Part 11

Serving 2 million people in 12 counties
Programs, activities, and facilities of the University of South Florida are available to all on a non-discriminatory basis, without regard to race, color, creed, religion, sex, age, or national origin. The University is an affirmative action Equal Opportunity Employer.

The announcements, information, policies, rules, regulations, and procedures set forth in this Bulletin are for information only and are subject to continual review and change without notice.

The USF Catalog is published in two parts: Part I contains general University information including admission standards and procedures, financial information, academic regulations, and general information on academic programs offered. Part II contains detailed academic program requirements and course descriptions. Copies of Part II are distributed to all new students at their first registration and are also available at advising offices in Florida high schools and community colleges.
Visiting the University

Prospective students and other interested persons are invited to visit the University whenever possible. Most University offices receive visitors from 8:00 a.m. to 5:00 p.m. Monday through Friday.

Tour guides for visitors to the Tampa Campus may be arranged by calling 813: 974-2635 or by writing University Center, USF, Tampa, Fla. 33620.

The Tampa Campus of the University is located on Fowler Avenue (State Route 582) approximately two miles east of Interstate 75 and Nebraska Avenue (U.S. Route 41) and seven miles north of Interstate 4.

The other campuses of the University are located in the places noted below and elsewhere in this publication.

Communicating With the University

Communications regarding the services and programs listed below should be directed by letter or by phone to the appropriate office on the Tampa, St. Petersburg, Fort Myers, or Sarasota campuses. Mailing addresses for the campuses are given at the bottom of the page. St. Petersburg offices may be reached by dialing 813: 898-7411 and asking for the desired office; Fort Myers Campus offices by dialing 813: 334-3780; Sarasota Campus by dialing 813: 959-5177; Tampa campus offices by dialing 813: 974- and the extension included below:

<table>
<thead>
<tr>
<th>Academic Advising (for freshmen)</th>
<th>Continuing Education Courses and Conferences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division of University Studies</td>
<td>Center for Continuing Education</td>
</tr>
<tr>
<td>FAO 126 2645</td>
<td>FAO 101 2403</td>
</tr>
<tr>
<td>Academic Advising (for upperclassmen and graduate students)</td>
<td>Cooperative Education Program</td>
</tr>
<tr>
<td>Office of the Dean of the appropriate college</td>
<td>Division-of Cooperative Education &amp; Placement</td>
</tr>
<tr>
<td>ADM 180 2987</td>
<td>AOC 105 2171</td>
</tr>
<tr>
<td>(Medical students should contact the Dean of the College of Medicine)</td>
<td>Equal Opportunity Program</td>
</tr>
<tr>
<td></td>
<td>Office of the Equal Opportunity Coordinator</td>
</tr>
<tr>
<td></td>
<td>ADM 253 2607</td>
</tr>
<tr>
<td>Athletics (Intercollegiate)</td>
<td>Financial Assistance (scholarships, loans, and student employment)</td>
</tr>
<tr>
<td>Athletic Director PED 214 2125</td>
<td>Office of Financial Aids</td>
</tr>
<tr>
<td></td>
<td>ADM 172 2621</td>
</tr>
<tr>
<td>Bachelor of Independent Studies Program</td>
<td>Food Services</td>
</tr>
<tr>
<td>External Degree Program</td>
<td>Office of Housing and Food Services</td>
</tr>
<tr>
<td>FAO 105 2403</td>
<td>RAR 229 2761</td>
</tr>
<tr>
<td>Career Planning and Placement</td>
<td>Graduate Studies</td>
</tr>
<tr>
<td>Division of Cooperative Education &amp; Placement</td>
<td>Division of Graduate Studies</td>
</tr>
<tr>
<td>AOC 105 2171</td>
<td>ADM 229 2846</td>
</tr>
<tr>
<td>College Level Examination Program (CLEP tests)</td>
<td>Handicapped Student Program and Facilities</td>
</tr>
<tr>
<td>Office of Testing and Advanced Placement</td>
<td>Office of Student Affairs</td>
</tr>
<tr>
<td>FAO 201 2741</td>
<td>ADM 153 2151</td>
</tr>
<tr>
<td>Community College Relations (for transfer students)</td>
<td>Health Services (Student)</td>
</tr>
<tr>
<td>Office of Community College Relations</td>
<td>Health Center</td>
</tr>
<tr>
<td>FAO 149 2506</td>
<td>CTR 411 2331</td>
</tr>
<tr>
<td>Housing (off-campus)</td>
<td>High School Relations</td>
</tr>
<tr>
<td>Student Government Office</td>
<td>Office of High School Relations</td>
</tr>
<tr>
<td>CTR 156A 2401</td>
<td>FAO 126 2076</td>
</tr>
<tr>
<td>Information Services</td>
<td>Housing (on campus)</td>
</tr>
<tr>
<td>Office of Information Services</td>
<td>Office of Housing and Food Service</td>
</tr>
<tr>
<td>ADM 190 2181</td>
<td>RAR 229 2761</td>
</tr>
<tr>
<td>Library Resources</td>
<td>University Police Department</td>
</tr>
<tr>
<td>Office of the Director of Libraries</td>
<td>UPB 2628</td>
</tr>
<tr>
<td>ULI 224 2721</td>
<td>Records, Registration, Transcripts</td>
</tr>
<tr>
<td>Orientation (&quot;Focus&quot;)</td>
<td>Office of Records &amp; Registration ADM 264 2987</td>
</tr>
<tr>
<td>Division of University Studies</td>
<td>Student Affairs</td>
</tr>
<tr>
<td>FAO 126 2076</td>
<td>Office of Student Affairs</td>
</tr>
<tr>
<td>Mature Student Advising</td>
<td>ADM 153 2151</td>
</tr>
<tr>
<td>Division of University Studies</td>
<td>Textbook Facilities</td>
</tr>
<tr>
<td>FAO 126 2076</td>
<td>Textbook Center CTR 102 2545</td>
</tr>
<tr>
<td>Parking and Traffic Services</td>
<td>Upward Bound Project Upward Bound APT 16 2802</td>
</tr>
<tr>
<td>University Police Department</td>
<td>Veterans Affairs Office</td>
</tr>
<tr>
<td>UPB 2628</td>
<td>CTR 166 2291</td>
</tr>
</tbody>
</table>

University of South Florida
Tampa Campus
4202 Fowler Avenue
Tampa, Florida 33620
Telephone: (813) 974-2011

University of South Florida
Fort Myers Campus
2266 Second Street
Fort Myers, Florida 33901
Telephone: (813) 334-3780

University of South Florida
Sarasota Campus
5700 N: Tamiami Trail
Sarasota, Florida 33580
Telephone: (813) 355-2986
CONTENTS

Academic Calendar ................................................. 4
College of Arts & Letters ........................................ 6
College of Business Administration ............................ 14
College of Education ............................................. 19
College of Engineering .......................................... 32
College of Fine Arts ............................................. 35
College of Medicine .............................................. 39
College of Natural Sciences .................................... 40
College of Nursing ............................................... 50
College of Social & Behavioral Sciences ..................... 52
Graduate Study ..................................................... 61
Course Descriptions ............................................. 64
Faculty and Administrative Staff ............................... 177
Index ............................................................... 199

This public document was promulgated at an annual cost of $15,683, or $.448 per copy, including preparation, printing, and distribution, to provide comprehensive information on curricula and courses offered by the University of South Florida. [6027]
### ACADEMIC CALENDAR

#### Summer Quarter (IV), 1975

**NOTE:** Dates apply to regular term. See quarterly Schedule of Classes for appropriate sessions.

- **May 29, Thursday**
  - Last day to apply for admission
  - Registration by appointment (tentative)
  - Classes begin

- **June 19, 20, Thurs., Fri.**
  - Last day to withdraw or drop and receive full refund of registration fees

- **June 23, Monday**
  - Last day to add courses
  - Last day for late registration (see late registration fee). Also last day to register as a Special Student

- **June 27, Friday**
  - Independence Day Holiday
  - Last day to register for Continuing Education courses
  - Last day for Continuing Education course refund

- **August 1, Friday**
  - Last day to drop courses without penalty
  - Last day to withdraw without penalty
  - End of Summer Quarter (IV)

#### Fall Quarter (I), 1975

- **August 22, Friday**
  - Last day to apply for admission

- **September 17, 18, 19 Wed., Thurs., Fri.**
  - Registration by appointment (tentative)
  - Classes Begin
  - Last day to withdraw or drop and receive full refund of registration fees

- **September 22, Monday**
  - Last day to add courses
  - Last day for late registration (see late registration fee). Also last day to register as a Special Student

- **September 26, Friday**
  - Last day to register for Continuing Education courses
  - Last day for Continuing Education course refund
  - Last day to apply for degree to be earned at the end of Quarter I, 1975

- **October 3, Friday**
  - Last day to drop courses without penalty
  - Last day to withdraw without penalty
  - Veterans Day Holiday

- **October 10, Friday**
  - Thanksgiving Holiday
  - End of Fall Quarter (I)

#### Winter Quarter (II), 1976

- **December 5, Friday**
  - Last day to apply for admission

- **January 2, Friday**
  - Registration by appointment (tentative)
  - Classes Begin
  - Last day to withdraw or drop and receive full refund of registration fees

- **January 5, Monday**
  - Last day to add courses
  - Last day for late registration (see late registration fee). Also last day to register as a Special Student

- **January 9, Friday**
  - Last day to register for Continuing Education courses
  - Last day for Continuing Education course refund
  - Last day to apply for degree to be earned at the end of Quarter II, 1976

- **February 13, Friday**
  - Last day to drop courses without penalty
  - Last day to withdraw without penalty
  - End of Winter Quarter (II)

*Earlier deadlines may be required by some graduate programs and the College of Nursing. See appropriate sections for further information.*
Spring Quarter (III), 1976

*February 27, Friday
March 25-26, Thurs., Fri.
March 29, Monday
April 2, Friday
April 2, Friday
April 9, Friday
April 16, Friday
May 7, Friday
May 7, Friday
May 31, Monday
June 9, Wednesday
June 13, Sunday

Last day to apply for admission
Registration by appointment (tentative)
Classes Begin
Last day to withdraw or drop and receive full refund of registration fees
Last day to add courses
Last day for late registration (see late registration fee). Also last day to register as a Special Student
Last day to register for Continuing Education courses
Last day for Continuing Education course refund
Last day to apply for degree to be earned at the end of Quarter III, 1976
Last day to drop courses without penalty
Last day to withdraw without penalty
Memorial Day Holiday
End of Spring Quarter (III)
Commencement Convocation

Summer Quarter (IV), 1976

NOTE: Dates apply to regular term. See quarterly Schedule of Classes for appropriate sessions.

*May 21, Friday
June 17-18, Thurs., Fri.
June 21, Monday
June 25, Friday
June 25, Friday
June 25, Friday
June 30, Friday
July 30, Friday
August 27, Friday

Last day to apply for admission
Registration by appointment (tentative)
Classes Begin
Last day to withdraw or drop and receive full refund of registration fees
Last day to add courses
Last day for late registration (see late registration fee). Also last day to register as a Special Student
Last day to register for Continuing Education courses
Last day for Continuing Education course refund
Last day to apply for degree to be earned at the end of Quarter IV, 1976
Last day to drop courses without penalty
Last day to withdraw without penalty
End of Summer Quarter (IV)

*Earlier dates may be required by the graduate programs

COLEGE OF MEDICINE
ACADEMIC CALENDAR, 1975, 76

First Period, 1975

July 2-3, Wednesday-Thursday
July 4-7, Friday-Monday
July 8-11, Tuesday-Friday
July 14, Monday
September 1, Monday
November 11, Tuesday
November 27-28, Thursday-Friday
December 12, Friday

Registration
Independence Day Holidays
Clinical Orientation
Classes Begin, First Period
*Labor Day Holiday
*Veterans Day Holiday
*Thanksgiving Holiday
End of First Period

Second Period, 1976

January 5, Monday
May 14, Friday

Classes Begin
End of Second Period

Third Period, 1976

May 24, Monday
May 31, Monday
July 5, Monday
September 6, Monday
September 17, Friday

Classes Begin
*Memorial Day Holiday
*Independence Day Holiday
*Labor Day Holiday
End of Third Period

The Labor Day, Veterans Day, Thanksgiving, Memorial Day, and Independence Day holidays may be waived for students serving in clinical clerkships, at the discretion of the individual chiefs of service.
Admission to the College
Admission to the College of Arts and Letters is open to all students who have been accepted to the University of South Florida, who are in good academic standing, and who have declared themselves a major in a particular field within the College.
For entrance into the College, each undergraduate student must complete an application in the Office of the Coordinator of Advising. The student will then be assigned to an adviser from the major field and will be counseled in the selection of courses which will fulfill his/her educational needs and satisfy the requirements for the Bachelor of Arts degree. Three programs (American Studies, Liberal Studies, and Mass Communications) have additional requirements, listed under Programs and Curricula.

General Requirements for Degrees
The degree of Bachelor of Arts will be conferred upon those who fulfill the requirements for degrees with majors in the fields of:

- American Studies (AMS)
- Classics (CLS)
- English (ENG)
- English-Linguistics (ENL)
- Foreign Languages, Combination (FOL)
- Foreign Language-Linguistics (FLL)
- French (FRE)
- German (GER)
- Humanities (HUM)
- Italian (ITA)
- Liberal Studies (ALA)
- Mass Communications (COM)
- Philosophy (PHI)
- Religious Studies (REL)
- Russian (RUS)
- Spanish (SPA)
- Speech Communication (SPE)
- Speech Communication-English (ENS)
- Speech Communication-Theatre Arts (STA)

A minimum of 180 quarter hours credit with an overall average of 2.0 or better in all work done at the University of South Florida must be completed in order to earn the Bachelor of Arts degree. The degree program must include the completion of 1) General Distribution Requirements, 2) a departmental major, and, 3) elective courses.

1. General Distribution Requirements
This work comprises a total of sixty (60) quarter credits which (except for English) may be spread over the normal four-year degree program. The requirement includes:
- Eight (8) hours credit in English Composition
- Eight (8) hours credit in Humanities/Fine Arts
- Eight (8) hours credit in Mathematics/Quantitative Method
- Eight (8) hours credit in Natural Sciences
- Eight (8) hours credit in Social and Behavioral Sciences

The remaining twenty (20) hours are to be divided among the last four areas at the discretion of the student and adviser.

2. The Departmental Major
A departmental major consists of a concentration of course work in a specific department. The number of credit hours required for a major will vary from department to department. There must be at least a cumulative grade point ratio of 2.0 in this major for all USF work passed. At least 120 quarter hours must be earned in courses outside the student's major.

3. Elective Courses
Of the minimum of 180 quarter hours required for a Bachelor's degree in the College of Language and Literature, sixty (60) are normally earned in general elective courses. This number varies with the credit requirement for the major and should be treated as an average figure.

Physical Education credit earned before Spring Quarter (III) 1972, will not be counted toward the 180 quarter hours required for the degree. However, up to four elective PE credits earned in Quarter III 1972 or later, may be counted toward the 180 hour requirement. No transfer PE credit will be accepted by the College of Arts and Letters.

Work transferred from other schools will not be included in the grade point ratio computed for graduation. However, graduation with honors requires a 3.5 average in USF and all previous college work attempted.

GRADUATE LEVEL DEGREE PROGRAMS

Master's Degree Programs
The College of Arts & Letters offers graduate programs leading to the Master of Arts degrees in the fields of:
- English (ENG)
- French (FRE)
- Linguistics (LIN)
- Philosophy (PHI)
- Spanish (SPA)
- Speech Communication (SPE)

The University requirements for graduate work at the Master's level are described on pages 61-62. The departmental requirements are listed under the appropriate program descriptions.

Doctor of Philosophy
The Department of English offers a program leading to the degree of Doctor of Philosophy. The University requirements for graduate work at the Doctor's level are given on pages 62-63. Specific requirements for the degree are listed under the Department of English.
NON-DEGREE PROGRAMS

Certificate of Concentration

The Certificate of Concentration is a short-term goal program for adults who are interested in taking a series of courses in a selected area of Arts & Letters but are not necessarily interested in a degree. The courses, on an undergraduate level, are offered to adults who may or may not have a degree. The Certificate of Concentration is awarded when a minimum of 25 hours has been completed in a given area or in a combination of areas. (In a combination of areas, 12 hours must be in one particular area.) It is a program that may be taken on a satisfactory-unsatisfactory or letter grade basis and may be applied toward an undergraduate degree in Arts & Letters. The Certificate of Concentration is designed for registration in the Special Student Category rather than the regular route of admission and registration.

HISTORY OF IDEAS

The program in the History of Ideas offers elective courses in the interdisciplinary study of ideas fundamental in Western cultural history, e.g. Progress, Utopia. The methods of philosophic and linguistic analysis are employed to the ends: (1) discerning how fundamental unit-ideas grow and develop logically and historically; and (2) discerning the scope of influence such ideas, once developed, may have in relation to other ideas and to action.

INTERDISCIPLINARY LANGUAGE-LITERATURE

Interdisciplinary Language-Literature offers courses of an interdisciplinary nature not housed in a specific department or program within the college. The primary objective of the courses is to aid the student in expanding his understanding of the interrelations among the various disciplines.

PROGRAMS AND CURRICULA

AMERICAN STUDIES (AMS)

Requirements for the B.A. Degree:

Required Core Courses (32 cr. hrs.)

AMS 301 (5) AMS 491 (4)
AMS 311 (5) AMS 492 (4)
AMS 312 (5) AMS 493 (4)
AMS 313 (5)

Required Supporting Courses (12 cr. hrs.)

(no more than one course from each department)

AFA 335 or 336 (4) HTY 311 or 312 (4)
AMS 321 or 331 (4) HTY 400-005 (4)
COM 301 (4) PHI 413 (4)
ENG 308 (5) POL 463 (4)
ENG 330 or 331 or 332 (5)

Related Electives (21 cr. hrs.)

(no more than 9 hours from one department)

Appropriate courses to be selected from the following departments in consultation with an American Studies adviser: Afro-American Studies, Anthropology, Dance, Economics, English, Geology, Geography, History, Philosophy, Political Science, Religious Studies, Sociology, Speech Communication, and Interdisciplinary Social Sciences.

Students desiring to major in American Studies are reminded that an interview with a department adviser is mandatory.

ENGLISH (ENG)

Freshman English Requirement in Freshman Year

All first-time-in-college students are required to take Freshman English in accordance with the following conditions:

1. First-time enrolled students (a) who do not intend to take the CLEP Freshman English Test or (b) who have been notified of failing CLEP prior to registration and who do not intend to attempt the examination a second time, must take ENG 101 the first quarter, ENG 102 the second quarter and ENG 103 the third quarter of their freshman year. If one of the courses is failed, that course must be repeated the very next quarter and the remaining courses attempted in immediately subsequent quarters.

2. First-time enrolled students (a) who have not taken CLEP prior to their arrival on campus or (b) who have failed but wish to repeat the test, must attempt CLEP during their first quarter on campus. During this quarter they should not enroll in ENG 101. If the examination is failed or not attempted during the student's first quarter, he must take ENG 101 during his second quarter and ENG 102 and 103 in the immediately subsequent quarters until the total requirement is fulfilled. In this case, he will complete the sequence by the first quarter of his sophomore year.

