinator prior to registration. Readings in special topics chosen by the student in cooperation with the instructor. Reading of literature also possible in English translation.

CLA 4930 SELECTED TOPICS
(1-4)
Course contents depend on student demand and instructor's interest and may range over the whole field of Ancient languages, literatures, and civilizations. Offerings on a semi-regular basis include Tongues of the Bible (2), and The Bible as History (3).

HEB 1120, 1121 BASIC HEBREW I, II
(4,4)
Designed to give students a working knowledge of Classical Biblical Hebrew, to prepare them to enter the Biblical literature in the original language.
NOTE: In any of the numbers CLA 4900, CLA 4930, enrollment is repeatable for different subject matters.

SOCIAL WORK

SOW 3101 HUMAN BEHAVIOR AND THE SOCIAL ENVIRONMENT I
PR: All pre-core courses. Restricted to Social Work majors, others by School permission. An integrating course emphasizing dynamics of behavior and environmental factors as they relate to social work practice with individuals, families and groups.

SOW 3102 HUMAN BEHAVIOR AND THE SOCIAL ENVIRONMENT II
PR: SOW 3101. Restricted to Social Work majors; others by School permission. An integrating course emphasizing dynamics of behavior and environmental factors as they relate to social work practice with organizations and communities.

SOW 3203 THE AMERICAN SOCIAL WELFARE SYSTEM
An introductory course tracing the development of the American social welfare system.

SOW 4233 SOCIAL WELFARE POLICY & PROGRAM
PR: All pre-core courses and SOW 3203. Restricted to Social Work majors, others by School permission. An advanced policy course taking an analytical approach to contemporary social welfare policy issues and current social welfare programs.

SOW 4341 MULTI-METHODS OF SOCIAL WORK PRACTICE I: MICRO-SYSTEM INTERVENTION
PR or CR: SOW 3101; SOW 3401. Restricted to Social Work majors; others by School permission. First practice course emphasizing development of skills and interventive methods with individuals, families and small groups. Course includes both didactic and experiential learning components.

SOW 4343 MULTI-METHODS OF SOCIAL WORK PRACTICE II: MACRO-SYSTEM INTERVENTION
PR: All pre-core courses, SOW 4341; SOW 4233, and SOW 3102 may be taken as PR or CR. Restricted to Social Work majors, others by School permission. Second practice course emphasizing the intervention at the community and organizational level. Builds upon theoretical and practical content of SOW 4341. Course includes both didactic and experiential learning components.

SOW 4510 FIELD PLACEMENT
PR: Completion of all social work core courses except SOW 4522. Restricted to social work majors in Senior year. Supervised field experience in a social welfare organization consisting of 32 hours per week in the field and 4 hours per week in an integrated practice seminar which constitutes the third and final course in the practice sequence.

SOW 4522 SENIOR SEMINAR
PR: All pre-core courses; all core Social Work courses, except that SOW 4510 may be taken as CR. This course is the final course taken in the BSW curriculum. It is restricted to Social Work majors in their final stages of the senior year. The course serves as a means for assisting the student in synthesizing and integrating his/her learning experiences in the BSW program.

SOW 4900 DIRECTED READINGS
(1-6)
PR: Completion of four social work courses including SOW 3401, upper level standing, and School permission. Content dependent upon student interest and ability. A contract will be jointly developed by student and instructor specifying nature of work to be completed. May be repeated up to 6 credit hours.

SOW 4930 VARIABLE TOPICS IN SOCIAL WORK
Restricted to Social Work majors; others by School permission. Variable title courses to expand on the four sequence areas in the Social Work core curriculum. Allows focus on areas relevant to student's educational interest.

SOW 5930 SELECTED TOPICS IN SOCIAL WORK
Restricted to Social Work majors, both graduate and undergraduate; others by School permission. Variable title courses to selectively expand specific social work content areas. May be repeated in varying topic areas.

SOCIOLOGY

SYA 3010 FOUNDATIONS OF THEORY
PR: SYG 2000 or CI. Consideration of selected theories in sociology and procedures of systematic theory construction.

SYA 3300 SOCIAL INVESTIGATION

SYA 3503 COMMENTARY FILM MAKING IN THE SOCIAL SCIENCES
PR: Major in the College of Arts and Sciences and CR in an upper level course. For students majoring in some other college, approval by major professor and instructor of course is both required, but concurrent registration in one of the social and behavioral science courses is maintained. The consideration of the theoretical and technical requirements for film expressing social science concepts and propositions on film. Film planning, camera techniques, editing silent film, and the utilization of the independent sound (tape cassette) in the commentary film. Ethics of film making.

SYA 3504 LABORATORY WORK IN COMMENTARY FILM MAKING IN THE SOCIAL SCIENCES
PR: SYA 3503, CR in a course in the social and behavioral sciences with instructor's approval to enable student to make a film in lieu of some other course requirement. A continuation of lab and field work in the making of commentary films. Camera, editorial and problems of independent sound solved in the context of making a film in one of the social sciences. Does not count for sociology major credit. May be repeated for a maximum of three credits. (S/U only.)
SYA 4430 COMPUTERS IN SOCIOLOGICAL RESEARCH (3) Introduction to the uses of computer in sociological research. Major emphasis is upon the use of statistical packages (principally SPSS) in data analysis. (S/U only.)

SYA 4910 INDIVIDUAL RESEARCH (1-3) Pr: Four courses in sociology, including SYA 3300, upper level standing, at least 3.0 overall GPA, or CI. Content dependent upon interest and competence of student. A contract specifying the work to be done must be completed and signed by both the student and the chairperson of the department before registration for this course will be permitted. May be repeated for credit. Up to 3 credits may be counted towards meeting major elective requirement.

SYA 4930 TOPICS IN SOCIOLOGY (3) Pr: 12 semester hours of Sociology and prior CI. May be repeated for credit. See class schedule for content.

SYA 4935 SENIOR SEMINAR (3) For seniors majoring in sociology or other social sciences. Major issues in sociology, stressing theory and research.

SYA 4949 SOCIOLOGICAL INTERNSHIP (1-6) Pr: Senior or graduate standing in Sociology plus CI. Supervised placement in community organization or agency for a minimum of 10 hours of volunteer work per week, and a weekly seminar on applying sociological skills and methods in the placement setting. May be repeated up to 6 credit hours. (S/U only.)

SYD 3700 RACIAL AND ETHNIC RELATIONS (3) Pr: SYG 2000 or CI. Comparative study of inter-relationships, social tensions, attitudes, and modes of adjustment in various areas of the world.

SYD 4020 POPULATION (3) Pr: SYG 2000 or CI: upper level standing. Sociological determinants of fertility, mortality and migration; theories of population change.

SYD 4410 URBAN SOCIOLOGY (3) Pr: SYG 2000 or CI, upper level standing. The social structure of the community in modern industrial societies. Analysis of community change.

SYD 4441 COMPARATIVE RURAL SOCIOLOGY (3) Pr: SYG 2000 or CI. The study of rural life in the United States; compares the situation in the United States with that of other societies as well as other times in history; some aspects of rural peasant societies and experiments in rural community formation.

SYD 4800 SOCIOLOGY OF SEX ROLES (3) Pr: SYG 2000; WST 2010 or 2011; or CI. Historical and contemporary exploration of current issues relevant to sex roles in America. Emphasis on sex role differences, interpersonal relationships and institutional participation. (Also offered under Women's Studies.)

SYG 2000 INTRODUCTION TO SOCIOLOGY (3) Nature and application of sociological concepts, theories, and methods; analysis of societies, associations and groups; social processes and social change.

SYG 2412 MARRIAGE (3) Study of pre-marital relations, social-cultural, and personal factors related to success and failure in mate selection and marriage. Does not count for sociology major credit.

SYG 3010 CONTEMPORARY SOCIAL PROBLEMS (3) Application of sociological concepts and principles to the description and analysis of major social problems of modern societies. Does not count for sociology major credit.

SYO 3120 THE FAMILY (3) Major emphasis is upon the use of the study of family organization, social adjustment, and control. Maturation, socialization, and stability of the family.

SYO 3200 SOCIOLOGY OF RELIGION (3) Pr: SYG 2000 or CI. Types, sources, and functions of religious behavior. Religious behavior in relation to other aspects of personality and culture.