These policies do not apply to first-time enrolled students who can meet the Freshman English requirement with credit transferred from another institution.

Requirements for the B.A. Degree:

The program in English provides a flexible curriculum that recognizes the individual interests of students and offers a wide variety of professional choices. Designed to provide a logical, balanced, and complete sequence of courses in English studies, the curriculum gives the student a choice of seven options (exclusive of English-Education sequences, described under the section for the College of Education), as follows:

I. English and American Literature, Early to Modern

This option is designed to prepare undergraduates for advanced study in the profession. It focuses on the literature of England from the earliest period through the 19th century and on the "classical" period of American literature. Required courses include ENG 311 (5), ENG 312 (5), ENG 313 (5), ENG 314 (5), ENG 315 (5), ENG 330 (5), and ENG 331 (5). Beyond the core requirement of 35 hours, to complete the major the student is free to select a minimum of 15 hours and a maximum of 25 hours of additional courses.

II. English and American Literature, Enlightenment to the Present

Like option I, this option is designed to prepare undergraduates for advanced study in the profession. The principal difference is that this option emphasizes more recent literature, beginning at the 18th century and coming up to the present. Its core requirement of 40 hours consists of ENG 300 (5), ENG 314 (5), ENG 315 (5), ENG 316 (5), ENG 317 (5), ENG 330 (5), ENG 331 (5), and ENG 332 (5). Beyond these 40 hours, to complete the major the student is free to select a minimum of 10 hours and a maximum of 20 hours.

Note: Options I and II may be combined for thorough coverage of the entire Anglo-American literary tradition. In that case, the requirement of ENG 300 specified in Option II would be waived.
III. World Literature. This option is designed to meet the interest of those students who are interested in a scope of literary study that includes not only Anglo-American literature but the literature (in translation) of other nations of the Western world. Its core requirement of 35 hours consists of ENG 300 (5), ENG 301 (5), ENG 302 (5), ENG 340 (5), ENG 341 (5), ENG 342 (5), and ENG 343 (5). To complete the major the student is free to select a minimum of 15 hours and a maximum of 25 hours. Students in this option who are interested in doing graduate work in comparative literature should develop a high degree of competency in at least one language.

IV. General Literature. This option, somewhat innovative, reflects the current interest in the relationships between literature and other aspects of contemporary culture and is designed to meet the desire of some students for a more generalized, culturally oriented approach to literature than traditional literary studies customarily provide. The wide-ranging eclectic survey consists of a core requirement of 30 hours, as follows: ENG 300 (5), ENG 301 (5), ENG 302 (5), ENG 310 (5), ENG 450 (5), and one course from ENG 340 (5), ENG 341 (5), and ENG 342 (5). The student has available a minimum of 20 hours and a maximum of 30 elective hours.

V. American Literature. This option focuses upon our national literature and reflects our own society, past and present. This emphasis is justified by the fact that much of the major literature written in English during the 20th century has been produced by Americans. Also pertinent is the current interest in the literature of Black Americans and American Indians. Core requirements of 35 hours for this option include ENG 300 (5), ENG 301 (5), ENG 330 (5), ENG 331 (5), ENG 332 (5), ENG 430 (5), and ENG 432 (5). In addition, the Option V major has the minimum of 15 and maximum of 25 elective hours available.

VI. Advisory Option. This option is designed for those students who have the maturity, independence, intellectual curiosity, and eclectic interests to want to design their own programs. Core requirements are ENG 300 (5), ENG 301 (5), and ENG 302 (5), with electives totaling between 35 and 45 credit hours. Students in this option must have prior consent of an English adviser at each stage of planning their programs.

VII. There is, in addition, a seventh option, a new major emphasizing writing Creative Writing. This represents a new option for students, and is designed for aspiring writers of fiction or poetry. The core requirement for the fiction option consists of 30 hours, and includes ENG 351 (5), ENG 353 (5), ENG 450 (5), ENG 451 (5), ENG 437 (5) or ENG 438 (5), and ENG 435 (5) or ENG 436 (5). To complete the fiction option, the student is free to select a minimum of 20 hours and a maximum of 30 hours from among departmental courses. The core requirement for the poetry option consists of 25 hours, and includes ENG 216 (5), ENG 352 (5), ENG 452 (5), ENG 441 (5), and ENG 451 (5). To complete the poetry option the student is free to select a minimum of 25 hours and a maximum of 35 hours from among departmental courses. Among the elective hours, the major in poetry or fiction may choose writing workshops (ENG 451 and ENG 452) as needed.

Requirements for the M.A. Degree:

The M.A. in English is designed primarily to train college teachers. The program includes study of college teaching, as well as the study of literature.

Requirements for Admission. An average of B in the last two years of undergraduate work (a GRE total score of 1000 may be substituted for this requirement). It may be necessary to require students who have not been English undergraduate majors to take extra undergraduate courses before graduate admission to English. Other exceptions may be made by the Graduate Committee of the Department of English.

Course Requirements.

1. ENG 693 (this must be the first course taken)
2. Forty-five credit hours, which must include
   a. ENG 685 (this must be taken in the student's first or second term in the program)
   b. One of the following courses as required by the adviser: ENG 601, ENG 602, or ENG 453
   c. One of these: ENG 610, ENG 616, ENG 620, or ENG 625
   d. One of these: ENG 630, ENG 640, or ENG 645
   e. One of these: ENG 650 or ENG 660
   f. ENG 683

Options:

It is possible, at student option, to take ENG 699 (thesis) in place of one of the elective courses. A student may transfer from another university up to 9 hours of graduate credit. He may take up to 10 hours of credit in another department (the courses to be approved in advance by the Department of English Graduate Committee).

Comprehensive Examination. This examination will be based on a list of literary works given to each student as he commences his graduate studies. The student will be asked to write for one hour on four of the following five areas:
1. British literature before Shakespeare
2. British literature Shakespeare through Sterne
3. British literature Johnson through Wilde
4. American literature before 1900
5. Twentieth Century American and British literature

Students will be graded 1 (Excellent), 2 (Good), 3 (Satisfactory), or 4 (Unsatisfactory). The Department will recommend students with a grade of 1 or 2 for admission to the Ph.D. program. A grade of 3 will satisfy the examination requirement for the M.A. degree; a grade of 4 will not.

Public Presentation. Each student will be required to present, before graduate students and faculty, a discussion of a major work or idea from the area he has not written upon for the comprehensive examination outlined above. The performance will be evaluated by the student's examining committee.

Thesis. Thesis optional (See Options, above).

Requirements for the M.A. Degree In Junior College Teaching:

This program is intended for those who plan to teach in junior and community colleges. It emphasizes lower-level college teaching.

Requirements for admission. See M.A. program above.

Course work.
1. EDR 409
2. EDH 651
3. EDH 653
4. EDC 691 (Internship if required—waivers must be endorsed by the College of Education)
5. The following English courses:
   a. ENG 601; or ENG 602 (if the student is an experienced teacher)
   b. ENG 686 (offering in advanced composition for teachers only)
   c. One of these: ENG 610, ENG 616, ENG 620, or ENG 625
   d. One of these: ENG 630, ENG 640, or ENG 645
   e. One of these: ENG 650 or ENG 660
   f. Five hours of English electives

Comprehensive Examination. This examination will be based on a list of literary works given each student as he commences his graduate studies. The student will be asked to write for one hour on four of the following five areas:
1. British literature before Shakespeare
2. British literature Shakespeare through Sterne
3. British literature Johnson through Wilde
4. American literature before 1900
5. Twentieth Century American and British literature

Students will be graded 1 (Excellent), 2 (Good), 3 (Satisfactory), or 4 (Unsatisfactory). The Department will recommend students with grades of 1 or 2 for admission to the Ph.D. program. A grade of 3 will satisfy the examination requirement for the M.A.; a grade of 4 will not.

Public Presentation. Each student will be required to present, before graduate students and faculty, a discussion of a major work or idea from the area he has not written upon for the comprehensive examination outlined above. The performance will be evaluated by the student's examining committee.

Requirements for the Ph.D. Degree:

Aim of the Program. The aim of this doctoral program is to produce teacher-scholars who have a good general knowledge of English and a special knowledge in their field of concentration. Each student in the program must take courses in teaching college English, and these courses include actual teaching experience.

The Ph.D. in English involves 50 hours of course work beyond the M.A. degree, exclusive of credits devoted to the doctoral dissertation. In addition, each student must achieve a grade of B or A in a foreign language course number 202 (i.e., FRE 202, GER 202, LAT 202, RUS 202, SPA 202). A dissertation is required.

Requirements for Admission. M.A. degree and a grade of 1 or 2 on the University of South Florida English M.A. final examination. Transfer students who have the M.A. in English must present a graduate average of at least B+. Students who do not have a M.A. in English will be required to take supplementary graduate work before being officially admitted to the program.

Course work. The following courses are required: ENG 693 or its equivalent, ENG 702 or 703, ENG 791, ENG 799, and seven other courses in English at the 600 or 700 level. A student may transfer from another university up to 9 hours of graduate credit. He may take up to 10 hours of credit in another department (the course to be approved in advance by the Department of English Graduate Committee).

Examinations. After five courses beyond the M.A., the student must take the written doctoral Qualifying Examination in all periods of American and British literature (1. British literature to 1500; 2. British literature 1500-1660; 3. British literature 1660-1780; 4. British literature 1780-1890; 5. American literature to 1920; 6. American literature after 1920 and British literature after 1890)—writing for two hours on each period. The total exam will require twelve hours of writing. Students may take this examination only twice; a second failure disqualifies them from the Ph.D. program. Students passing this comprehensive examination and the foreign language course are admitted to doctoral candidacy. After completion of an approved dissertation the student will defend his dissertation in a two-hour oral examination and will be examined as well on his major field. Thereafter, he is awarded his doctoral degree.

FOREIGN LANGUAGES
(ITALIAN/FRENCH/GERMAN/RUMANIAN/SPANISH)

Requirements for the B.A. Degree:

Foreign Language major programs are designed to meet the needs of students who desire competency in a language and an expanded understanding of its culture and literature. They are of particular interest to students who wish to teach languages, those who plan to further their studies in graduate school; and those who seek careers in various types of foreign or foreign-related employment.

Major programs leading to the Bachelor of Arts degrees are offered in French, German, Italian, Classics (Latin, Latin-Greek), Russian and Spanish.

Combined majors are offered in any two languages. For the combined major, a student must take the courses required for the complete major in one language and the required courses in the second language.

In the list of course numbers included in the foreign language major programs, foreign language offerings are included for the benefit and for the information of the student applicant. The student must consult with the appropriate foreign language advisor before enrolling in the foreign language course.

CLASSICS (CLS)
Latin and Latin-Greek Option

For requirements for this area, see department adviser.

FRENCH (FRE)

Required Courses (16 cr. hrs.)
FRE 301 (4) FRE 405 (4)
FRE 303 (4) FRE 406 (4)

Required Supporting Courses:
32 hours in upper-level courses planned with the adviser.

GERMAN (GER)

Required Courses (16 cr. hrs.)
GER 301 (4) GER 405 (4)
GER 303 (4) GER 406 (4)

Required Supporting Courses:
32 hours in upper-level courses planned with the adviser.

ITALIAN (ITA)

Required Courses (16 cr. hrs.)
ITA 301 (4) ITA 405 (4)
ITA 303 (4) ITA 406 (4)

Required Supporting Courses:
32 hours in upper-level courses planned with the adviser.

RUSSIAN (RUS)

Required Courses (16 cr. hrs.)
RUS 301 (4) RUS 405 (4)
RUS 303 (4) RUS 406 (4)

Required Supporting Courses:
32 hours in upper-level courses planned with the adviser.

SPANISH (SPA)

Required Courses (20 cr. hrs.)
SPA 301 (4) SPA 406 (4)
SPA 303 (4) SPA 407 (4)
SPA 405 (4)

Required Supporting Courses:
28 hours in upper-level courses planned with the adviser.

Requirements for the M.A. Degree:

Requirements for Admission. General requirements for graduate work are given on page 62.

Students who do not have an undergraduate major in French or Spanish may be required to take additional undergraduate courses before being admitted to the M.A. program. The student must have a grade point ratio over the last two years of undergraduate work attempted, or a total score of 1000 on the Graduate Record Examination. All applications must be approved by the Department of Foreign Languages.

Program Requirements. For a master's degree in French or Spanish, the following are required:
1. Reading proficiency in a second foreign language.
2. Satisfactory completion of a written comprehensive examination, based upon a reading list provided by the department, on French language and literature or Spanish and Spanish-American language and literature. Portions of the comprehensive examination must be written in the foreign language.
3. A thesis written under the direction of an adviser and two additional professors, or an additional four (4) hours of course work.
4. Course work following one of the plans listed below:

Plan I
45 hours.

Plan II
31-35 hours, with 10-14 hours in a second language.
HUMANITIES (HUM)

The Humanities Program: An interdisciplinary program that deals with the visual arts, music and literature together and how they reflect the culture from which they emerge. Secondary sources are used sparingly; students are encouraged to make a vigorous, personal response to specific works of art, literature, and music.

Requirements for the B.A. Degree:

The curriculum for the Humanities major comprises interdisciplinary courses in the verbal, visual, and musical arts of specified periods and cultures. Specific requirements are as follows:

1. Forty-two to fifty-seven credits in upper level Humanities courses, 400 and 500 level.
2. HUM 491, a senior essay, three credits.
3. Nine credits in the creative or performing arts.

Requirements for the B.A. Degree in Humanities Education:

A program designed to prepare secondary school Humanities teachers is available through the College of Education. For requirements, see the College of Education, page 23.

Requirements for the M.A. Degree in Humanities Education:

A graduate program leading to a M.A. degree in Humanities Education (HUE) is available. For requirements, see the College of Education, page 26.

Interdisciplinary Language-Literature

Interdisciplinary Language-Literature (ILL) is the prefix under which courses of an interdisciplinary nature not housed in a specific department or program within the College are offered. The primary objective of the courses has been to aid the student in expanding his understanding of the interrelations among the various disciplines.

LIBERAL STUDIES (ALA)

Requirements for the B.A. Degree:

The College offers a Liberal Studies major for students who require a broad academic approach for realization of their conceived academic goals (or pre-professional purposes), goals which could not be ideally achieved through pre-defined curricula.

Several basic requirements have been established for the Liberal Studies major.

1. A minimum GPR of 3.0 at the time of admission, including acceptable transfer credits.
2. Upon admission to the program no fewer than 30 or more than 120 quarter hours.

For application to the program, a written, persuasive proposal must be submitted which substantiates the student's special academic circumstances and goals meriting this major, outlining the areas of desired study, and indicating the intended utilization of the education. If the proposal is accepted, the student will then formulate, in collaboration with the program director, a program of studies to be pursued toward his particular academic goals. Foreign language is required; the Liberal Studies major must complete at least one quarter work in this area.

LINGUISTICS (ANL/ENL/FLL/LIN)

Linguistics is primarily an upper-level and graduate discipline with strong interdisciplinary concerns. Undergraduates interested in Linguistics must elect one of the three combined majors described below. Graduate students may effect complete specialization in the program leading to the Master of Arts degree in Linguistics.

Students interested in Linguistics are urged to acquire a broad language background in their undergraduate programs, especially if they intend graduate study. A classical language (Latin, Greek, Hebrew) or a non-Western language is strongly recommended in addition to any modern European language(s) the student may have studied. Also, prospective graduate students are advised that good foundations in Mathematics (MTH 309, and PHI 509 are especially recommended), computer programming, statistics, and experimental design and methodology may prove valuable. All programs for any of the three majors leading to the baccalaureate degree described below must be approved by an adviser from both of the disciplines concerned.

Requirements for B.A. Degrees:

1. Anthropology-Linguistics Major (ANL). This sequence is designed for students who are particularly interested in the role of language in human behavior and cultural development.

   Required Core Courses (43 cr. hrs. minimum)
   Required Supporting Courses
   ANT 201 (4)    ANT 491 (4)
   ANT 311 (4)    ANT 431 (4)
   ANT 321 (4) or ANT 441 (3-6)
   ANT 331 (4)    LIN 301* (4)
   ANT 401 (3-6)  LIN 401 (4)
   ANT 461 (4)

   (12 cr. hrs. minimum from the following group)
   LIN 321 (4)    HII 401 (4)
   ANC 373 (2)    HII 402 (4)

   *One section of LIN 301 is for Anthropology majors and requires ANT 201 as a prerequisite.

2. English-Linguistics Major (ENL). This sequence is designed for students who are especially interested in the role of linguistic studies in problems of English grammar, composition, and literary structure and style.

   Required Core Courses (43 cr. hrs.)
   ENG 300 (5)    ENG 402 (5)
   ENG 301 (5)    ENG 475 (5)
   ENG 302 (5)    ENG 476 (5)
   ENG 310 (5)    ENG 477 (5)
   ENG 350 (5)

   Required Supporting Courses
   (12 cr. hrs. minimum from the following group)
   ANC 373 (2)    LIN 321 (4)
   HII 401 (4)    LIN 401 (4)

3. Foreign Language-Linguistics Major (FLL). This sequence is designed for students who are especially interested in the role of linguistic studies in problems of grammar, composition, and literary structure and style.

   Required Core Courses
   (19 cr. hrs. minimum from the following group)
   ANC 373 (2)    LIN 321 (4)
   ENG 477 (5)    LIN 401 (4)
   LIN 301 (4)

   Plus one of the following five sequences:
   I. French (30 cr. hrs.)
   FRE 301 (4)    FRE 405 (4)
   FRE 303 (4)    FRE 406 (4)
   FRE 401 (4)    FRE 416 (4)
   FRE 403 (4)    ANC 373 (2)

   II. German (20 cr. hrs.)
   GER 301 (4)    GER 405 (4)
   GER 303 (4)    GER 406 (4)
   GER 401 (4)

   III. Italian (26 cr. hrs.)
   ITA 301 (4)    ITA 405 (4)
   ITA 303 (4)    ITA 406 (4)
   ITA 401 (4)    ANC 373 (2)
Students wishing to combine two foreign languages and linguistics must take one of the above sequences as the first language and the second sequence (ANT, 301, 303, 401, 403 (prefix determined by language selected), plus any phonetics, stylistics, or history of the language courses offered for that language. Students who intend to do graduate work are strongly urged to consider Latin or Classical Greek as a second language. Students may also elect a non-Western language as a second language; six quarters satisfies the requirements for one of these. The Linguistics course requirements remain the same as for a single foreign language.

Requirements for the M.A. Degree:

Requirements for Admission. Undergraduate majors generally regard as appropriate foundations for graduate study in linguistics (LIN) are: anthropology, English, a foreign language, linguistics, and speech communication; however, a student with a baccalaureate degree in any discipline is eligible. In addition to the general requirements of the University, an applicant must have an academic average of B in all of his major courses and a combined score of 1000 on the aptitude section of the Graduate Record Examination (a minimum of 500 of the total must be earned on the verbal portion). If a student's undergraduate preparation has not included suitable introductory courses in general or descriptive linguistics and phonetics, he will be required to remedy the deficiencies by taking LIN 301, LIN 401, and SPE 503. (Credit for LIN 301, and LIN 401 may not be counted toward the degree requirements.) The undergraduate study of one or more foreign languages, especially a non-Western language, is strongly encouraged.