SYO 3500 SOCIAL ORGANIZATION (3) Pr: SYG 2000 or CI. Social organization in the broadest sense, including institutions and associations, as well as variations in role and status.
ANT 3562 AMERICAN WOMEN II (4)
A study of women in the evolution of American society from 1877 to the present. Women's roles in the family, economy, politics, wars, religion and reform movements will be examined. (May also be taken for credit in History.)

AMS 3370 SOUTHERN WOMEN: MYTH AND REALITY -SA (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. (May also be taken for credit in American Studies.)

ANT 4302 SEX ROLES IN CROSSCULTURAL PERSPECTIVE (3)
PR: ANT 3400 or Cl. Course focuses on various theories, models and beliefs about male-female behaviors and interactions in human cultures throughout history and in various societies in the world today. (May also be taken for credit in Anthropology.)

LIT 3383 IMAGE OF WOMEN IN LITERATURE (3)
An historical literary analysis of stereotyped and liberated female images from Sappho through the emergence of the women's movement. (May also be taken for credit in English.)

PHI 4345 FEMINIST ETHICS (3)
A study of the varied approaches to moral reasoning taken by feminist ethical writers such as Wollstonecraft, Mill, Gilligan, Daly, Hoagland and others. May also be taken for credit in Philosophy.

POS 4693 WOMEN AND LAW I (3)
Introduction to issues concerning the legal aspects of sex and sex-based discrimination as embodied in statutory and case law, focusing on constitutional and family law and reproductive freedom issues. Open to majors and non-majors. (May also be taken for credit in Government and International Affairs.)

POS 4694 WOMEN AND LAW II (3)
PR: POS 4693 or Cl. Legal position of women in American society and modern issues. Emphasis will be placed on current government laws and practices, with specific emphasis on employment and education issues as they relate to both women and men. (May also be taken for credit in Government and International Affairs.)

PUP 4323 WOMEN AND POLITICS (3)
An analysis of the impact of gender on power and influence in American society, and women's changing role in the political process. Open to majors and non-majors. (May also be taken for credit in Government and International Affairs.)

REL 3145 WOMEN AND RELIGION -SA (3)
Status and roles of women as compared to men in the Judeo-Christian tradition. Contemporary issues of feminist theology, and the controversies surrounding them. (May also be taken for credit in Religious Studies.)

SOC 3700 THEORIES OF WOMEN (3)
Theories of female personality. Current research on socialization, sexuality, reproduction. Emerging lifestyles and developmental tasks of the life cycle. (May also be taken for credit in Psychology.)

SYD 4800 SOCIOLOGY OF SEX ROLES (3)
PR: SYG 2000, WST 3010 or 3011; or Cl. Historical and contemporary exploration of current issues relevant to sex roles in America. Emphasis on sex role differences, interpersonal relationships and institutional participation. (May also be taken for credit in Sociology.)

WST 3010 INTRODUCTION TO WOMEN'S STUDIES (3)
Survey of major issues relevant to the female experience. The women's movement: historical, psychological, sociological, anthropological perspectives.

WST 3011 ISSUES IN FEMINISM (3)
Survey of major issues relevant to the female experience: marriage and the family, sexuality, work, creativity.

WST 3210 WOMEN IN WESTERN CIVILIZATION I -SA (3)
Survey of women in the ancient Near East, ancient Greece, ancient Rome, early Middle Ages. Origins of Western attitudes toward sex roles, female sexuality, relation of power to gender. (May also be taken for credit in History.)

WST 3220 WOMEN IN WESTERN CIVILIZATION II (3)
Survey of European women from the late Middle Ages to the twentieth century: differing consequences of historical change for women and men. (May also be taken for credit in History.)

WST 3270 AMERICAN WOMAN IN CONTEMPORARY SOCIETY I (3)
An analysis of the status and opportunities of contemporary American women in their social context, using both historical and socio-psychological data. (Only offered on the Ft. Myers campus.)

WST 3271 AMERICAN WOMAN IN CONTEMPORARY SOCIETY II (3)
An analysis of current issues facing American women, focusing on the nature and consequences of stereotyping, and on women and employment, creativity, health issues, the family, aging, poverty and abuse. (Only offered on the Ft. Myers campus.)