Course Work. An M.A. degree in linguistics requires a minimum of 48 hours of course work. All students must satisfy the core requirements which constitute a minimum of 29 hours. The remainder of the course work may be taken in linguistics courses, or closely related courses in other departments, notably Anthropology, Ancient Studies, Education, English, Foreign Languages, Philosophy, Psychology, Sociology, and Speech Communication. The student may elect to take all of these remaining courses in one such department, or he may take them in several departments, but each program must be planned with and approved by the Linguistics adviser, who may make appropriate substitutions when he deems these educationally advisable.

Core Requirements (29 cr. hrs. minimum)

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<th>LIN 551 (5)</th>
<th>LIN 621 (4)</th>
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<td>LIN 600 (2)</td>
<td>LIN 699 (1-8; must be earned)</td>
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<td>LIN 601 (4)</td>
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<td>LIN 602 (4)</td>
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<td>LIN 611 (4)</td>
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Plus one of the following:

| ENG 687 (5) | LIN 612 (4) |

Foreign Language Requirement. The foreign language requirement is regarded as an integral part of the M.A. program in Linguistics, and students must demonstrate a proficiency in one foreign language for the degree. However, students who intend to concentrate in historical-comparative linguistics will be expected to bring to the program an extensive undergraduate background in foreign languages, or else to remedy the deficiency after admission. Students who elect to concentrate their work in general-descriptive linguistics or other subspecialties will have wide latitude in their choice of a foreign language to satisfy the requirement, and the study of a non-Western language is strongly encouraged. The choice of a language and the method for satis-fying the proficiency requirement (e.g., course work, examination, etc.) will be determined on an individual basis by the student and his thesis committee.

Other Requirements. The student will present an acceptable thesis in the field of linguistic studies (from 2 to 8 hours credit are granted for this project through registration for LIN 699; see above under course work requirements). In addition, the student must pass a comprehensive examination in linguistics, both oral and written. If a student has elected to take as many as eight hours of course work in a department other than Linguistics in his program, then his examination will cover material from those courses also.

The following courses taught in other departments are also linguistics courses, or are closely related to linguistics: ANC 373, ANT 401, EDT 431, EDT 631, EDX 649, ENG 476, ENG 477, ENG 616, ENG 686, ENG 687, FRE 403, FRE 601, GER 513, GER 601, PHI 531, PSY 441, SPA 403, SPA 501, SPA 601, SPE 503, SPE 601. SPE 611, SPE 612, CLY 580, CLY 623. Descriptions of these courses may be found under the appropriate departmental heading.

**MASS COMMUNICATIONS (COM)**

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

To be admitted to the core curriculum in Mass Communications, students must have completed 75 hours with a 2.5 minimum GPA, and English 101, 102, and 103 with a minimum grade of "C" in each. Both courses in the Mass Communications core curriculum (COM 302 and COM 303) must be completed with a minimum grade of "C" before any other COM-prefix course may be taken. A 2.5 GPA is required for graduation, and no grade lower than "C" in Mass COM-prefix courses may be used toward graduation.

A required core curriculum, "Writing for the Mass Media" (COM 302) and "Mass Communications and Society" (COM 303), and a balance between required and recommended courses in the major sequence offer students a guided set of essential courses plus a number of options of their own choosing. Majors will take approximately 72 hours of electives outside the department in addition to the 60-hour University distribution requirement. Students will be encouraged to use a substantial number of their electives in courses which support their major.

Required are 8 hours in the Mass Communications core curriculum (COM 302 and COM 303) and 40 hours in a major sequence—20 hours specified and 20 hours to be selected from a restricted list of options—for a minimum and maximum of 48 hours in COM-prefix courses within the 180-hour degree requirement.

Typing proficiency is a prerequisite for admission to the department.

The departmental sequence requirements are:

**Departmental Core Curriculum**

| COM 302 (4) | COM 303 (4) |

**Sequence Requirements**

| COM 500 (4) | COM 508 (4) | COM 541 (4) | COM 543 (4) |

**Sequence Selections**

| COM 341 (4) | COM 414 (4) |

**I. Advertising Requirements**

| COM 311 (4) | COM 312 (4) | COM 313 (4) |

**Selective Requirements**

| COM 314 (4) | COM 330 (4) | COM 361 (4) | COM 371 (4) | COM 375 (4) |

**II. Broadcasting Requirements**

| COM 330 (4) | COM 361 (4) | COM 362 (4) | COM 403 (4) | COM 465 (4) | COM 468 (4) |

**Programming and Production Track**

| COM 311 (4) | COM 361 (4) | COM 368 (4) | COM 465 (4) | COM 468 (4) |
The philosophy program includes five major areas of study:

1. Logic and scientific method
2. History of philosophy
3. Theory of knowledge
4. Theory of reality
5. Theory of value

In addition, all majors who are going to graduate school in philosophy are urged to take at least one course in the three remaining major areas of study. All majors must take at least nine credits above the 413 level, including two seminars. No more than two of PHI 301, 311, 317 will be counted toward the major. Credit for a major in philosophy will be extended for HII 315.

Honors Program
The Department of Philosophy offers the philosophy major the opportunity of participating in the Philosophy Department Honors Program. A student may graduate with departmental honors if he: (1) is accepted by the department as an honors candidate, (2) completes four honors courses with a grade point average of 3.5 or better, and (3) completes the courses necessary for a philosophy major with a grade point average of 3.2 or better. The four honors courses will consist of three upper-level courses in which the student attends regular class sessions but makes arrangements with the instructor for additional work. The student will receive additional credit for honors work by enrolling for one hour of directed study for each course taken as an honors course. The fourth honors course will be a research project, and the student will enroll for the project under PHI 483.

Requirements for the M.A. Degree:

Requirements for Admission. For admission the student must have a B average in Philosophy at the undergraduate level, have a score of at least 1000 on the GRE, and have completed the equivalent of PHI 303, 333, 334, and 335. No credit towards the M.A. degree will be granted for courses outside the Department of Philosophy without the approval of the Graduate Program Director and the Department Chairman. Program Requirements. The following comprise the degree requirements in Philosophy, in addition to the general requirements for graduate work as specified on pages 61-62.

1. Reading knowledge of a foreign language approved by the student's advisor.
2. A written comprehensive examination.
3. A thesis or thesis-type paper, written under the direction of an advisor assigned by the Department Chairman, and approved by the student's supervisory committee.

RELIGIOUS STUDIES (ANC/REL)

RELIGIOUS STUDIES (REL)
Requirements for the B.A. Degree:
A total of 49 credit hours are required for a major chosen from the following courses:

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<td>REL 351</td>
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<td>REL 360</td>
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Of the 49 hours required for a major in Religious Studies, twelve hours may be selected from the following extra-departmental courses:

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ANC 341 (3) HTY 361 (4)
ANC 342 (3) PHI 301 (4)
ANC 343 (3) PHI 333 (4)
ANC 441 (3) PHI 341 (4)
ANC 442 (3) PHI 409 (4)
ANC 443 (3) PHI 521 (4)
AST 371 (5) SOC 373 (4)
BIO 256 (4)

With departmental approval, students may make other course substitutions for the extra-departmental courses listed above.

Each student's program must be planned with a faculty adviser in Religious Studies, who may make appropriate course substitutions when such changes are academically advisable.

ANCIENT STUDIES (ANC)

Requirements for the major in Ancient Studies:
The sequence in Ancient Studies requires 52-54 credits. The prerequisite is normally two years of high school Latin or one year of college Latin (the latter can be taken in college concurrently with other required courses but without credit toward it; it can be waived in special cases with the consent of the coordinator).

Required courses:
- Two ancient languages (17-19)
  - ANC 321 (5)
  - ANC 352 (3)
  - Plus two of the following:
    - ANC 421 (4)
    - ANC 423 (4)
  - Plus 11-13 credits in electives: ancient literatures or other aspects of the ancient world, to be selected individually in consultation with the coordinator. Variations in the required courses, to meet special needs or interests, can also be made with the consent of the coordinator.

SPEECH COMMUNICATION
(ENS/SPE/STA)

Requirements for the B.A. Degree:
A major in Speech Communication requires a minimum of 45 credits in SPE courses. A combined Speech Communication-English major, intended primarily for those preparing to teach in secondary schools, requires 67 credits in the combined areas and 5 credits in Theatre Arts. A combined Speech Communication-Theatre Arts major requires 61 credits in the combined areas.

I. Speech Communication Sequence (SPE)
(45 cr. hrs.)
- SPE 201 (5)
- SPE 203 (5)
- SPE 321 (5)

20 credits of Speech Communication electives in 300-level courses or above. (A maximum of ten elective credits may be taken in any given Speech Communication area. These areas include: rhetoric and public address, oral interpretation, and speech science. The remaining credits must be taken in one or more of the other Speech Communication areas.)

II. Speech Communication-English Sequence (ENS)
(67 cr. hrs. in combined areas; 5 cr. hrs. in Theatre Arts)
- SPE 201 (5)
- SPE 203 (5)
- SPE 321 (5)

10 credits of Speech Communication electives in 300-level courses or above.

Two courses from the following:

ENG 300 (5) ENG 313 (5)
ENG 301 (5) ENG 314 (5)
ENG 310 (5) ENG 315 (5)
ENG 311 (5) ENG 316 (5)
ENG 312 (5) ENG 317 (5)

One course from American Literature as follows:
ENG 302 (5) ENG 331 (5)
ENG 330 (5) ENG 332 (5)

One course from Contemporary Literature as follows:
ENG 307 (5) ENG 438 (5)
ENG 308 (5) ENG 442 (5)
ENG 317 (5) ENG 446 (5)
ENG 437 (5)

In addition, ENG 350 (5), or 351 (5), ENG 475, and TAR 303.

III. Speech Communication-Theatre Arts Sequence (STA)
(59 cr. hrs. in combined areas)
- SPE 201 (5)
- SPE 203 (5)
- SPE 321 (5)

10 credits of Speech Communication electives in 300-level courses or above.

TAR 201 (2) TAR 211 (4)
TAR 339 (4) TAR 431 (4)

Plus eight (8) hours credit from the following:
TAR 315 (4)
TAR 341 (4)
TAR 365 (4)
TAR 410 (4)
TAR 411 (4)

Plus four (4) hours credit of Theatre Arts Electives.

Requirements for the M.A. Degree:

Requirements for Admission. In addition to the general requirements of the University, an applicant must have: (1) a baccalaureate degree in Speech or related fields from an approved college or university (2) a B average or better in all work attempted during the last two years of undergraduate work or a total quantitative- verbal GRE score of 1000 or higher. All prospective M.A. candidates must take the GRE whether or not they have the minimum of B average, (3) approval by the Department of Speech Communication graduate committee.

Course Work. A Master of Arts degree in Speech Communication requires 45 credit hours of course work distributed in the following manner: 15 hours in Rhetoric and Public Address, 10 hours in Oral Interpretation of Literature, 5 hours of Speech Science, 5 hours of research and bibliography, and 10 hours of electives. (Electives in related areas must be approved by the candidate's major professor and the departmental graduate committee.)

For graduate SPE electives, students may substitute two courses acceptable for graduate credit in related areas, subject to approval by the Department of Speech Communication.

Examinations. Each student is required to pass a written comprehensive examination. An oral examination is also required for students selecting the thesis option.

Other Requirements. Each student will select one of the plans listed below. Successful completion of one of the following plans is in addition to the 45-quarter-hour requirement; competency in the selected plan to be determined by the candidate’s supervisory committee.

Plan A—An extended critical or analytical paper (thesis) in the field of Speech Communication studies.

Plan B—Three courses (or 12 credits) in Speech Communication and/or other academic disciplines if part of an approved planned sequence. If this plan is elected, students are ordinarily expected to follow a sequence of courses that either deepens their competency in a speech communication area or in a related academic discipline or in a research tool area such as computer sciences, foreign languages, linguistics, or statistics.
The College of Business Administration offers courses of study leading to both undergraduate and graduate degrees. These programs are designed to prepare individuals for business and government careers, and graduate education.

The undergraduate curriculum leads to a Bachelor of Arts degree. Programs in Accounting, Economics, Finance, Management, Marketing and General Business Administration (an interdisciplinary business curriculum) are structured to accomplish the following objectives:

1. Give the student a broad foundation in general and liberal education, a thorough grounding in basic business courses, and some specific competence in at least one significant functional area of economics, business, or administration.
2. Strengthen students' powers of creative, independent analysis, and sensitivity to social and ethical values.
3. Instill in students a desire for learning that will continue after they have graduated and taken their place in the community.

A general graduate program in Business Administration, and specialized graduate programs in the fields of Accounting, Economics, and Management seek to:

1. Make high quality professional education available to those qualified individuals who have selected specific career objectives in fields of business, government or education.
2. Support adequately the research activity so vitally necessary to maintain a quality graduate faculty and program.
3. Foster independent, innovative thinking and action as a professional individual.

## Baccalaureate Level Degree Programs

### General Requirements for Degrees

The general requirements for graduation in the College of Business Administration is the satisfactory completion of 180 academic quarter hours, including from 87 hours minimum to 100 hours maximum of business courses, depending upon the major field and electives chosen.

1. **General Distribution Courses:** 60 hours distributed over five areas as required by the University of South Florida. (See page 31, Part I).
2. **General Electives:** 20-27 hours to be chosen from courses not listed in the General Distribution areas.
3. **Business Core:** 53 hours which includes 9 hours of Accounting (ACC 201, 202, 300); 8 hours of Economics (ECN 201, 202); 5 hours of Intermediate Price Theory (ECN 301); 8 hours of Statistics (ECN 231, 331); 5 hours of Finance (FIN 301); 5 hours of Management (MAN 301); 5 hours of Marketing (MKT 301); 5 hours of Law (GBA 361); 3 hours of Computer Application (GBA 333).
4. **Major Area:** 20-27 hours with a 2.0 GPA in these courses.
5. **Business Electives:** 7-20 hours

Note: College Level Examination Program (CLEP) may be substituted for course work in the General Distribution area and some courses in the Business Core. For specific details see page 35, Part I.

### Admission to College Programs

#### Undergraduate Programs

New students and students currently enrolled at the University of South Florida, who are in good academic standing at the University of South Florida, may be admitted to the College of Business Administration by filing an intent to major in an undergraduate business degree program in the Office of Undergraduate Advising and Records.

**Transfers from Junior Colleges:** Junior college students should complete the program of general education as required by the junior college. Certification to this effect will be accepted as fulfilling the general distribution requirements of the University of South Florida.

Students should follow the business parallel program indicated in their junior college catalog to assure graduation from the University of South Florida in minimum time. Should the junior college catalog not specify pre-business courses, we recommend that students take two semesters of mathematics; two semesters of economics; two semesters of accounting, and one semester of statistics while still at the junior college.

Students transferring more than six quarter hours of Elementary Accounting must still complete ACC 300 in the Business Core. The extra hours of Elementary Accounting transferred will apply toward the Business Electives requirements. Students transferring credit in Elementary Statistics will receive credit for ECN 231. Extra hours of Elementary Statistics will apply toward the Business Electives requirements. These students, however, must take ECN 331.

**Transfer Students from Other Colleges and Universities:** Transfer credit will be allowed for general distribution courses similar to those required at the University of South Florida. The prerequisite courses in business subjects, such as accounting principles and principles of economics, may also be given transfer credit. Other credit transfer requests will be considered individually on their merit.

#### Student Advising and Counselling in the College

The College of Business Administration provides advising and counselling through a central Office of Advising and Records and through faculty advisers in individual departments.

**Central Advising and Records:** The Undergraduate Studies Advising and Records Office provides information about
academic program requirements in the College of Business Administration, 2) services provided to students, and 3) student organizations in the College of Business Administration. It advises students on all undergraduate business programs registration procedures and conducts registration for College of Business Administration courses. It evaluates records of students entering the College of Business Administration and maintains these and subsequent records. This office is the primary source of advice on general distribution requirements, business core requirements and, along with the faculty advisers, on general electives.

Departmental Advising and Counseling Services: Each department in the college provides advising and counseling services in the individual majors and the interdisciplinary business curriculum. These faculty advisers may serve as a source of assistance on requirements in the individual majors, and general and business electives. Contact the Office of Advising and Records for further information.

Graduate Programs

Students who need to pursue night-time studies are welcome in the M.B.A. program and in each of the specialized programs in Accounting, Economics, and Management. Evening and day courses are scheduled in such a way as to allow either part time or full time students to complete all program requirements within a reasonable length of time.

Colleges and Schools

Applicants to graduate programs in the College of Business Administration should apply directly to the Division of Graduate Studies, and must meet the University requirements (see pages 61-62). Applicants whose GMAT scores are below 450 or whose grade point averages are below 2.75 for the last half of their undergraduate work may be admitted under certain conditions on a probationary status.

Students are advised and counselled by the director of graduate studies in each graduate program (M.B.A., M.Acc, M.B.A. with emphasis in Finance, M.B.A. with emphasis in Marketing, M.A. in Economics).

The directors of graduate studies in each of the programs are:

1. M.B.A.—College Graduate Office
2. M.S. in Management—Dr. Richard E. Dutton
3. M.Acc.—Dr. Jack L. Smith
4. M.B.A. with specialization in Marketing—Dr. Thomas E. Ness
5. M.B.A. with specialization in Finance—Dr. James R. Longstreet

The appropriate director will determine ways in which entering students can remedy undergraduate background deficiencies. These include additional undergraduate course work, remedial graduate courses, and CLEP tests.

Graduate students must maintain an overall grade point average of 3.0 (B) in all courses. Students must perform satisfactorily in a comprehensive examination at the end of their program.

PROGRAMS AND CURRICULA

BUSINESS ADMINISTRATION (BA/MBA)

GENERAL BUSINESS ADMINISTRATION (GBA)

Flexible Program

Students with special objectives and career interests have the opportunity to develop an undergraduate program to meet these needs. Working closely with a faculty adviser, students may design an approved plan of study over and above the undergraduate business core. Essentially, business and non-business electives are blended to best meet special needs. This program will contain 34 to 47 hours beyond the business core, and no more than 16 hours will be in any single business discipline. The program shall also contain such non-business electives as will contribute to the academic objectives of the student.

BUSINESS ADMINISTRATION (MBA)

The Master of Business Administration program is designed to enable persons with diverse backgrounds to develop the skills and insights essential for management personnel in business and not-for-profit organizations. Built into the program is the flexibility to meet the needs of students with backgrounds in engineering, the sciences, and the humanities, as well as those with undergraduate training in administration.

The learning environment blends work in structured situations where students gain command of analytical techniques together with work in comprehensive unstructured applications which sharpen student's resourcefulness in sorting out complex problems and selecting optimal courses of action. Emphasis throughout the program is on problem-solving skills.

Courses are scheduled to accommodate students already employed who are seeking an opportunity to upgrade and broaden their professional interests as well as students wishing to pursue full-time studies. The program is designed so that part-time students who can attend classes only in the evening can complete the program in a reasonable period. Full-time students may complete the program in a year.

Students with a background in business administration complete a total of 48 credit hours of 500 and 600 level courses designated by the M.B.A. adviser. Typically, these 48 hours are drawn from the following subject areas:

- Accounting Theory and Practice
- Statistical Theory and Methods
- Decision Theory
- Production and Control
- Financial Management
- Managerial Economics
- Capital Markets
- Economic Conditions Analysis and Forecasting
- Capital Budgeting
- Marketing Management
- Personnel, Industrial, Labor, and Human Relations
- Integrative Seminars and Laboratories
- Individual or Group Projects in the Private or Public Sector
- Other Topics Consistent with Students' Programs

Specifically, the program of M.B.A. students will include the following core courses. In some instances, other courses may be substituted for one or more of these requirements:

- ACC 601, 602
- ECO 605, 607
- FIN 601, 602
- plus three electives
- GBA 603, 605, 615
- MAN 601, 602
- MKT 601, 602

For students without a background in business administration, certain additional courses will be needed to remedy deficiencies. These consist of basic courses in each of the areas of business, economics, and statistics. The specific program for each student is individually planned in consultation with the M.B.A. adviser. In developing these plans, appropriate consideration is given to scores on proficiency examinations and studies at other institutions.

Undergraduates majoring in other areas such as mass communications, theater arts, psychology, physical sciences, and so on, may devote some of their elective studies to M.B.A. preparation. This will permit them to shorten the total length of time required for earning both a bachelor's degree in their technical
specialization and also a Master of Business Administration degree. For such purposes, the following preparation should be included among the undergraduate electives:

ACC 201, 202, FIN 301 (5)
300 (9)
MAN 301 (5)
ECN 201, 202, 231, MKT 301 (5)
331 (16)
Total (40)

The M.B.A program permits a student to become a generalist, but those who wish to do so may specialize to a limited extent by electing an emphasis in Finance or in Marketing. These program variations allow the student to concentrate on more specific objectives while still acquiring the broad gauge training the M.B.A program is designed to provide.

M.B.A. with Emphasis in Finance

Students seeking a graduate education with a concentration in the field of Finance should enroll in the Master of Business Administration program. All students will complete the core courses in the M.B.A. program and 9 elective hours of courses in finance or in finance combined with other pertinent courses approved by the adviser. Including the six hours of Finance in the core, a student may have a maximum of 15 hours in Finance. Elective courses in Finance cover a wide range of subject matter including investments, financial intermediaries, financial policy and strategy for existing firms, and advanced theories of finance. Topics of mutual interest to the student and the faculty may also be covered for variable course credit. As far as possible candidates for an M.B.A. with an emphasis in Finance should take their integrative seminar (GBA 615) in the special section designated for their emphasis.

M.B.A. with Emphasis in Marketing

Students wishing to concentrate their studies in Marketing should enroll in the M.B.A. program, and will fulfill all the stated requirements of the M.B.A. The nine credit hours of electives plus the six credit hours of required Marketing courses will give the students a minimum of 15 hours of Marketing in the M.B.A. program. Elective course work can include studies in consumer behavior, physical distribution systems and channels, promotion and advanced marketing research. Other areas of marketing can be undertaken on an independent study basis. Such independent study projects can serve part of the elective course work. No thesis is required.

ACCOUNTING (ACC/M.Acc)

The Accounting program offers students the opportunity to enter directly into the fields of professional accounting, private accounting, and governmental accounting. The professional accounting option prepares the student for employment by firms of certified public accountants; the private accounting option prepares the student for employment by individual business organizations such as manufacturers and retailers, and the governmental option prepares the student for employment by the various branches of federal, state, and local government. Departmental advisers will assist student in designing programs to meet specific career objectives.

Requirements for the B.A. degree (ACC):

Students in this program must complete 24-36 credits in upper level accounting, 53 credits in the Business Core and 10-23 credits in Business electives. It is strongly recommended that all accounting students take either GBA 371, Business Communications or ENG 350, Advanced Expository Writing.

Accounting courses taken by accounting majors on an S/U basis will not be counted toward the 180 hour graduation requirement.

Required Accounting Courses (24-36 credit hours)

ACC 301, 302, 303 (4, 4, 3)
ACC 421 (4)

Plus 9-21 credits from the following:

ACC 401 (3) ACC 412 (3)
ACC 402 (3) ACC 422 (3)
ACC 405 (4) ACC 423 (4)
ACC 411 (4) ACC 425 (3)

Students wishing to qualify to take the CPA examination in the State of Florida must have earned a minimum of 27 credits in upper-level accounting courses and have credit for:

ACC 301, 302, 303 (4, 4, 3)

Any further questions concerning the CPA examination should be directed to the Chairperson of the Accounting Department.

Requirements for the Master of Accountancy Degree (M.Acc.)

The Master of Accountancy Program is designed to meet the increasing needs of business, government, and public accounting for persons who have professional training in accounting as well as background in such areas as quantitative methodology, economic analysis, and management science.

For the student who has the equivalent of an undergraduate major in accounting, the program consists of approximately 48 quarter hours. A minimum of 18 quarter hours (and not more than fifty percent) of the program is devoted to the study of professional accounting. Another 18 quarter hours of the program consists of study in the related areas of financial management, economics, management science, and quantitative decision models. The remaining 12 quarter hours of the program course work is elected by the student in consultation with his graduate school adviser. Elective courses taken in the area of accounting may not exceed six (6) quarter hours.

Admission is open to any student who has a baccalaureate degree and meets the University graduate requirements. Students who do not have the equivalent of an undergraduate degree in accounting will be required to take additional courses. The number of additional courses deemed necessary will depend on the academic background of the individual student.

Required courses are:

Accting Courses, (18 cr. hrs.)

ACC 605 Development of Accounting Thought (3)
ACC 606 Contemporary Accounting Theory (3)
ACC 607 Systems Theory and Quantitative Applications (3)
ACC 611 Federal Tax Research and Planning (3)
ACC 621 Managerial Cost Analysis and Control (3)
ACC 623 Ethics and Responsibility in Professional Accountancy (3)

Business Courses (18 cr. hrs.)

GBA 603 Quantitative Methods I (3)
GBA 605 Quantitative Methods II (3)
MAN 602 Administrative Decision Procedures (3)
ECN 607 Aggregate Economics (3)
FIN 601 Financial Management (3)
6XX Economics or Finance Elective (3)

Electives

(At least six quarter hours must be in non-accounting courses)

ECONOMICS (ECN)

Economics is one of the vital disciplines investigating the complex problems and relationships in modern society. Indeed, the very breadth of economics has led to major areas within the discipline, including labor economics, international economics, urban and regional economics, monetary economics, public finance, industrial organization, comparative economic systems, and the like. Students are grounded in economic theory and economic statistics to facilitate the investigation of the problems of human behavior, decision-making, and organizational effectiveness in these problem areas. Students majoring in economics
are encouraged to supplement their programs with courses in other business and social science subjects. Management, finance, marketing, accounting, political science, psychology, sociology, and others contribute greatly to an enriched plan of study. A student may plan the best possible program to help him achieve his particular career objectives. Similarly, a variety of courses in economics are designed to permit students majoring in other disciplines to acquire the skills and insights provided in economics.

Requirements for the B.A. Degree:

A student may earn a Bachelor of Arts degree with a major in Economics by completing satisfactorily a minimum of 48 credits in Economics. Normally, these 48 credits include:

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<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ECN 201</td>
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<tr>
<td>ECN 202</td>
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<tr>
<td>ECN 301</td>
<td>(5)</td>
</tr>
<tr>
<td>ECN 323</td>
<td>(5)</td>
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</tbody>
</table>

In addition to this core, a student is encouraged to select 300 level courses in several of the applied areas during their junior year. The remaining economics electives may be selected from those 300 and 400 level courses that provide the type of program that best suit the student's interests and objectives.

A student in the College of Business Administration also must satisfy the other Business Core requirements detailed on page 14.

Students interested in majoring in economics are encouraged to contact the departmental advisers for more information about the program. In addition, the department maintains a file describing the varied career opportunities for economists in business, government and education.

Requirements for the M.A. Degree:

Applicants should submit results of the Graduate Record Examination Aptitude Test and meet other University requirements specified on pages 61-62. The primary requisites for success in graduate study are strong motivation, aptitude, and basic intellectual ability. An undergraduate major in economics is not required but a sound background in economic theory, mathematics, and statistics will permit completion of the master's program in the normal time span of one year.

The Master of Arts degree in Economics permits students to select one of two general approaches. The first emphasizes terminal professional training to prepare the student for decision making and problem solving roles in business, governmental agencies, and other organizations. Within this area the student may select the program emphasis in public sector economics which is designed to provide skills necessary for the performance of analysis and decision making in the public sector—particularly at the state and local level. The fields of economics stressed in this emphasis include public economics, urban economics and industrial organization. The second approach prepares the student for doctoral work in Economics in other recognized institutions and teaching in secondary and junior college educational institutions.

Both programs involve preparation in economic theory and quantitative methods. The student in the professional program then supplements these skills with an emphasis on courses in applied economics and additional quantitative methods selected in accordance with his career objectives. The student who is preparing for doctoral studies normally takes additional courses in economic theory, mathematics and statistics. Research and the writing of a thesis may be incorporated into the program of a student selecting this option. The nature of the thesis subject indicates his area of specialization and interest. The Economics department participates in the Junior College Teaching Program jointly with the College of Education as outlined on page 30.

The student must complete 45 hours of graduate credit selected in consultation with the adviser in the Economics department. At least 35 of these hours must be in Economics.

FINANCE (FIN)

The Finance program provides broad-gauged analytical training for students anticipating a career in the management of both large and small organizations. Students seeking a career with financial institutions in the field of insurance and real estate should find the finance major particularly valuable. In addition, the program is designed to provide the flexibility needed by students who seek professional degrees in areas such as law and public administration.

The Finance program offers applied and theoretical courses directed to the identification and solution of such problems as the acquisition of and allocation of scarce funds as employed by economic units under uncertainty in both the private and public sectors. Finance is an interdisciplinary approach which draws on economic theory, accounting information systems, and the quantitative decision framework of statistics and mathematics.

The required courses for finance majors focus on understanding the analytical tools and institutional environment for decision-makers. It includes capital budgeting, the concepts of asset and liability management, and an examination of the social and regulatory impact upon the decision-making process.

Requirements for the B.A. Degree:

Students in this program must complete 20-27 credits in upper level Finance, 53 hours of Business Core, and 14-27 hours of Business electives.

Required Finance Courses (20-27 cr. hrs.)

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<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>FIN 321</td>
<td>(4)</td>
</tr>
<tr>
<td>FIN 411</td>
<td>(4)</td>
</tr>
<tr>
<td>FIN 421</td>
<td>(4)</td>
</tr>
</tbody>
</table>

Plus 8-15 additional credits of upper level Finance courses.

Finance—Pre-Law:

A minimum of 20 hours of Finance courses as listed above with 14-27 hours of Business electives chosen with consent of adviser to specifically meet the needs of the student.

M.B.A. With Emphasis in Finance

Students seeking a graduate education with a concentration in the field of finance should enroll in the Master of Business Administration program. Students take the 39 credit hours of core courses required by the general M.B.A. program. The 9 elective hours will be taken in the area of finance, or a combination of finance and other approved courses. A maximum of 15 hours of finance is available since students will take FIN 601 and 602 as a part of the graduate core. Although a thesis is not required, graduate research projects are possible under FIN 683. As far as possible candidates for an M.B.A. with an emphasis in finance should take their integrative seminar (GBA 615) in the special section designated for their emphasis.

MANAGEMENT (MAN)

The program provided by the Management faculty integrates knowledge in behavioral and social science, industrial relations, and quantitative and computer technology in developing an understanding of organizational theory and research. The aim is to build competence in the practice of managing groups and organizations.

To accomplish this goal, the department offers (a) a mix of lectures, management laboratories, independent research, and team activities in many courses, (b) a flexible curriculum which permits students to select a program of courses most suitable to their needs, and (c) the option of selecting more advanced courses within each area.

To assist students in making realistic course selections, descriptive material for each course is listed in this bulletin. In addition to the catalog descriptions, more specific information is available in the undergraduate advising office, College of Business Administration. Listed descriptions and individual advising describes the background necessary for each course.
Requirements for the B.A. Degree:

Management students must take 27 credits in upper level Management, 53 credits of Business Core, 7-20 credits of Business electives.

It is strongly recommended that students include courses in Calculus, Speech, Psychology, Sociology, and Political Science in their General electives.

Required Management Courses (27 credit hours) Students are required to take:

(a) at least one course from each of the four course areas listed below:

Area 1—Organizational Behavior: MAN 322, MAN 431, MAN 451, MAN 453.


Area 3—Industrial Relations: MAN 332, MAN 461, MAN 463, MAN 465.

Area 4—Integrative Policy Course: MAN 499

(b) Additional upper level Management courses to meet the requirements for graduation.

Requirements for the Master of Science Degree in Management

Students meeting the general admissions standards of the College of Business Administration including a satisfactory score on the Graduate Management Admission Test may be admitted into the department as candidates for the M.S. degree in Management. The department welcomes men and women qualified by motivation, intellect, personality and experience for future organizational leadership. An undergraduate major in management or in other business disciplines is not required.

Graduate Studies in Management offers concentrations in Behavioral Science and Management Science and includes courses in the following areas:

1. The Management of Organizational Behavior: Managerial Behavior; Organizational Theory; Management of Organizational Change; Organizational Assessment; Planning, Control and Humanism in Management.


4. The Management of Organizational Communications.

Each student must complete a minimum of 48 hours of graduate credit selected in consultation with the departmental Director of Graduate Studies. Students, as a part of the 48-hour program, will take 12 hours of courses selected from other disciplines such as Accounting, Educational Administration, Economics, Finance, Industrial Systems, Marketing, Psychology, Public Administration, and Sociology. At least 6 of these 12 hours shall be from ACC, ECN, FIN or MKT. Entering students should meet with the departmental Director of Graduate Studies to identify and plan remedies for any background deficiencies required for the program of study they propose.

It is recommended that studies in the department be taken in conjunction with work in some managerial situation. Course content may be tailored to the needs of groups of students with similar professional needs, such as Urban, Corporate, Health and Entrepreneurial Management, and Collective Bargaining.

The departmental Director of Graduate Studies can assist students who desire to intern in such areas while fulfilling the requirements for the degree.

MARKETING (MKT)

Marketing is a dynamic field with many dimensions, including product selection and planning, product distribution, pricing and promotion. Marketing poses many challenges and yields generous rewards for those meeting these challenges. Marketing operations are carried out domestically and internationally in virtually all business organizations offering a product or service. Many marketing concepts are applicable to the operations of non-profit organizations such as governmental, educational and health care institutions as well as charitable and political campaigns.

The Marketing program at USF prepares students for initial entry and management positions in many areas of marketing with a curriculum that is concerned with:

1. Understanding consumer behavior and the broader environment within which the firm or institution operates;

2. Collecting, analyzing, and using information about customers, competitors, and the environment for managerial decisions;

3. Distributing products effectively and efficiently from producer to user;

4. Advertising and promoting the offerings of the firm or institution effectively;

5. Creatively and effectively managing a sales force selling industrial or consumer goods and services; and

6. Managing retail operations, including the conceptualization, implementation and evaluation of the buying, merchandising and control functions.

Each student is strongly encouraged to set up his own plan of study with the assistance of a Marketing department faculty advisor. Such counseling can lead to a better definition of career objectives and will result in a plan of study that is consistent with each student's career objectives.

Requirements for the B.A. Degree:

Majors in Marketing are required to take 27 credits in upper level marketing, 53 credits in Business Core, and 7-20 credits in Business electives. Students are encouraged to supplement their business courses by choosing electives in the computer sciences, Mass Communications, Mathematics, Political Science, Psychology, Sociology, or Speech Communication.

Required Marketing Courses (18 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MKT 312</td>
<td>(3)</td>
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<tr>
<td>MKT 315</td>
<td>(4)</td>
</tr>
<tr>
<td>MKT 411</td>
<td>(4)</td>
</tr>
</tbody>
</table>

Plus 9 credits from the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MKT 311</td>
<td>(3)</td>
</tr>
<tr>
<td>MKT 316</td>
<td>(3)</td>
</tr>
<tr>
<td>MKT 401</td>
<td>(3)</td>
</tr>
<tr>
<td>MKT 403</td>
<td>(3)</td>
</tr>
<tr>
<td>MKT 405</td>
<td>(3)</td>
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</tbody>
</table>

Any substitutions for the above courses must be approved in writing by the adviser and the chairman of the Marketing Department.

Undergraduate students not majoring in Marketing are encouraged to take selected offerings from the Marketing curriculum to broaden their backgrounds and to prepare for Marketing-related positions in business or non-profit organizations.

M.B.A. with Emphasis in Marketing

Students in the Master of Business Administration Program may concentrate in the area of Marketing by selecting their nine hours of electives in Marketing. Elective course work can include studies in one or more of the areas outlined above in the description of the Marketing program. An independent research project can serve as part of the elective course work in the Marketing emphasis option; however, no thesis is required. Students electing the MBA with emphasis in Marketing should meet with the chairman of the marketing department at the beginning of their MBA course work.
The College of Education places an emphasis on each student learning what is relevant for the world of today and on his getting deeply involved in his own educational process. Thus, the emphasis is on the student learning to do his own thinking about himself and his universe.

The College of Education is committed to a continuous and systematic examination of the professional program of teacher education. Promising programs are examined experimentally under controlled conditions, which make possible an objective appraisal of effects in terms of learning outcomes.

The University of South Florida follows a University-wide approach to teacher education. Its programs for the preparation of teachers represent cooperative effort in planning and practice by faculties of all academic areas, coordinated through the University Council on Teacher Education. Courses needed by teacher candidates but designed also for other students are offered outside the College of Education. Courses in the University which are primarily designed for teacher candidates are taught by the College of Education.

In the total teacher education program there is a special concern for developing in the student a deep interest in intellectual inquiry and the ability to inspire this interest in others. It is the task of the College of Education to give leadership to the instruction in subject matter and process, which means the total teacher education program.

BACCALAUREATE LEVEL DEGREE PROGRAMS

The undergraduate teacher education program leads to the Bachelor of Arts degree. It is an upper division program.

Teacher Education Programs and Curricula

There are three distinct areas in the teacher education program, and all teacher candidates must meet certain minimum requirements in each. The three areas and their requirements are as follows:

1. General Distribution Requirements (60 cr. hrs.) The five areas of General Distribution and the specific requirements are as follows:

   Area I English Composition: ENG 101-102-103.

   Area II Humanities/Fine Arts: A minimum of eight hours from at least two of the following prefixes: AMS, ART, CLS, DAN, ENG (excluding 100, 101-103), FOL, FRE, GER, GRE, HEB, HTY, HUM, ITA, MUS, PHI (excluding 303), POR, REL, ROM, RUS, SPA, SPE, TAR.

   Area III Mathematics: MTH 331-332-333 for any program requiring EDE 415; a minimum of eight hours from any ECD 231, ESC, MTH, and ECD 331, PHI 303, SSI 301 for all other programs.

   Area IV Natural Sciences: A minimum of eight hours from the following prefixes: AST, BIO, BOT, CHM, GLY, MSC, NAS, PHS, PHY, ZOO.