WST 3275 WOMEN IN THE DEVELOPING WORLD (3)
Survey of status of women in Asia, Africa, Latin and Caribbean America, compared to that in USA, Canada, West Europe, Marxist-Leninist countries. (May also be taken for credit in Government and International Affairs.)

WST 3360 MEN AND SEXISM (3)
Ways in which sex role conditioning affects the lives of men. Factors in this conditioning, and alternatives to masculine sex role models.

WST 4260 RESEARCH ISSUES ON WOMEN OF COLOR (3)
An interdisciplinary introduction to the research process as it has been carried out on women of color nationally and internationally.

WST 4309 THE FEMALE EXPERIENCE IN AMERICA (3)
The female experience in America, in historical context, with an emphasis on women in families of various classes, races, and ethnic groups from colonial times to 1870. (May also be taken for credit in History.)

WST 4310 FEMINISM IN AMERICA (3)
Examination of the women's movement in 19th century America: origins, theoretical and practical issues, relation to European feminism. Sources, issues, implications of 20th century feminism. (May also be taken for credit in History.)

WST 4320 WOMAN'S BODY/WOMAN'S MIND (3)
An analysis of the historical, social and political perspectives of women's health and healing experiences, and how woman's role as patient and provider of care are shaped by public and cultural assumptions.

WST 4335 FEMINIST FILM THEORY (3)

WST 4342 CLASSICS IN FEMINIST THEORY (3)
A study of classic contributions to the elaboration of feminist thought from the 18th century to the present in an attempt to discover the roots of the contemporary feminist movement. This course is cross-listed with the Department of Philosophy.

WST 4380 HUMAN SEXUAL BEHAVIOR (3)
The dynamics of human sexuality: biological, constitutional, cultural, and psychological aspects. The range of sexual behavior across groups. Sources of beliefs and attitudes about sex, emerging sex roles and especially female sexuality.

WST 4900 DIRECTED READINGS (1-3)
PR: Registration requires instructor's written consent and signed contracts from instructor of choice. To provide advanced students with interdisciplinary research experience in areas of specific interest. May be repeated up to 6 credit hours.

WST 4910 DIRECTED RESEARCH (1-3)
PR: Registration requires instructor’s written consent and signed contracts from instructor of choice. To provide advanced students with interdisciplinary research experience in areas of specific interest. May be repeated up to 6 credit hours.

WST 4930 SELECTED TOPICS (1-4)
PR: WST 3010 or Cl. Study in special areas such as Feminist Ethics, Women's Arts, etc.

WST 4935 SEMINAR IN WOMEN'S STUDIES (3)
PR: WST 3010 or Cl. In-depth study of research in one or more areas of topical interest to students and staff. Research involvement by students required.
WST 5001 FEMINIST RESEARCH AND METHODOLOGY (3)
The main goals of this course are to develop a more comprehensive understanding of the situation of women in society and to develop a theoretical basis for integrating this knowledge into the student's graduate course of study.

WST 5266 WOMEN OF COLOR: ACTIVISM AND SOCIAL CHANGE (3)
Intensive reading and discussion of the participation of women of color in contemporary revolutionary and reformist activities. Class project involvement is required.

WST 5934 SELECTED TOPICS (1-4)
Study of current research methods and scholarship on women from a multidisciplinary perspective. May be repeated as topics vary. (CI).

Bachelor of Independent Studies
State University System
External Degree Program
See program description in College Section under College of Arts and Sciences for description of curriculum components.

ISS 4909 BIS SOCIAL SCIENCES, INDEPENDENT STUDY (15)
ISS 4939 BIS SOCIAL SCIENCES, SEMINAR (15)
PR: BIS ISS 4909 or CI (S/U only)

ISC 4909 BIS NATURAL SCIENCES, INDEPENDENT STUDY (15)

ISC 4939 BIS NATURAL SCIENCES, SEMINAR (15)
PR: BIS ISC 4909 or CI (S/U only)

HUM 4909 BIS HUMANITIES, INDEPENDENT STUDY (15)
HUM 4939 BIS HUMANITIES, SEMINAR (15)
PR: BIS HUM 4909 or CI (S/U only)