   Area V Social and Behavioral Sciences: (A minimum of 16 hours is required in Area V as specified below)

      I. Behavioral Science
         a) For all programs
            PSY 201 or SSI 201 and SOC 201 or SSI 202
         b) For all other programs a minimum of

            eight hours from the following prefixes:
            AFA, AGE, ANT, CJP, ECN 100, GPY, HTY, POL, PSY (excluding 201), SOC (excluding 201), SSI (excluding 201, 202, 301), WSP.

      Note: State Board of Education regulation (6A-5.25) revised July 10, 1973, was amended to require that all (elementary and secondary) approved programs of teacher education must include information on teaching reading skills.

      For elementary majors, additional competencies over and above those taught in EDE 409 are required. This applies to all students graduating after August, 1974.

      Please check with your adviser with respect to the ways and means of meeting these competencies.

         Courses required for a student's major program will not be counted in the total 60 hours although areas of the general distribution requirements may be waived where appropriate. A student will be limited to 12 hours in a single department toward distribution requirements in any area. None of the above may be taken S/U.

2. Professional Education Core (36-44 credit hours)

   The required courses in the professional education core are as follows:

   EDC 401 Curriculum & Instruction (5)
   EDF 305 Human Development and Learning (4)
   EDF 307 Social Foundations of Education (4)
   Methods Course(s) (4-12)
   Internship & Seminar (15)
   Reading Requirement (see note below) (4)

3. Teaching Specialization Preparation (41-73 credit hours)

   Course requirements in the area of teaching specialization vary according to subject field of specialization.
ELE MELEMENTARY EDUCATION CERTIFICATION PROGRAMS

Elementary Education majors are prepared to teach in grades one through six. Currently there are two options for completing the elementary coursework and internship requirements.

Students may pursue a program by taking required education courses during their junior and senior year with practical field experiences during their senior year. These experiences include pre-internship as part of EDC 401 and EDE 440 and a full quarter internship assignment in a selected elementary school.

Students may pursue a program of elementary teacher preparation which provides continuous daily laboratory experiences in local schools. Students electing this program must arrange to spend a minimum of two hours daily working in a variety of classroom situations. Pre-internship and internship credit is earned during this field experience which extends over a period of five quarters.

Students entering an elementary education program must be eligible for admission to the College of Education (see admission requirements) and maintain a 2.0 average.

All students accepted in the Elementary Education Program in the College of Education will be required to pass a written proficiency examination at some time prior to enrollment in EDC 499—Supervised Teaching. The examination will consist of the students writing extemporaneously for one hour on one of three topics to be announced at the time of the examination.

ELEMENTARY SPECIALIZATION (EDE)

The major consists of an elementary specialization sequence. The 41 hours of elementary specialization courses include:

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<tbody>
<tr>
<td>EDE 409</td>
<td>5</td>
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<tr>
<td>EDE 411</td>
<td>4</td>
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<tr>
<td>EDE 413</td>
<td>4</td>
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<tr>
<td>EDE 415</td>
<td>5</td>
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<tr>
<td>EDE 417</td>
<td>5</td>
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</table>

Students are encouraged to choose a concentration in a subject taught in the elementary school. With careful planning, a student may receive dual certification in elementary education and a junior high subject area.

ELEMENTARY-EARLY CHILDHOOD (EEC)

Students interested in early childhood teaching, which includes children ages 3-8, should pursue a program leading to certification both in early childhood and elementary education. This program includes 50 hours of course work as follows:

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<th>Course</th>
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<tbody>
<tr>
<td>EDE 409</td>
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<td>EDE 413</td>
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<tr>
<td>EDE 415</td>
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<tr>
<td>EDE 417</td>
<td>5</td>
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<tr>
<td>EDE 419</td>
<td>5</td>
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</table>

ELEMENTARY-MIDDLE SCHOOL EDUCATION

For the student with a special interest in youngsters in the middle grades, courses are available which lead to both elementary and middle school certification. The courses are grouped in two segments: (1) Elementary Education—consisting of 42 hours of course work in elementary education, (2) Middle School Teaching—consisting of between 28 and 32 hours of liberal arts and education courses related to one of the following special areas; Reading, Language arts education, Science education, Social Science education, Mathematics education. Further information can be obtained by contacting advisers in the respective areas.

KINDERGARTEN THROUGH TWELFTH GRADE CERTIFICATION PROGRAMS

Candidates meet teaching requirements for all grade levels from Kindergarten through the senior year of high school.

ART EDUCATION (EDA)

The Art Education student may elect to emphasize painting, sculpture, graphics, ceramics, or photography/cinematography by selecting the appropriate courses.

The following courses constitute a program of study:

Art Education (25 Credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDA 308</td>
<td>4</td>
</tr>
<tr>
<td>EDA 310</td>
<td>5</td>
</tr>
<tr>
<td>EDA 412</td>
<td>5</td>
</tr>
</tbody>
</table>

In these courses students will have the opportunity to work at the elementary school and high school levels.

Specialization (52 cr. hrs.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 201</td>
<td>4</td>
</tr>
<tr>
<td>ART 202</td>
<td>4</td>
</tr>
<tr>
<td>ART 301</td>
<td>2</td>
</tr>
</tbody>
</table>

28 cr. hrs. from the following courses as approved by the adviser:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 304</td>
<td>ART 401</td>
</tr>
<tr>
<td>ART 311</td>
<td>ART 411</td>
</tr>
<tr>
<td>ART 321</td>
<td>ART 421</td>
</tr>
<tr>
<td>ART 331</td>
<td>ART 431</td>
</tr>
<tr>
<td>ART 340</td>
<td>ART 441</td>
</tr>
<tr>
<td>ART 361</td>
<td>ART 442</td>
</tr>
<tr>
<td>ART 365</td>
<td>ART 443</td>
</tr>
</tbody>
</table>

EXCEPTIONAL CHILD EDUCATION

The Exceptional Child Education Baccalaureate Level Degree Program offers students three tracks leading to Rank III Certification in that specific area of emphasis.

Emotionally Disturbed (EMD)

The planned program includes:

Specialization Requirements (65-67 cr. hrs.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLY 201</td>
<td>3</td>
</tr>
<tr>
<td>EDE 409</td>
<td>5</td>
</tr>
<tr>
<td>EDE 413</td>
<td>4</td>
</tr>
<tr>
<td>EDE 415</td>
<td>5</td>
</tr>
<tr>
<td>EDE 417</td>
<td>5</td>
</tr>
<tr>
<td>EDE 419</td>
<td>5</td>
</tr>
<tr>
<td>EDE 421</td>
<td>4</td>
</tr>
<tr>
<td>EDE 423</td>
<td>2</td>
</tr>
<tr>
<td>EDE 424</td>
<td>(3)</td>
</tr>
<tr>
<td>EDE 425</td>
<td>(4)</td>
</tr>
</tbody>
</table>

Plus the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 476</td>
<td>(4)</td>
</tr>
<tr>
<td>ART 476</td>
<td>(4)</td>
</tr>
<tr>
<td>MUS. DAN, TAR</td>
<td>(6)</td>
</tr>
</tbody>
</table>

At the time of application to upper level, each Art Education student must submit slides or portfolio to the head of the department. To assist transfer students in selection of courses, they must submit work prior to or during registration.
## Mental Retardation (MRD)

The planned program includes:

**Specialization Requirements (71 cr. hrs.)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLY 201</td>
<td>(3)</td>
</tr>
<tr>
<td>EDE 409</td>
<td>(5)</td>
</tr>
<tr>
<td>EDE 415</td>
<td>(4)</td>
</tr>
<tr>
<td>EDE 435</td>
<td>(4)</td>
</tr>
<tr>
<td>EDE 445</td>
<td>(4)</td>
</tr>
<tr>
<td>EDE 425</td>
<td>(4)</td>
</tr>
<tr>
<td>EDV 207</td>
<td>(4)</td>
</tr>
<tr>
<td>EDF 379</td>
<td>(4)</td>
</tr>
<tr>
<td>EDS 311</td>
<td>(4)</td>
</tr>
</tbody>
</table>

### Specific Learning Disabilities (SLD)

The planned program includes:

**Specialization Requirements (67 cr. hrs.)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLY 201</td>
<td>(3)</td>
</tr>
<tr>
<td>EDE 409</td>
<td>(5)</td>
</tr>
<tr>
<td>EDE 415</td>
<td>(4)</td>
</tr>
<tr>
<td>EDE 425</td>
<td>(4)</td>
</tr>
<tr>
<td>EDE 435</td>
<td>(4)</td>
</tr>
<tr>
<td>EDE 445</td>
<td>(4)</td>
</tr>
<tr>
<td>EDF 379</td>
<td>(4)</td>
</tr>
<tr>
<td>EDS 311</td>
<td>(4)</td>
</tr>
<tr>
<td>EDS 322</td>
<td>(4)</td>
</tr>
</tbody>
</table>

### HEALTH EDUCATION (HEN)

The following are courses required in the Health Education Program (61 hours):

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDP 255</td>
<td>(3)</td>
</tr>
<tr>
<td>HEN 310</td>
<td>(5)</td>
</tr>
<tr>
<td>HEN 311</td>
<td>(4)</td>
</tr>
<tr>
<td>HEN 321</td>
<td>(4)</td>
</tr>
<tr>
<td>HEN 322</td>
<td>(5)</td>
</tr>
<tr>
<td>HEN 331</td>
<td>(4)</td>
</tr>
<tr>
<td>HEN 332</td>
<td>(5)</td>
</tr>
<tr>
<td>HEN 333</td>
<td>(2)</td>
</tr>
</tbody>
</table>

### MUSIC EDUCATION (EDM)

#### A. Instrumental Specialization (112 cr. hrs.)

**Music Education courses (24 cr. hrs.)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDM 370</td>
<td>(6)</td>
</tr>
<tr>
<td>EDM 390</td>
<td>(3)</td>
</tr>
<tr>
<td>EDM 431</td>
<td>(5)</td>
</tr>
</tbody>
</table>

### PHYSICAL EDUCATION (EDP)

The following are the required courses in the physical education program of study (158 cr. hrs.):

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDP 255</td>
<td>(3)</td>
</tr>
<tr>
<td>EDP 311</td>
<td>(5)</td>
</tr>
<tr>
<td>EDP 312</td>
<td>(6)</td>
</tr>
<tr>
<td>EDP 314</td>
<td>(2)</td>
</tr>
<tr>
<td>EDP 321</td>
<td>(5)</td>
</tr>
<tr>
<td>EDP 322</td>
<td>(6)</td>
</tr>
<tr>
<td>EDP 331</td>
<td>(5)</td>
</tr>
<tr>
<td>EDP 332</td>
<td>(6)</td>
</tr>
</tbody>
</table>

### SECONDARY EDUCATION CERTIFICATION PROGRAMS

Candidates are required to meet specialization requirements in broad subject fields or in subject combinations. The secondary school specialization requirements can be satisfied in more than 15 subject areas in eight broad fields.

### CLASSICS EDUCATION (CLE)

#### Latin-English Education:

**Specialization Requirements (80 cr. hrs.)**

**Latin (40 cr. hrs.)**

Select four courses from the following five categories. Do not select more than one course from any single category.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ANC 321</td>
<td>(5)</td>
</tr>
<tr>
<td>ANC 427</td>
<td>(4)</td>
</tr>
<tr>
<td>ANC 429</td>
<td>(4)</td>
</tr>
<tr>
<td>2. CLS 310</td>
<td>(4)</td>
</tr>
<tr>
<td>CLS 311</td>
<td>(4)</td>
</tr>
<tr>
<td>CLS 312</td>
<td>(4)</td>
</tr>
<tr>
<td>3. HTY 201</td>
<td>(4)</td>
</tr>
<tr>
<td>HTY 202</td>
<td>(4)</td>
</tr>
</tbody>
</table>

Select six additional upper level Latin courses (4 qtr. hrs. each) in consultation with Latin advisers.

**English (40 cr. hrs.)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 302</td>
<td>(5)</td>
</tr>
<tr>
<td>ENG 310</td>
<td>(5)</td>
</tr>
</tbody>
</table>

### B. Vocal Specialization (101 cr. hrs.)

**Music Education courses (21 cr. hrs.)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDM 380</td>
<td>(6)</td>
</tr>
<tr>
<td>EDM 435</td>
<td>(5)</td>
</tr>
</tbody>
</table>

**Music courses (88 cr. hrs.)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 201, 202, 203</td>
<td>(9)</td>
</tr>
<tr>
<td>MUS 221, 222, 223</td>
<td>(8)</td>
</tr>
<tr>
<td>MUS 301, 302, 303</td>
<td>(8)</td>
</tr>
<tr>
<td>MUS 321, 322, 323</td>
<td>(6)</td>
</tr>
<tr>
<td>MUS 401, 402, 403</td>
<td>(9)</td>
</tr>
<tr>
<td>MUS 207</td>
<td>(8)</td>
</tr>
<tr>
<td>MUS 204, 304, 404, 454*</td>
<td>(33)</td>
</tr>
</tbody>
</table>

**Theatre Arts**

- (2)
- Art
- (3)
- Dance

**Performing Ensemble (minimum of one per quarter with applied music)**

**Piano proficiency requirement**

**Graduating recital**

* MUS 454 minimum of 6 hours.

### *CLS 351—If CLS 351 taken, the hours will count in only one area of requirements (i.e. English/Latin) not in both.*
### Latin-Modern Foreign Language Education:

**Specialization Requirements (76 cr. hrs.)**

Latin (40 cr. hrs.)

Select four courses from the following five categories. Do not select more than one course from any single category.

1. ANC 321 (5)  
   ANC 427 (4)  
   ANC 429 (4)
2. CLS 310 (4)  
   CLS 311 (4)  
   CLS 312 (4)  
   4. PHI 415 (4)
3. HTY 201 (4)  
   HTY 202 (4)  
   5. CLS 351* (4)

Select six additional upper level Latin courses (4 qtr. hrs. each) in consultation with Latin advise rs.

Modern foreign language requirements are 25 credit hours beyond introductory courses. Modern foreign language course requirements are (36 hrs.):

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>(___) 301</td>
<td>(4)</td>
</tr>
<tr>
<td>(___) 303</td>
<td>(4)</td>
</tr>
<tr>
<td>(___) 401</td>
<td>(4)</td>
</tr>
<tr>
<td>(___) 403</td>
<td>(4)</td>
</tr>
</tbody>
</table>

ROM 517 and 518 may be among the selected courses.

Two special methods courses (EDX 447 and EDX 449) are included in the professional education sequence.

### ENGLISH EDUCATION (ENE)

**Specialization Requirements (61-64 cr. hrs.)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPE 201</td>
<td>(5)</td>
</tr>
<tr>
<td>SPE 321</td>
<td>(5)</td>
</tr>
<tr>
<td>ENG 475</td>
<td>(5)</td>
</tr>
</tbody>
</table>

One of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 350</td>
<td>(5)</td>
</tr>
<tr>
<td>ENG 351</td>
<td>(5)</td>
</tr>
</tbody>
</table>

One of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 476</td>
<td>(5)</td>
</tr>
<tr>
<td>ENG 477</td>
<td>(5)</td>
</tr>
</tbody>
</table>

One of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 300</td>
<td>(3)</td>
</tr>
<tr>
<td>COM 301</td>
<td>(4)</td>
</tr>
<tr>
<td>COM 351</td>
<td>(3)</td>
</tr>
</tbody>
</table>

One of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 300</td>
<td>(5)</td>
</tr>
<tr>
<td>ENG 301</td>
<td>(5)</td>
</tr>
<tr>
<td>ENG 302</td>
<td>(5)</td>
</tr>
<tr>
<td>ENG 303</td>
<td>(5)</td>
</tr>
</tbody>
</table>

One of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 330</td>
<td>(5)</td>
</tr>
<tr>
<td>ENG 331</td>
<td>(5)</td>
</tr>
<tr>
<td>ENG 332</td>
<td>(5)</td>
</tr>
</tbody>
</table>

One of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 307</td>
<td>(5)</td>
</tr>
<tr>
<td>ENG 308</td>
<td>(5)</td>
</tr>
<tr>
<td>ENG 317</td>
<td>(5)</td>
</tr>
<tr>
<td>ENG 437</td>
<td>(5)</td>
</tr>
</tbody>
</table>

One of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 438</td>
<td>(5)</td>
</tr>
<tr>
<td>ENG 442</td>
<td>(5)</td>
</tr>
<tr>
<td>ENG 446</td>
<td>(5)</td>
</tr>
</tbody>
</table>

Two 300 level or 400 level English courses in literature. Also, one elective from one of the following areas: English, Communications, Theatre Arts, Language-Literature Interdisciplinary, Philosophy, Classics, Education, or American Studies (4). Two special methods courses EDT 447 and EDT 431 are included in the professional education sequence.

### FOREIGN LANGUAGE EDUCATION (FOL)

**Foreign Language-English Education:**

**Specialization Requirements (76 cr. hrs.)**

English (40 cr. hrs.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 300</td>
<td>(5)</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>ENG 301</td>
<td>(5)</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>ENG 302</td>
<td>(5)</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>ENG 310</td>
<td>(5)</td>
</tr>
</tbody>
</table>

One of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 350</td>
<td>(5)</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>ENG 351</td>
<td>(5)</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>ENG 475</td>
<td>(5)</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>SPE 201</td>
<td>(5)</td>
</tr>
</tbody>
</table>

One of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 317</td>
<td>(5)</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>ENG 435</td>
<td>(5)</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>ENG 436</td>
<td>(5)</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>ENG 437</td>
<td>(5)</td>
</tr>
</tbody>
</table>

One of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 340</td>
<td>(5)</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>ENG 341</td>
<td>(5)</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>CLS 351</td>
<td>(4)</td>
</tr>
</tbody>
</table>

If an elective is needed, SPE 321 is recommended. **Foreign Language** requires a minimum of 36 credit hours beyond intermediate courses. Foreign language course requirements are:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>(___) 301</td>
<td>(4)</td>
</tr>
<tr>
<td>(___) 403</td>
<td>(4)</td>
</tr>
<tr>
<td>(___) 303</td>
<td>(4)</td>
</tr>
<tr>
<td>(___) 401</td>
<td>(4)</td>
</tr>
<tr>
<td>(___) 403</td>
<td>(4)</td>
</tr>
</tbody>
</table>

Student and adviser will select the additional foreign language courses to total a minimum of 36 credit hours in foreign language. ROM 517 and 518 may be among the selected courses.

Two special methods courses (EDT 447 and EDX 449) are included in the professional education sequence.

### Two Foreign Language Education:

**Specialization Requirements (61 credit hours)**

Beginning and intermediate foreign language requirements (or equivalents) must be completed. In the major language (French, German, Italian, Russian, or Spanish), the student must earn a minimum of 35 credit hours, and in the minor language 26 credit hours. The required upper level foreign language courses for the major language are:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>(___) 301</td>
<td>(4)</td>
</tr>
<tr>
<td>(___) 403</td>
<td>(4)</td>
</tr>
<tr>
<td>(___) 303</td>
<td>(4)</td>
</tr>
<tr>
<td>(___) 401</td>
<td>(4)</td>
</tr>
<tr>
<td>(___) 403</td>
<td>(4)</td>
</tr>
</tbody>
</table>

Plus a minimum of 11 additional selected hours of upper level courses in the major language:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>(___) 301</td>
<td>(4)</td>
</tr>
<tr>
<td>(___) 403</td>
<td>(4)</td>
</tr>
<tr>
<td>(___) 303</td>
<td>(4)</td>
</tr>
<tr>
<td>(___) 401</td>
<td>(4)</td>
</tr>
<tr>
<td>(___) 403</td>
<td>(4)</td>
</tr>
</tbody>
</table>

Plus a minimum of six additional selected hours of upper level courses in the minor language:

### Single Foreign Language Education:

After consultation with a foreign language education adviser, the Dean may give permission for a student to elect a single foreign language major. A minimum of 45 credit hours beyond intermediate course requirements must be earned in the single foreign language. Among the 45 hours must be the following:

**French** (45 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRE 301</td>
<td>(4)</td>
</tr>
<tr>
<td>FRE 303</td>
<td>(4)</td>
</tr>
<tr>
<td>FRE 401</td>
<td>(4)</td>
</tr>
</tbody>
</table>

Plus a minimum of 21 additional selected hours of upper level courses.

**German** (45 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GER 301</td>
<td>(4)</td>
</tr>
<tr>
<td>GER 303</td>
<td>(4)</td>
</tr>
<tr>
<td>GER 401</td>
<td>(4)</td>
</tr>
</tbody>
</table>

Plus a minimum of 21 additional selected hours of upper level courses.

**Italian or Russian** (45 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>(___) 301</td>
<td>(4)</td>
</tr>
<tr>
<td>(___) 403</td>
<td>(4)</td>
</tr>
<tr>
<td>(___) 303</td>
<td>(4)</td>
</tr>
<tr>
<td>(___) 405</td>
<td>(4)</td>
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<tr>
<td>(___) 401</td>
<td>(4)</td>
</tr>
<tr>
<td>(___) 406</td>
<td>(4)</td>
</tr>
</tbody>
</table>

Plus a minimum of 21 additional selected hours of upper level courses.

**Spanish** (45 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPA 301</td>
<td>(4)</td>
</tr>
<tr>
<td>SPA 303</td>
<td>(4)</td>
</tr>
<tr>
<td>SPA 401</td>
<td>(4)</td>
</tr>
<tr>
<td>SPA 403</td>
<td>(4)</td>
</tr>
</tbody>
</table>

Plus a minimum of 21 additional selected hours of upper level courses.
Plus a minimum of 17 additional selected hours of upper level courses. ROM 517 and ROM 518 may be used to satisfy selected course requirements in any of the modern foreign languages.

**MASS COMMUNICATIONS—ENGLISH EDUCATION (MCE)**

**Specialization Requirements (63 cr. hrs.):**

Mass Communications (23 cr. hrs.)

<table>
<thead>
<tr>
<th>COM 300</th>
<th>COM 301</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 330</td>
<td>or</td>
</tr>
<tr>
<td>COM 483</td>
<td>ENG 308</td>
</tr>
</tbody>
</table>

2 of the following or 1 of the following plus a more advanced course in that area.

<table>
<thead>
<tr>
<th>COM 311</th>
<th>COM 370</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 320</td>
<td>COM 371</td>
</tr>
<tr>
<td>COM 341</td>
<td>COM 375</td>
</tr>
<tr>
<td>COM 351</td>
<td>COM 453</td>
</tr>
<tr>
<td>ENGL 361</td>
<td>ENGL 362</td>
</tr>
</tbody>
</table>

Two special methods courses EDT 447 and EDT 431 are included in the professional education sequence.

**English (40 cr. hrs.)**

<table>
<thead>
<tr>
<th>SPE 201</th>
<th>ENG 475</th>
</tr>
</thead>
</table>

2 of the following:

<table>
<thead>
<tr>
<th>ENG 300</th>
<th>ENG 313</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 301</td>
<td>ENG 314</td>
</tr>
<tr>
<td>ENG 310</td>
<td>ENG 315</td>
</tr>
<tr>
<td>ENG 311</td>
<td>ENG 316</td>
</tr>
<tr>
<td>ENG 312</td>
<td>ENG 317</td>
</tr>
</tbody>
</table>

1 of the following:

<table>
<thead>
<tr>
<th>ENG 302</th>
<th>ENG 331</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 330</td>
<td>ENG 332</td>
</tr>
</tbody>
</table>

1 of the following:

<table>
<thead>
<tr>
<th>ENG 307</th>
<th>ENG 438</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 317</td>
<td>ENG 442</td>
</tr>
<tr>
<td>ENG 437</td>
<td>ENG 446</td>
</tr>
</tbody>
</table>

2 additional ENG courses in literature or 1 ENG course and SPE 321.

**HUMANITIES EDUCATION (HUE)**

Specialization Requirements (3 cr. hrs. in HUM 491 Selected Topics in Humanities; and 42 cr. hrs. from the following):

HUM 411, 412. Twentieth Century Arts and Letters (5, 5)
HUM 415, 416. Arts and Letters of the Romantic Period (4, 4)
HUM 417, 418. Nineteenth-Century Arts and Letters (4, 4)
HUM 419, 420. The Enlightenment (4, 4)
HUM 423, 424. Renaissance Arts and Letters (4, 4)
HUM 427. 428. Medieval Arts and Letters (4, 4)
HUM 431, 432. Classical Arts and Letters (4, 4)
HUM 481. Directed Study (1-5)
HUM 535, 536, 537. Humanities in America (4, 4, 4)
HUM 539, 540. Selected Non-Western Humanities (4, 4)
HUM 541. Humanities in the Orient: India (4)
HUM 542. Humanities in the Orient: China (4)
HUM 543. Humanities in the Orient: Japan (4)
HUM 545. Latin American Arts and Letters (4)

Also required (a minimum of 9 cr. hrs. in the creative or performing arts from the following areas: TAR, ART, MUS, DAN, and ENG.) Academic work in these areas taken prior to entering the College of Education will be considered toward the satisfaction of this requirement.

**MATHEMATICS (MAE)**

The typical program for prospective mathematics teachers consists of a minimum of 47 credit hours in mathematics above the 200 level. The specialization requirements are:

<table>
<thead>
<tr>
<th>MTH 302</th>
<th>MTH 309</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 303</td>
<td>MTH 323</td>
</tr>
<tr>
<td>MTH 304</td>
<td>MTH 423</td>
</tr>
<tr>
<td>MTH 305</td>
<td>MTH 424</td>
</tr>
</tbody>
</table>

Upper level mathematics electives (MTH 345 and 420 are strongly recommended)

The student has the option of completing a Natural Science major with a concentration in mathematics. This requires a minimum of 36 credit hours in mathematics and a minimum of 24 credit hours in the College of Natural Sciences outside of mathematics. These latter 24 hours must be approved by the student's adviser and must include a minimum of four credit hours at the 300 level or above.

**SCIENCE**

**Botany (BOE), Chemistry (CHE), Physics (PHE), Zoology (ZOE):**

A student planning to teach science at the secondary level should complete the departmental major in the corresponding science area (in Botany, Chemistry, Physics, or Zoology). Requirements for these programs are listed in the catalog under the science departments of the College of Natural Sciences. EDN 427 is recommended for biology teachers, EDN 425 is recommended for physical science (chemistry and physics) teachers.

Science Education (SCE): An alternate program is available in which the prospective teacher must meet the minimum requirements of the major in the Natural Sciences. This requires 36 credit hours in the discipline of major concentration and 24 credit hours within the Natural Sciences and outside the concentration area. These latter 24 hours must be approved by the student's adviser and include at least one 300 level course. (Total program, 68 credit hours minimum). Concentrations are available in biology, physics, and chemistry. A typical program for a biology concentration includes:

Minimum credit within concentration (36-44 credit hours)

<table>
<thead>
<tr>
<th>BIO 201</th>
<th>BIO 203</th>
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</thead>
<tbody>
<tr>
<td>BIO 202</td>
<td>BIO 331</td>
</tr>
</tbody>
</table>

Additional selections from:

<table>
<thead>
<tr>
<th>BIO 401</th>
<th>BOT 311</th>
</tr>
</thead>
<tbody>
<tr>
<td>or</td>
<td>MIC 351</td>
</tr>
<tr>
<td>BIO 510</td>
<td>ZOO 311</td>
</tr>
<tr>
<td>BIO 445</td>
<td>ZOO 313</td>
</tr>
<tr>
<td>BOT 302</td>
<td>(5)</td>
</tr>
</tbody>
</table>

Minimum credits outside of concentration (24-32 credit hours)

Courses outside biology would normally include:

<table>
<thead>
<tr>
<th>CHM 211</th>
<th>CHM 332</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 212</td>
<td>CHM 333</td>
</tr>
<tr>
<td>CHM 213</td>
<td>Electives</td>
</tr>
<tr>
<td>CHM 217</td>
<td>CHM 331</td>
</tr>
<tr>
<td>CHM 218</td>
<td>CHM 332</td>
</tr>
<tr>
<td>CHM 219</td>
<td>CHM 333</td>
</tr>
<tr>
<td>CHM 331</td>
<td>Electives</td>
</tr>
</tbody>
</table>

Courses in Mathematics, Physics, and Geology are also recommended.

**SOCIAL SCIENCE (SSE)**

The College of Education provides a program of study which enables students to attain a degree in secondary social science education (7-12). To teach at the secondary level the minimum requirements of a social science education major must be met. All programs in the social science education major specify 64 credits or more in the social sciences. A teaching emphasis requires a minimum of 24 credits in one discipline within an approved program which will lead to certification in the broad area of social sciences. However, a student may concentrate his study in one of the separate subject areas (political science, history, geology, American history). Each program contains both required and elective courses which each student in consultation with his adviser will select.
SPEECH COMMUNICATION—ENGLISH EDUCATION (SEE)

Specialization Requirements (70 cr. hrs.)

Specialization Requirements (70 cr. hrs.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPE 201</td>
<td>(5)</td>
</tr>
<tr>
<td>SPE 203</td>
<td>(5)</td>
</tr>
<tr>
<td>SPE 321</td>
<td>(5)</td>
</tr>
<tr>
<td>SPE 361</td>
<td>(5)</td>
</tr>
<tr>
<td>SPE 365</td>
<td>(5)</td>
</tr>
<tr>
<td>SPE 491</td>
<td>(5)</td>
</tr>
<tr>
<td>ENG 475</td>
<td>(5)</td>
</tr>
<tr>
<td>TAR 303</td>
<td>(5)</td>
</tr>
</tbody>
</table>

Two of the following:

- ENG 300
- ENG 301
- ENG 310
- ENG 311
- ENG 312
- ENG 302
- ENG 330
- ENG 307
- ENG 308
- ENG 317
- ENG 437

VOCATIONAL AND ADULT EDUCATION CERTIFICATION PROGRAMS

Candidates planning to teach in county-wide adult and secondary education programs, junior college associate of arts and area vocational schools, continuing education centers, model cities programs, and other vocational, adult and technical schools may pursue one or more of the following specializations.

BUSINESS AND OFFICE EDUCATION (VBU)

Prior to being admitted to upper level all students must demonstrate proficiency in English skills to include grammar, composition, and verbal communication. These proficiencies are demonstrated by successfully passing an examination during the quarter a student makes application to upper level.

Prior to enrolling in the two business methods courses, which are a part of the pre-internship block, a student must demonstrate proficiencies in the office skills to include typewriting, shorthand, and office machines. Office skill competency examinations are administered prior to preregistration for Quarters I and II. Only students who have demonstrated successful performance in the office skills will be eligible to register for the pre-internship block which includes EDV 443, EDV 445, and EDC 401.

Specialization Requirements (73 cr. hrs.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 201</td>
<td>(3)</td>
</tr>
<tr>
<td>ACC 202</td>
<td>(3)</td>
</tr>
<tr>
<td>GBA 361</td>
<td>(5)</td>
</tr>
<tr>
<td>GBA 371</td>
<td>(4)</td>
</tr>
</tbody>
</table>

Three hours of advanced typing (3), three hours of advanced shorthand (3).

Two of the following:

- ECN 100 (5)
- ECN 201 (4)
- ECN 202 (4)
- EDV 353 (5)
- EDV 431* (4-8)
- EDV 461 (5)
- EDV 461 (5)
- EDV 407 (4)

Electives in Education and/or Business Administration courses to bring total to 73.

Recommendations include:

- FIN 201 (5)
- GBA 333 (3)
- MAN 301 (5)
- MKT 301 (5)
- ENG 313
- ENG 314
- ENG 315
- ENG 316 (10)
- ENG 312
- ENG 331
- ENG 332 (5)
- ENG 438
- ENG 442
- ENG 446 (5)
- ENG 437
- ENG 350
- ENG 351 (5)

The following special methods courses are included in the professional education sequence: EDT 447, EDT 423, EDT 424 (2) and EDR 407 (2).

INDUSTRIAL-TECHNICAL EDUCATION (VIT)

Enrollment in the Industrial-Technical Education program is restricted to persons with employment experiences qualifying them to teach Industrial, Technical, or Health Occupations.

Special provision is made for students to satisfy four (4) of the six (6) years of work experience by completing an Associate of Science degree program in a Technological specialty from one of the State Community Colleges.

Acceptability of work experience will be determined by the State Department of Education, Division of Certification, Tallahassee, Florida.

Students may validate up to 45 quarter hours of credit through the Occupational Competency Testing Program.

In addition to the professional core requirements, students must complete 29 quarter hours in Adult & Vocational Education selected from the following courses:

- EDV 207 (4)
- EDV 431 (8)
- EDV 443 (5)
- EDV 445 (4)
- EDV 480 (4)
- EDV 503 (4)
- EDV 504 (4)
- EDV 505 (4)
- EDV 406 (4)
- EDV 407 (4)
- EDV 407 (4)
- EDV 511 (4)
- EDG 503 (4)

In addition, students must meet the General Distribution Requirements of 60 credit hours and SPE 201.

Acceptability of work experiences will be determined by the Adult and Vocational staff at the University of South Florida.

* Required only if student lacks sufficient office work experience.
MASTER'S LEVEL DEGREE PROGRAMS

Admission
Candidates for admission to graduate study must present satisfactory evidence of:
1. Undergraduate grade-point-ratio of 3.0 (B) minimum on the last half of the baccalaureate degree; or GRE aptitude score—1000 minimum.
2. Any additional requirements specified by the program.
3. Receive favorable recommendation from program chairman.

Filing of Program
During the first term of graduate study the candidate for the master's degree must file a planned program of studies. This report of Graduate Advisory Conference is to be completed in consultation with the adviser. The completed report should be filed with the Coordinator of Graduate Studies in the College of Education.

Quality of Work
Candidates for the master's degree must maintain a 3.0 GPA. If at any time the student's GPA falls below the minimum, the student will be placed on probation. During the probationary status the student's academic progress will be reviewed to determine: 1) removal from probation, 2) continuation on probation, 3) drop from graduate program.

Residency
The candidate for the master's degree will be required to meet the residency requirement established by each program area. Consult the appropriate program area for details.

Comprehensive Examination
During the last term of enrollment, prior to completion of degree requirements, the candidate must perform satisfactorily on a comprehensive examination.

Process Core Examination
Graduate students with sufficient undergraduate background may take the Process Core Examinations after consultation with their advisers. Successful performance on the examination enables a student to waive the course requirement, but he must take elective courses in lieu of the hours required. The Process Core Examinations are in the Foundations of Measurement, Psychological Foundations and Social Foundations of Education. Graduate students on a Plan II Master's Program (see below) are not eligible to take the Process Core Examinations unless they have had a comparable course at the undergraduate level.

PROGRAM PLANS OF STUDY

Plan I
Plan I is a program of graduate studies designed for those with appropriate certification who desire to increase their competence in a subject specialization or receive professional preparation in one of the service areas of education.

A. Process Core (4-16 hours)
Students will take a minimum of one Process Core (Foundations) course. Substitution for the remaining courses may occur upon the advise of the Degree Program and concurrence of the College Program Policy Committee. Process Core:
- a. EDF 605 Foundations of Measurement
- b. EDF 607 Foundations of Educational Research
- c. EDF 611 Psychological Foundations of Education or EDF 613 Principles of Learning
- d. EDF 621 Socio-economic Foundations of Education or EDF 623 Historical Foundations of American Education or EDF 625 Philosophical Foundations of American Education

B. Current Trends Course in Teaching Specialization (4 hours)

C. Specialization (27 hours minimum)
The areas of specialization beginning below are suggested programs of study. Individual programs will vary with background, experience, and specific interest.

Plan II
Plan II is a program of graduate studies designed for the holder of a non-education baccalaureate degree who desires to meet initial certification requirements as part of a planned program leading to the Master of Arts degree. (This program is not available in the area of elementary education.)

A. Process Core (21 hours)
- EDC 501, Curriculum and Instruction: Secondary;
- EDF 605, Foundations of Measurement;
- EDF 607, Foundations of Educational Research;
- EDF 611, Psychological Foundations of Education; and EDF 621, Socio-Economic Foundations of Education;
or
- EDF 623, Historical Foundations of American Education;
or
- EDF 625, Philosophical Foundations of American Education.

B. Current Trends Course in Teaching Specialization (4 hours)

C. Specialization (27 hours minimum)
This is an individually planned graduate major in the teaching field or in an appropriate College of Education program for K-12 specialists.

D. Internship (9 hours)
Enrollment will be in EDC 691 which involves planned observation and supervision by a member of the University faculty and a secondary school staff member. In-service teachers are required to complete this assignment over two quarters.
ELEM3NTARY EDUCATION PROGRAMS

ELEMENTARY EDUCATION (EDE)

This program requires full certification as an elementary teacher for admission. Students pursuing the master's degree in elementary education are required to present credit in the following courses: EDE 603, 609, and 613. The student will choose from one of the following areas of emphasis:

a. Elementary Curriculum Emphasis: At least three courses must be selected from EDE 611, 615, 617, 619, and 621. Additional work is available through consent of the adviser as part of a planned program.
b. Reading Emphasis: Three courses from EDE 611, EDR 630, EDR 631, EDR 632, and EDE 631 or EDL 605 are required.
c. Supervision Emphasis: EDC 661, 671, and EDE 641 are required.
d. Early Childhood Emphasis: Individually planned emphasis include EDE 429 and three courses from the following: EDE 435, 527, 539, 629. e. Elementary School Mathematics Emphasis: Individually planned emphasis to include four courses from the following: EDE 615, 645, 646; EDN 515, 616, 617, 618, 621. Additional work in related areas may be planned with the adviser.

SECONDARY EDUCATION PROGRAMS

ENGLISH EDUCATION (ENE)

Candidates must score at least 500 on the Verbal Aptitude section of the GRE or 550 on the Advanced Literature test of the GRE.

PLAN I—Requirements for admission: A bachelor's degree in English Education from a recognized institution, or Rank II certification in Secondary English from the State of Florida or other equivalent certification. Students holding a bachelor's degree and qualified for Rank III Secondary English certification except for the required Education courses may enroll as Special students and complete certification requirements. After obtaining certification, they may apply for degree-seeking status and apply up to 12 credit hours of relevant work in Education on this degree. Plan I requires at least 32 hours of English as specified below.

PLAN II—Requirements for admission: A bachelor's degree in English from a recognized Liberal Arts institution of higher learning. Requires at least 28 hours of English as outlined below.