IDS 4990 BIS INTER-AREA STUDIES (30)
PR: ISS 4909, ISS 4939, ISC 4909, ISC 4939, HUM 4909, HUM 4939.
ACCOUNTING/LAW


ECONOMICS


FINANCE

Chairperson: G. Kanatas; Lykes Professor of Banking & Finance: J. L. Pappas; University Distinguished Service Professor and Serge Bonanni Distinguished Professor of International Finance: A. Beenhakker; Professors: A. Beenhakker, S. E. Bolten, R. G. Cox, G. Kanatas, S. Kapplin, R. L. Meyer, F. B. Power, A. Schwartz, K. F. Wieand; Associate Professors: S. Besley, S. B. Bulmash, D. A. Johnson, P. Kares, R. J. Rivard; Assistant Professors: L. Johnson, H. W. Lee, W. G. Modrow, S. Quintero, R. Sanders; Other Faculty: J. Rader.

INFORMATION SYSTEMS AND DECISION SCIENCES


MANAGEMENT


MARKETING


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)

ACG 3074 MANAGERIAL ACCOUNTING FOR ENGINEERS (3)
The study of the uses of accounting data internally by managers in planning and controlling the affairs of organizations. Does not count towards major or CPA requirements.

ACG 3102 INTERMEDIATE ACCOUNTING I (4)
PR: ACG 2011. Measurement theory and methodology underlying income measurement and reporting of financial position. The study of compound interest fundamentals, cash, temporary investment, receivables, inventories, property and equipment, intangibles, and long term investments.

ACG 3112 INTERMEDIATE ACCOUNTING II (4)

ACG 3341 COST ACCOUNTING AND CONTROL I (3)
PR: FIN 3403, QMB 3200. Deals with relevant costs for decision making, standards and job order costing, flexible budgeting direct and absorption costing, regression analysis and decision models.

ACG 3401 ACCOUNTING INFORMATION SYSTEMS (3)

ACG 4201 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 partnerships.

ACG 4351 COST ACCOUNTING AND CONTROL II (3)
PR: ACG 3341. Further development of the material covered in ACG 3341 with special emphasis on cost allocation issues and accounting in the new manufacturing environment.

ACG 4501 NONPROFIT ORGANIZATION ACCOUNTING (3)

ACG 4632 AUDITING I (3)
PR: ACG 3112, ACG 3401, and QMB 3200. Procedures and principles of internal and public auditing. The ethics, responsibilities, standards, and reports of professional auditing.

ACG 4642 AUDITING II (3)
PR: ACG 4632. Further development of material covered in ACG 4632, with special emphasis on additional reporting topics and audit techniques not previously addressed.

ACG 4801 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 that have taken place in the profession which the student should have for a well-rounded background in accounting but have not been exposed to in previous courses. Available to majors and nonmajors.

ACG 4901 INDEPENDENT STUDY (1-3)
PR: Consent of Director. 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: Consent of Director. Individual study contract with instructor and director 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: CI. The course content will depend on student demand and instructor's interest.

ACG 5935 SELECTED TOPICS IN ACCOUNTING (1-4)
PR: CI. To allow advanced undergraduate students and graduate students to pursue study of contemporary and emerging topics in the field. May be repeated up to 6 credit hours.

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.

TAX 4011 FEDERAL TAXES II (3)
PR: TAX 4011. A detailed 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 2935 SELECTED TOPICS IN ECONOMICS (1-3)
PR: CI. Topics to be selected by department chairperson. May be repeated if topics vary. Not available for credit to upper-level students who have been admitted to the College of Business Administration.

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 with a grade of "C" or better. 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)
PR: ECO 3101 with a grade of "C" or better. Role of international trade in the U.S. economy. Emphasis is placed on the bases of trade and the nature of gains from trade, balance of payments, exchange rate determination, equilibrating mechanisms for restoring balance of payments stability and international commercial policy.

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 4303 HISTORY OF ECONOMIC THOUGHT (3)
PR: ECO 3101 with a grade of "C" or better. 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 4323 MARXIST POLITICAL ECONOMY (3)
PR: ECO 2013, or CI. 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 QMB 3200, MAC 3233 or CI. Economic analysis using mathematical tools such as matrix algebra and differential calculus. Models of optimizing behavior and economic equilibrium.

ECO 4504 PUBLIC FINANCE (3)
PR: ECO 3101 with a grade of "C" or better. Examination of the public sector and its contribution to economic welfare. Government expenditures and revenues in relation to their impact on resource allocation, income distribution, stabilization, and economic growth.