Course Sequence for both plans: Process Core (16 hours), EDT 631, ENG 450 (Theory of Fiction), ENG 686 (Advanced Composition for Teachers), one advanced course in linguistics, depth preparation in two English areas (minimum of two courses in each) from among the following: 1) Old English-Middle English (to 1500); 2) Renaissance (1500-1660); 3) Restoration-Eighteenth Century (1600-1780); 4) Nineteenth Century British (1780-1890); 5) American Literature (to 1920); 6) Twentieth Century British (after 1890); 7) Stylistics.

FOREIGN LANGUAGE EDUCATION (FRENCH, GERMAN, SPANISH) (FOE)

Candidates for the M.A. degree in foreign language education must present satisfactory evidence of:
1. Undergraduate grade point ratio of 3.0 or better on the last half of the B.A., or GRE aptitude score of 1000, or GRE advanced foreign language score in upper third, or equivalent.
2. Baccalaureate degree in chosen foreign language, or in foreign language education from an accredited institution of higher learning.
3. Favorable recommendation from program chairman.

Each candidate will be assigned his major adviser in the College of Education and, to facilitate selection of appropriate foreign language courses, a co-adviser in the Foreign Language department of the College of Arts and Letters. Since identical lists of foreign language courses are not prescribed for each candidate, and since each candidate's program is designed to satisfy the individual's needs, the specific foreign language courses are selected in consultation with the advisers. Candidates should meet with both advisers before registering for each quarter.

The M.A. in foreign language education requires a minimum of 27 credit hours in foreign language courses of the 500 and 600 levels. Foreign language requirements, however, are not the same for all and may go as high as 36 hours, depending upon the individual candidate's background and strengths. Unless otherwise approved by adviser, at least 21 hours in French should be on the 600 level; in German at least 15 hours should be on the 600 level; in Spanish at least 18 hours should be on the 600 level.

HUMANITIES EDUCATION (HUE)

The program in Humanities consists of 27-45 credit hours selected from the following with the advice of the adviser in the field of specialization:

HUM 481
HUM 535
HUM 536
HUM 537
HUM 539
HUM 540
HUM 541
HUM 542
HUM 543
HUM 545
HUM 611
HUM 623
HUM 681
HUM 683

Up to nine hours may be substituted for the above from courses outside of Humanities with the consent of the adviser in Humanities.
Plan I—For teachers who are certified to teach general secondary social studies or one of the separate subject areas. Each student is in consultation with his adviser who will select at least seven courses at the 500 or 600 level from courses offered in the College of Social and Behavioral Sciences. Three or more of these courses must be at the 600 level.

Plan II—Students will complete all of the Plan I requirements, take EDW 461, EDC 501, and EDC 691, plus any other social science course(s) which the Social Science Education department deems necessary for fulfilling minimum state certification requirements.

Plan I—For teachers who are certified to teach general secondary social studies or one of the separate subject areas. Each student is in consultation with his adviser who will select at least seven courses at the 500 or 600 level from courses offered in the College of Social and Behavioral Sciences. Three or more of these courses must be at the 600 level.

Plan II—Students will complete all of the Plan I requirements, take EDW 461, EDC 501, and EDC 691, plus any other social science course(s) which the Social Science Education department deems necessary for fulfilling minimum state certification requirements.

Plan I—For teachers who are certified to teach general secondary social studies or one of the separate subject areas. Each student is in consultation with his adviser who will select at least seven courses at the 500 or 600 level from courses offered in the College of Social and Behavioral Sciences. Three or more of these courses must be at the 600 level.

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Plan I—For teachers who are certified to teach general secondary social studies or one of the separate subject areas. Each student is in consultation with his adviser who will select at least seven courses at the 500 or 600 level from courses offered in the College of Social and Behavioral Sciences. Three or more of these courses must be at the 600 level.

Plan II—Students will complete all of the Plan I requirements, take EDW 461, EDC 501, and EDC 691, plus any other social science course(s) which the Social Science Education department deems necessary for fulfilling minimum state certification requirements.
An individually tailored liberal arts sequence of 14 quarter hours is also provided in the gifted teacher training program.

**PLAN II—**An individual with a non-education undergraduate major may prepare as a teacher-consultant of the gifted through Plan II.

The student will be expected to take a minimum of 28 quarter hours in the area of specialization. In consultation with his adviser, he will choose from the following:

- EDC 552
- EDS 550
- EDS 551
- EDS 559
- EDS 643
- EDS 653
- EDS 654

An individual may meet initial certification through Plan II by taking EDC 501, an appropriate methods of teaching course and completion of an internship in a liberal arts area.

**Mental Retardation (MRD)**

The course of study is designed to prepare the student to become a more effective teacher or supervisor of teachers for the retarded.

It is highly recommended by the Mental Retardation Program that any student who is about to apply for Graduate work in the area of Mental Retardation contact that office for advising purposes before any courses are taken or application made for admission.

**PLAN I—**Through a Plan I program, a certified teacher may satisfy the requirements for graduation within four quarters.

**Process Core Requirements (16-17 hours)**

- At least 28 hours are allocated to the area of specialization with an emphasis on Mental Retardation.
- Basic Course Requirement: EDS 610, or the equivalent.

**Courses required:**

- EDC 699: EDS 612 (4)
- EDS 531: EDS 611 (4)
- EDS 561: EDS 623 (4)

**Plan II—**Process Core Requirements (16-17 hours)

**Prerequisites:** Basic Course Requirements: EDC 501, EDS 613 or EDS 625, EDS 645, EDS 610

**Courses required:**

- EDC 691
- EDE 635
- EDR 631
- EDR 632

**Specific Learning Disabilities (SLD)**

The course of study is designed to prepare the student to become a more effective learning disabilities specialist.

**PLAN I—**Process Core Requirements (16-17 hours)

- At least 40 hours are allocated to the area of specialization with an emphasis on Specific Learning Disabilities.
- Basic Course Requirement: EDS 610, or equivalent.

**Courses required:**

- EDC 683: EDS 620
- EDC 691: EDS 621
- EDF 635: EDS 622
- EDR 632: EDS 623
- EDS 531: EDS 624

**PLAN II—**Process Core Requirements (16-17 hours)

- At least 48 hours are allocated to the area of specialization with an emphasis on Specific Learning Disabilities.

**Prerequisites:** EDE 409, EDE 415, EDS 411

**Basic Course Requirements:**

- EDC 501
- EDC 691
- EDE 645
- EDS 610

**Courses required:**

- EDC 693 or EDE 631 or EDS 561
- EDS 646
- EDF 635
- EDR 631
- EDR 632
- EDS 531 or EDS 561

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**GUIDANCE (EDG)**

**PLAN I—**The guidance program typically requires seventeen credit hours from the Process Core including EDF 605, 607, 613 and one of the following: EDF 621, 623, or 625. Additional course requirements depend upon the major emphasis in either elementary school guidance or in secondary school guidance.

a. Elementary School Guidance Emphasis: Requirements in specialization and related courses total 38 credit hours and include:

- EGD 601
- EGD 603
- EGD 609
- EGD 613
- EGD 619
- EGD 623
- EGD 627
- EGD 633
- EGD 631 or PSY 452

b. Secondary School Guidance Emphasis: Requirements in specialization and related courses total 39 credit hours and include the following and an approved elective:

- EGD 601
- EGD 603
- EGD 609
- EGD 619
- EGD 623
- EGD 627
- EGD 633
- EGD 631 or PSY 452

**PLAN II** is available in both emphases and requires EDC 501 and EDC 691 in addition to minimum requirements.

The Guidance Program has no full-time residency requirement. Students who are gainfully employed on a full-time basis are limited to 8 hours per quarter. Exceptions are made only with permission of the Guidance Program Committee.

Applications for admission to the Guidance Program should be submitted at least four months prior to the quarter in which the student plans to begin the program.

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**LIBRARY-AUDIOVISUAL (MEDIA) EDUCATION (EDL)**

Basic courses are required for all students with a choice of specialization for work in one of the following areas: School Media (formerly School Library); Public Library; Academic Library; Special Library. The requirements for the School Media specialization include Rank II certification for the State of Florida. Other requirements prepare the student to assume leadership roles in the profession.

The number of credits required in this program range from 46 to a possible maximum of 75. The average number of hours totals 60, thirty-three of which must be taken after the student is fully accepted into the graduate program. The exact number of hours is determined in conference with the student and his assigned program adviser on the basis of the student's needs and the program standards for the specialty areas of study. Thesis
hours when elected, EDC 699 (4-), are in addition to course work. Required courses, or their equivalent, for students in all library specializations are:

- EDL 500
- EDL 601
- EDL 606
- EDL 640

and one audiovisual or instructional technology course.

Administration courses recommended for each specialization are:

- EDL 612
- EDL 621
- EDL 640
- EDL 660
- MAN 601

Each student is urged to take field work, EDL 609, in the area of his specialization.

With the consent of his adviser any student may choose one or more cognates from other courses offered outside the department.

Criteria for admission and for graduation are those general criteria specified by the College of Education. The Library-Audiovisual program also asks for three letters of recommendation to be sent to the director of the program, and an interview with the program director, the program's admission committee or any other individual designated by the director. Graduation requirements include the fulfillment of the student's filed program of studies, application for graduation at the beginning of the quarter in which he intends to graduate, and the successful completion of a final comprehensive examination administered by the Library-Audiovisual faculty.

### MUSIC EDUCATION (EDM)

Plans in both instrumental and vocal music are offered. At least 27 hours are taken in one of these areas. A placement examination is required of all new registrants in musical styles. Each candidate must meet the undergraduate level of piano proficiency before the quarter in which he expects to graduate. Participation in ensembles is required for at least three quarters. Three plans are available to the candidate: 48 hours plus thesis, 51 hours plus recital, or 54 hours without thesis or recital.

**Vocal Majors:** 7 to 14 credits in music education, including EDM 601, 614, and 635; 8 to 12 credits in music theory-literature, and at least 4 credits in applied music.

**Instrumental Majors:** 7 to 14 credits in music education, including EDM 601, 603, 617, 633; 8 to 12 credits in music theory-literature, including MUS 618; and at least 4 credits in applied music.

### PHYSICAL EDUCATION (EDP)

Areas within the program in which a student may focus study are Elementary Physical Education, Secondary Physical Education, or Physical Education for the Handicapped.

Enrollment in EDP 600, Professional Assessment, is required of all students. Preferably this course will be completed during the first quarter of study in the program and not later than the completion of eight quarter hours of credit in the physical education curriculum area.

### READING EDUCATION (EDR)

Specialization in Reading Education shall include a minimum of 32 credit hours:

- EDE 609
- EDE 631
- EDR 409
- EDR 631

(Candidates who have had a children's literature course at either graduate or undergraduate level may take an elective in lieu of EDE 631).

Students entering the program with an undergraduate major outside elementary education should substitute EDE 409 for EDE 609.

Electives must be chosen by conference with adviser. Residency requirements may be met by enrolling for two courses, at least eight credits, during a quarter when the student is not engaged in a full-time work assignment.

### SCHOOL PSYCHOLOGY (PSE)

The School Psychology program is offered jointly with the Department of Psychology in the College of Social and Behavioral Sciences.

**PLAN I—Course Requirements**—except where equivalent courses are transferred into the program, the student must complete the following minimum quarter hours: 8 hrs. in Statistics and Research Design; 26 hrs. in Educational and Psychological Foundations; 9 hrs. in Assessment Techniques; 4 hrs. in Consultation Techniques; 4 hrs. in Field Experience. Specific courses may be obtained from the School Psychology program.

Research Competency—Each student must show competency through the planning, execution and write-up of a piece of research resulting in either a thesis or colloquium paper.

Internship—A full-time internship of two academic quarters is required.

**PLAN II**—Students without educational certification are required to take EDC 501. For the School Psychology program, the internship requirement for Plan II is the same as that for Plan I.

### VOCATIONAL AND ADULT EDUCATION PROGRAMS

**Adult Education (VAD)**

1. In consultation with the graduate adviser, a program will be planned which will include a minimum of 45 credit hours. Specialization requirements of 27 credit hours in Adult Education are designed to provide competencies in organization and administration, supervision, adult learning characteristics, curriculum development, program planning, methods of teaching, and research techniques as each of these relate to adult education programs. Generally, specialization courses will be selected from the following, depending upon the individual's background of experience:

   - EDV 407
   - EDV 445
   - EDV 503
   - EDV 505
   - EDV 506

2. Requirements in a related area may include a concentration of courses in one of the following areas: psychology, sociology, guidance, administration, complementary basic, or a vocational field.

**Business and Office Education (VBU)**

1. A minimum of 12 credit hours in the specialization area of Business and Office Education. Individualized pro-
grams will include courses to be taken from the following:

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Any deficiencies needed for business teacher certification must be included in the Master's candidate's program.

2. Selected courses from which to choose in Vocational and Adult Education:

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3. Selected courses in one related area such as Guidance, Exceptional Child Education, Business Administration, Junior College, Administration or Supervision (4-12 credit hours).

**Distributive Education (VDE)**

1. Appropriate College of Business Administration courses in marketing, management, economics, finance, and accounting for Distributive Education teacher certification (22 credit hours maximum).

2. Distributive Education (minimum of 12 credit hours)

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<tr>
<td>EDV 687</td>
<td>Seminar in Distributive Education Research</td>
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</table>

4. Selected courses in a related area such as Business Administration, Administration, Supervision, Guidance, Exceptional Child Education, (4-12 credit hours).

**Industrial-Technical Education (VIT)**

**PLAN I**—Before being admitted to the degree program, a prospective student must have met the work experience requirements for certification in Industrial, Technical, or Health occupations. In addition to the process core requirements, specialization requirements must include EDV 651 and EDV 687. Courses totaling a minimum of 45 credit hours will be a part of the student's program which he will plan with the graduate adviser for industrial education.

Related electives (0-16 credit hours). See areas of specialization listed above.

The **PLAN II** program in Vocational and Adult Education is designed primarily for non-certificated teachers. The candidate is required to complete additional professional education courses—usually EDC 501 and EDC 691, which are in excess of the normal Process Core requirements. A student will be advised of other courses which he must complete. Master's degree candidates wishing to be certified must meet the state's minimum certification requirements in the area of specialization.

**JUNIOR COLLEGE TEACHING PROGRAM**

**PLAN II**—The University of South Florida has developed a program for junior college teachers which leads to the Master of Arts degree and Florida State Department of Education certification at this level. The College of Education, in close cooperation with the other colleges on the campus, has formulated the program.

The Junior College program includes:

- **Astronomy**
- **Biography**
- **Business**
- **Chemistry**
- **English**
- **Engineering**
- **Economics**
- **Engineering* degree required.**
- **French**
- **Geography**
- **Geology**
- **History**
- **Mathematics**
- **Physics**
- **Political Science**
- **Psychology**
- **Sociology**
- **Spanish**
- **Speech**
- **Communication**

**Admission and Advising**

Because of the unique character of the Junior College Program which integrally involves two colleges of the University, there are admission and advisory regulations which go beyond those listed in the section dealing with Graduate Study.

Application for admission to the program is made in the Office of Admissions. Action on all applications is the joint responsibility of the two colleges. Admission to the program requires a minimum score of 1000 on the combined verbal and quantitative aptitude tests of the Graduate Record Examination. Duplicate sets of the student's complete record will be on file in both offices, with the College of Education charged with the responsibility of making official recommendations for the granting of the degree to the Vice President for Academic Affairs and to the Registrar.

**The Program**

Consists of a minimum of 45 credit hours, plus an internship of 1-9 hours if deemed necessary.

1. Specialization (36-45 hours)

   a. Courses in Higher Education (9 hours)
   b. EDC 651, Seminar in Higher Education (9 hours)
   c. EDH 651, Seminar in College Teaching (5)
   d. EDC 691, Internship (1-9 hours)

Those students who have not met the internship requirement for certification (up to nine hours credit in Junior College internship or two years or more of successful full-time teaching experience) must complete EDC 691, Internship. Typically, the internship will consist of full-time supervised teaching for one quarter of part-time teaching for two quarters. At least one-half of the internship must be in the junior college, the other half being left to the discretion of the student's adviser.

Those students who have met an internship requirement or who have had two years or more of successful full-time teaching experience prior to admission to the program will not normally be required to take EDC 691, Internship. This does not preclude the possibility of an internship for less than 9 credit hours if the advisers deem it to be desirable.
MASTER OF EDUCATION PROGRAMS

ADMINISTRATION AND SUPERVISION (ESA)
This Master of Education (M.Ed.) degree is to prepare administrators and supervisors with organizational, management, and instructional leadership skills. Admission requirements include: (1) certification in a teaching field, (2) at least two years of successful teaching experience or Rank II certification in an instructional area, (3) current U.S.F. graduate admission requirements, (4) College of Education requirements for admission to graduate study. Successful completion of the program leads to both the M.Ed. degree and Florida Rank II certification in Administration and Supervision.

CURRICULUM AND INSTRUCTION (CUR)
This Master of Education (M.Ed.) degree program is to prepare certified teachers who have at least two years of successful teaching experience and want to improve their teaching skills and/or become team leaders, department heads, program coordinators, directors of instruction, or assistant principals of curriculum. The degree requires at least 50 quarters hours with 60 percent or more at the 600 level. No specific research and thesis is required. Successful completion of the program will lead to both the Master of Education degree and Florida Rank II certification.

ED.S. PROGRAM
The Education Specialist (Ed.S.) program has been developed to provide for state approved Rank I-A certification. The program offers specialization in Elementary Education, with emphasis on urban education. In addition, there are tracks under the elementary specialization available in (1) Early Childhood Education, (2) Exceptional Child Education, (3) Mathematics Education, and (4) Reading/Language Arts Education.

PH.D. PROGRAM
The Doctor of Philosophy degree is available in Education. Specialization is in Elementary Education with research emphasis on problems or urban education. In addition, there are tracks available under the elementary specialization in (1) Early Childhood Education, (2) Exceptional Child Education, (3) Mathematics Education, and (4) Reading/Language Arts Education.
This section provides detailed information on College of Engineering programs as well as on supplementary college requirements students must meet. (Basic information on the college and its programs is contained in Part I of the USF Bulletin and is not repeated here.) Students must comply with both Part I and Part II of the USF Bulletin.

PROFESSIONAL ENGINEERING

FOUR-YEAR PROGRAM—BACHELOR OF SCIENCE IN ENGINEERING DEGREE (EGU)

This program contains four major elements further detailed below.

- Social Science and Humanities Core — 47 credit hours min.
- Mathematics and Science Core — 49 credit hours min.
- Engineering Core — 56 credit hours min.
- Specialization (Option) — 49 credit hours min.

Note: Special requirements exist for the Chemical option. Students selecting this field should make sure they familiarize themselves with these. Detailed information can be obtained from the Energy Conversion and Mechanical Design Department or the College’s Advising Office.

Core Requirements

1. Social Science and Humanities Core Requirements (47 credit hours minimum)

Prospective Engineering majors must take 9 credit hours of Freshman English (ENG 101, 102, 103).