ECO 4713 INTERNATIONAL MONETARY RELATIONS (3)

ECO 4723 INTERNATIONAL COMMERCIAL POLICIES (3)
PR: ECO 3101 with a grade of "C" or better. Advanced analysis of international trade theory and commercial policy, international economic integration, and multinational enterprise.

ECO 4905 INDEPENDENT STUDY (1-3)
PR: CI. 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: CI. Individual student 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: CI. Topics to be selected by the instructor or instructors on pertinent economic issues.

ECP 3203 LABOR ECONOMICS (3)
PR: ECO 3101 with a grade of "C" or better. An examination of the determinants of wage and employment levels; occupation, industrial and geographical wage differentials, union and public policy effects on labor markets; the economics of discrimination; inflation and unemployment.

ECP 3413 BUSINESS-GOVERNMENT RELATIONSHIPS (3)

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 CI. 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 4451 LAW AND ECONOMICS (3)
PR: ECO 3101 with a grade of "C" or better. An advanced analysis of the economic impact in the areas of: Tort, Criminal, Property and Contract Law as well as in the formation and adjudication of law.

ECS 3013 ECONOMIC DEVELOPMENT (3)
PR: ECO 2013 or CI. 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 CI. Analysis of the major types of economic systems: traditional, capitalism, democratic socialism, communism and fascism. The methodology of Max Weber will be stressed.
FIN 3100 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. May not be counted toward major requirements in FIN or GBA.

FIN 3105 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. May not be counted toward major requirements in FIN or GBA.

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 3404 PRINCIPLES OF FINANCE (3)
PR: ECO 2011 and ECO 2023. Study of the processes, decision 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 CI. Study of factors affecting international business, assessment of risks, international managerial finance; institutions and instruments of international business finance.

FIN 4245 FEDERAL RESERVE SYSTEM AND MONETARY POLICY (3)
PR: FIN 3233 or CI. An analysis of the Federal Reserve System, with special emphasis on monetary theory and the formulation and administration of monetary policy.

FIN 4303 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 3233, FIN 4443 or ECO 2011. A comprehensive study 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 4514 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 4905 INDEPENDENT STUDY (1-3)
PR: CI. Specialized independent study determined by the students’ needs and interests. May be repeated up to six credit hours in Finance.

FIN 4915 INDEPENDENT RESEARCH (1-3)
PR: CI. 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: CI. Topics to be selected by instructor and department chairperson on pertinent Finance issues.

REE 3043 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 3703 REAL ESTATE LOCATION THEORY AND URBAN DEVELOPMENT (3)
PR: ECO 2023. The spatial determinants of real property demand and supply. Theoretical bases for market feasibility, risk analysis, real estate market forecasting.

REE 4103 REAL ESTATE APPRAISAL (3)
PR: REE 3043. 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 an emphasis on residential property.

REE 4143 INCOME PROPERTY VALUATION (3)
PR: REE 3043 and FIN 3403. Application of general appraisal methodologies and financial analysis to the valuation of income producing properties. Focus is on the income approach to valuation.

REE 4203 REAL ESTATE FINANCE (3)
PR: REE 3043. A comprehensive analysis of the institutional and legal framework of real estate financing together 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 4313 REAL ESTATE INVESTMENT ANALYSIS (3)
PR: FIN 3403, REE 3043. 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.

REE 4314 REAL ESTATE FEASIBILITY ANALYSIS (3)
PR: REE 3703, REE 4143, and QMB 3200. A comprehensive and in-depth study of the determinants of the market and financial feasibility of the real estate investment decision.

RMI 3011 PRINCIPLES OF INSURANCE (3)
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 4115 LIFE, HEALTH, AND DISABILITY INSURANCE (3)
PR: GEB 3121, RMI 3011. 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 (3)
PR: RMI 3011. 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 workers’ compensation, public liability, auto liability, suretyship and crime insurance. Not limited to Finance majors.

RMI 4210 PROPERTY INSURANCE (3)
PR: RMI 3011. 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 3112 LAW AND BUSINESS I (3)
This course covers the nature of legal and societal institutions and environments, and major aspects of public, private, UCC and related business law.