An additional 38 credit hours of course work is required in this core area, of which at least 34 hours must be selected from the current “Approved Social Science and Humanities Courses” list for Engineering and Engineering Science students. A minimum of 12 credit hours of this course work must be of 200 level or higher. At least 8 credit hours must be taken in each in Humanities/Fine Arts area and the Behavioral and Social Sciences area (to meet the University’s Genral Distribution Requirements). It is recommended that the student pursue specific subject areas to some depth, since this develops areas of knowledge and interests which aid fuller development of the individual and later assist in relating a professional career to non-technical environments and situations.

It is desirable that at least 35 hours of this course work 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 and who have met that college’s General Education Requirement will normally find that their General Education course work satisfies the major portion—but not all—of the Social Science and Humanities Core requirement.

Credit by Examination can be obtained for some of this course work. CLEP General Examination credit is accepted for the areas of English Composition, Humanities and Social Science. Credit for CLEP Subject Examinations and CEEB Advanced Placement Tests can be accepted when the subject covered is recognized to be equivalent to USF course(s) on the “Approved Social Science and Humanities Courses” list. Questions in this area should be addressed to the Coordinator of Engineering Advising in the Dean’s office.

2. Mathematics and Science Core Requirements (49 credit hours minimum)

The student with a satisfactory high school preparation must take 49 credit hours of mathematics and science course work. (Some credit towards this core requirement can be obtained by passing applicable CEEB Advanced Placement Tests or CLEP Subject Examinations.)

In mathematics this course work consists of a Calculus for Engineers sequence (or a calculus sequence of equivalent level), differential equations, and six hours of advanced mathematics courses supportive of the student’s selected field of specialization (option).

In science the course work consists of one year of General Chemistry and one year of Physics (with calculus), and normally one additional advanced science course supportive of the student’s area of specialization (option). Chemical option students should contact their department for special advanced chemistry requirements in this area.

Students whose high school preparation is insufficient to enter the Calculus for Engineers and/or the General Chemistry sequence are required to take supplementary mathematical (algebra and trigonometry) and/or chemical foundation course work.

3. Engineering Core Requirements (56 credit hours minimum)

The prospective engineering major must take 56 credit hours of engineering foundation course work drawn from the major disciplines. This course work is designed to equip the student with a sound technical foundation for later more advanced specialized course work and the eventual formation of professional judgement. This course work includes introductory studies in such areas as engineering analysis and computation, electrical engineering principles, thermodynamics, statics, dynamics and fluids, and properties of materials.

All but 10 credit hours of the engineering core are common to all areas of specialization (option) of the Bachelor of Science in Engineering program. The remaining 10 credit hours of course work must be chosen with concurrence of the departmental adviser to fit the option selection of the student. Details on this selection are available in the departmental office of the option selected, or in the College’s Advising Office.

4. Specialization (Option) Requirements (49 credit hours minimum)

Specific options available and their offering departments are listed below.
Option
Chemical
Electrical
Industrial
Mechanical
Structures, Materials, and Fluids*

Department
Energy Conversion and Mechanical Design
Electrical and Electronic Systems Industrial Systems
Energy Conversion and Mechanical Design
Structures, Materials, and Fluids

*Concentrations in Structures, Materials, Fluids, Civil Engineering, Water Resources, and Applied Mechanics are available.

The General option accommodates Pre-Medical, Pre-Law and Biomedical students as well as students following an individually arranged program.

General information on these options is available in Part I of the USF Bulletin. Detailed information, including listing of required courses and approved electives, is available in the department responsible for the option. For information on the General option contact the College's Advising Office.

FIVE-YEAR PROGRAM—MASTER OF SCIENCE IN ENGINEERING DEGREE (EGG)

This program requires the same 152 credit hours minimum of foundation coursework consisting of the Social Science and Humanities Core, Mathematics and Science Core, and Engineering Core. In addition it requires 94 credit hours minimum of Specialization (option) coursework. The program leads to concurrent Bachelor of Science and Masters of Science in Engineering degrees. The program is available in all options listed under the Four Year Program (EGU). Detailed information for each option of this 246 credit hours minimum program is available in the responsible department.

POST-BACCALAUREATE MASTER OF SCIENCE IN ENGINEERING DEGREE (EGP)

MASTER OF ENGINEERING DEGREE PROGRAM (EGM)

General Information on these two degree programs is furnished in Part I of the USF Bulletin. Detailed information on requirements in each of the college's areas of concentration is available in the responsible department.

OTHER REQUIREMENTS FOR ENGINEERS

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 University of South Florida 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. The undergraduate engineering program at the University requires, in addition to the minimum Distribution requirement of the University, an additional 22 credit hours of Humanities and Social Science course work.

Florida community college transfer students who have completed their General Education Requirements will not have to meet USF's General Distribution requirements. However, as is the case with USF students who have to take more than the minimum Distribution Requirements coursework in this area, the community college transfer student must expect to take some additional carefully selected upper level coursework in this area to meet the education standards for professional engineering programs in the SOCIAL SCIENCE AND HUMANITIES area.

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. This examination will be administered by the faculty of the University's English program and students evidencing a deficiency will be required to initiate the necessary corrective programs, with the assistance of their advisers. Correction of any deficiency must be effected prior to recommendation of the student for graduation by the faculty of the College.

Foreign students entering the College of Engineering must have taken, for advising purposes, the Test of English as a Foreign Language (TOEFL), and have the score sent to the University's Admissions Office. A full-time student is expected to achieve a score of 550 or better.

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 the ability to apply mathematics will be required to take remedial course work 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 Office of the Dean.

4. Continuation Requirements

All undergraduate students registered in the College of Engineering are expected to maintain the minimum of 2.0 average ("C" average) for all work attempted while registered in the College. Students who do not maintain this requirement will be declared ineligible for further registration for course work and degree programs in the College unless individually designed continuation programs have been prepared by the student's adviser and approved by the academic committee of the College.

Key courses, including but not limited to Calculus, Physics and Engineering core courses in the student's area of specialization, must be passed with a grade of "C" or better before taking the next course in the sequence.

Students pursuing an engineering degree program are expected to take their courses on a graded (ABCF) basis. (Exceptions are required courses not available on a graded basis.)

5. Requirements for Graduation

In addition to the completion of the course work and/or project requirements of the respective programs of the College, students must be recommended for their degrees by the faculty of the College. It is expected that students completing their master's program would have completed their advanced work with a minimum average of 3.0 or "B." The awarding of a baccalaureate degree requires a minimum average of 2.0 or "C" for all engineering coursework attempted while registered in the College. Students attempting but not completing their master's requirements may elect to request the awarding of the bachelor's degree, provided they have met that degree's requirements.

In addition to the College requirements listed above, degree candidates are expected to meet applicable special departmental requirements.
APPLIED SCIENCE AND TECHNOLOGY

Engineering Science

- FOUR-YEAR PROGRAM—
  BACHELOR OF SCIENCE IN
  ENGINEERING SCIENCE DEGREE
  (EGC)
- FIVE-YEAR PROGRAM—MASTER
  OF SCIENCE IN ENGINEERING
  SCIENCE DEGREE (EGC)
- POST-BACCALAUREATE—MASTER
  OF SCIENCE IN ENGINEERING
  SCIENCE DEGREE (EGC)
- DOCTOR OF PHILOSOPHY
  DEGREE IN ENGINEERING
  SCIENCE (EGC)

General information on these programs is furnished in Part
1 of the USF Bulletin. For detailed information the following
offices should be contacted:
- Option/Specialization, Department
- Computer Science, Electrical and Electronic Systems
- Applied Mathematics, Dean's Office
- Biomedical Systems, Dean's Office

OTHER REQUIREMENTS
FOR ENGINEERING
SCIENCE

The Other Requirements for Engineers on page 33 are applicable
to Engineering Science students.

Engineering Technology

- BACHELOR OF
  ENGINEERING
  TECHNOLOGY (ETK)

General information on these programs is furnished in Part
1 of the USF Bulletin. For detailed information contact:
Coordinator for Engineering Technology
USF St. Petersburg Campus
830 First Street, South
St. Petersburg, Florida 33701
or
Coordinator for Engineering Technology
College of Engineering
University of South Florida
Tampa, Florida 33620
COLLEGE OF FINE ARTS

PROGRAMES AND CURRICULA

Courses for Degree Programs:
The College of Fine Arts offers courses of study leading to undergraduate degree programs (the B.A. degree) in the Departments of Art, Dance, Music, and Theatre Arts; and leading to graduate degree programs in the Departments of Art (the M.F.A. degree) and Music (the M.M. degree).

Joint Programs:
Degree programs in Art Education and Music Education are offered jointly by the College of Fine Arts and the College of Education. Studio and history courses in art, and in vocal and instrumental music for these programs, are offered by the College of Fine Arts. (See programs under the College of Education.)

Courses for General Distribution Requirements:
Courses in the College of Fine Arts with the departmental prefixes ART, DAN, MUS and TAR fall within Area II of the University's General Distribution Requirements. This means that any student in the University may utilize art, dance, music, and theatre courses toward the partial satisfaction of the University's 60-hour General Distribution Requirements. (See Part I of the University Bulletin for a complete description music, and theatre courses toward the partial satisfaction of the University's 60-hour General Distribution Requirements. (See Part I of the University Bulletin for a complete description of General Distribution Requirements and their satisfaction by 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.

Fine Arts Courses as Electives (and Policy for Course Availability in the College, Generally):
Any student in the University, regardless of the student's departmental, college or major affiliation, may take any course in any one of the various programs in any one of the four departments in the College of Fine Arts for elective credit as well as for the General Distribution Requirement when the course is appropriate to the student's level, when the student has the established prerequisites for the course, and when there is a vacancy in the course at the time of the student's registration.

Advising in the College:
Upon admission to the College of Fine Arts, undergraduate students with a declared major will be counseled in their selection of courses by an adviser from the major field. Students will then plan the remainder of their college program to fulfill their educational needs and to satisfy requirements for the Bachelor of Arts degree.

Degree-seeking graduate students accepted into the M.F.A. program in art or into the M.M. program in music will be counseled on program completion requirements and in their selection of courses by the Graduate Art Adviser or by the Graduate Music Adviser.

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

Special Assistance to the Student:
Student academic problems of an unusual or extraordinary nature, even seemingly unsolvable problems needing particular attention and personalized clarification and/or resolution, may be directed to the Coordinator of Advising and Graduate Studies in the College of Fine Arts.

B.A. Degree Requirements in the College of Fine Arts (Art, Dance, Music, Theatre Arts):

1. In Art and in Dance, a minimum of 63 hours in the major.
2. In Theatre Arts, a minimum of 64 hours in the major.
3. In Music, a minimum of 96 hours in the major.
4. For all majors, 60 hours in General Distribution Courses.
5. For Art, Dance, and Theatre Arts majors, 35 hours of Free Electives (of which 28 hours may be taken in the major).
6. For Music majors, 7 hours of Free Electives (none of which may be taken in the major).
7. For Art and Dance majors, 22 hours of Special Requirements outside the major department.
8. For Theatre majors, 21 hours of Special Requirements outside the major department.
9. For Music majors, 17 hours of Special Requirements outside the major department.

Contracts and Permission Slips
All Directed Studies courses in the College and all variable credit courses in the College require contracts between students and instructors describing the work to be undertaken by the students and specifying the credit hours. These contracts are to be completed with 4 copies and signed by the student, the instructor and the Department Chairman. The student and the instructor each retain a copy, with one copy going to the College Advising Office. 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.

Permission Slips: Admission into some courses is possible only by consent of instructor (CI), consent of chairman (CC), or by audition or portfolio review. When such special permission is required, it will be the student's responsibility to obtain any required "Permission Slip" for presentation at registration.

Additional Contracts: The College of Fine Arts requires that any S/U grading agreement entered into between student and instruc-
tor be formalized by a contract in quadruplicate signed by the student and the instructor. Distribution: one copy retained by the instructor, one copy for the student, one copy delivered to the department office and one copy delivered to the College Advising Office.

1 Grades (Incompletes) must be contracted for by mutual agreement between student and instructor, with the contract describing specifically the amount and nature of the work to be completed for the removal of the incomplete grade. This contract additionally clearly specifies the date that the work will be due (within legal limits) for grading. Both the student and the instructor must sign this contract and the distribution of the four copies will be the same as with S/U contracts.

S/U Grading in the College
1. Non-majors enrolled in college major courses may undertake such courses on an S/U basis with instructor approval.
2. S/U grading agreements between instructors and students must be carried out in the form of written contracts.
3. The timetable for the completion of an S/U contractual agreement between instructor and student in any given quarter will be determined solely by the instructor.
4. 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 required-for-graduation 35 hour Free Elective category (with the exception of music).
5. Although Fine Arts major students may take up to 28 hours of course work in their major to be used as Free Electives (with the exception of music majors), Fine Arts students are not entitled to the S/U grading option in courses taken in their major subject area, even when specifically used or intended to be used as Free Electives.
6. 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).
7. With the exception of such courses as may be specifically required under the College's "Special Requirements" regulations, and such specific courses that may be required in the General Distribution area, there will be no limitation whatsoever placed on student majors in the College as to the number of courses taken S/U outside of his major department, nor upon the number of hours that may be taken S/U outside of the major department, nor upon the number of courses or hours that may be taken S/U outside the major department during any given Quarter of study.

Dean's List Honors
The Dean's List Honors will be published quarterly by the Dean of the College of Fine Arts. The following are criteria for Dean's List Honors to students majoring in the College of Fine Arts:
1. The Dean's List will be limited to a maximum of the top 5% of the undergraduates in the College of Fine Arts.
2. The Dean's List will be further limited to the undergraduates in the College of Fine Arts who earn a grade point average of 3.3 or better for course work undertaken in any given quarter.
3. The student must be enrolled for and successfully complete a minimum of 12 USF credit hours of course work during a given quarter in an undergraduate degree seeking program to be eligible for that quarter.
4. The only S/U grades in these first 12 hours will be the non-optionals.
5. No restriction other than above will be placed on courses graded S/U.
6. "I" grade (incomplete) limitations:
   a. The Dean's List may not be achieved retroactively. Example: A student undertakes 13 quarter credit hours under the conventional letter grade system in a given term. He receives a five hour "A" and a four hour "A" and a four hour "I" (incomplete). The student would initially disqualify due to the fact that the minimum of 12 successfully completed hours was not met. Even if the student should complete the incomplete work as early as the next quarter, and even if the "I" grade were to be replaced by an "A" grade, the student would not be recognized for the Dean's List Awards retroactively.
   b. The Dean's List may not be achieved by a student for graded work in any given quarter for whom an "I" grade exists, unresolved, for any previous quarter.

PROGRAMS AND CURRICULA

ART (ART)
Requirements for the B.A. Degree:
The listing of courses in the Art Department (page 70) are in a numerical sequence, by level, and are not topically grouped by subject matter-related areas or sequentially organized by specific disciplines in such a manner as to suggest the various major concentration options available to the art major.

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

The major concentrations, or areas of emphasis, available to undergraduate (B.A. seeking) art students are:

- DRAWING
- PAINTING
- SCULPTURE
- CERAMICS
- GRAPHICS
- (LITHOGRAPHY and/or INTAGLIO and/or SILKSCREEN)
- PHOTOGRAPHY
- CINEMATOGRAPHY and VIDEO
- ART HISTORY and THEORY

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. (See 500 and 600 level courses leading to the graduate MFA degree following the undergraduate course listing.)

Art Studio Concentration
The following are the requirements for a studio major:
1. ART 201, ART 202 and ART 301, each with a grade of "C" or better.
2. Minimum of 12 hours of 300-level studio courses.
   ART 201 is a prerequisite to all two-dimensional media courses;
   ART 202 is a prerequisite to all three-dimensional courses;
   ART 301 is prerequisite to all 300-level studio courses.
3. Minimum of 12 hours of 400-level studio courses and/or technique seminars. PR: 300-level equivalent. ART 201, ART 202, and ART 301.
4. Minimum of 12 hours in Idea Seminars, and/or art history courses. Basic Seminar, ART 301, is a prerequisite to the Idea Seminars (ART 491). Art history has no prerequisite except for appropriate level. ART 476 20th Century Art History, is required of all art majors.
5. ART 453, Art Senior Seminar.
6. Additional art courses for a total of 63 credit hours.
7. Admission to all 500-level studio courses is by Consent of the Instructor.

Art History Concentration

Requirements are as follows:
1. ART 201 (4), ART 202 (4), and ART 301 (2).
2. Minimum of 16 hours from the following: ART 470, ART 471, ART 472, ART 473, ART 474, ART 475, ART 477; and ART 476, for a total of 20 hours in art history.
3. Seminar in the History of Art History (offered under ART 499); PR: 16 hours in art history.
4. Minimum of 16 hours of ART 491 (2), and/or ART 498 (4).
5. ART 453 (3), ART Senior Seminar.
6. Additional art courses to total 63 credit hours.
7. Proficiency in at least one foreign language.

Special Requirements for All Art Majors

At the discretion of the Art Department, major students may be required to take up to 22 hours of courses outside the Art Department which are deemed necessary to meet the particular needs of individual students engaged in special areas of study in that department. Of these, at least 9 hours must be taken in the other departments of the College of Fine Arts.

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

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

M.F.A. Degree Requirements

The M.F.A. degree requires a minimum of 72 quarter hours. With the exception of ART 682 (which must be taken at least twice), ART 683, ART'684, and ART 699, which are required, the specific course structure of any student's graduate program will be determined by Faculty Graduate Committee appraisal of the student's interests, capacities and background during his first quarter of residency. It should be noted that under normal circumstances, students will be encouraged to take a broad range of courses rather than more toward a narrow specialization. (A graduate degree in Art History is not offered).

The thesis required for the M.F.A. Degree, while primarily a body of creative visual work (as opposed to the traditional written scholarly research document with standardized requirements), has other components and is developed in the following manner:

1. The production of the body of visual work for a Thesis Exhibition under the guidance of the student's major professor (who will be the Chairman of the student's graduate committee) and the two remaining faculty members on the student's graduate committee.

2. The formally scheduled Thesis Exhibition itself. Although the reservation of desired available space and dates is arranged in advance between the student and the Exhibitions Coordinator, the body of thesis work to be presented must receive the final approval of the student's entire graduate committee before there may be a Thesis Exhibition.

3. The Documentation of the Thesis Exhibition, which is not to be confused with "the thesis" as described in Part II section of the University Bulletin "Division of Graduate Studies", under "Master's Degree" on page 62,) as being required to conform to the guidelines in the Handbook of Graduate Theses and Dissertations ... ." The required Documentation normally consists of two parts: (a) A record in 35 mm. slides of each piece of work in the Thesis Exhibition when appropriate, such as in the case of paintings, sculptures, ceramics, etc. (obvious exceptions would be in the case of Cinematography, Video, etc.). Five sets of the documenting slides are normally required by the College for distribution and will be retained, the student bearing the expense. (b) A logically developed, well organized, clearly articulated, written documentation of the development of the Thesis work. Although there is no rigidly prescribed style or format, the written documentation should be conceived and designed to reveal rather than to conceal, to communicate rather than to preclude communication, and must provide supporting evidence of an aesthetic awareness and of a creative sensibility.

The student's entire graduate committee must give its preliminary approval of the written Documentation prior to the student's scheduled oral defense of that Documentation (at the time of and necessarily in connection with the Thesis Exhibition).

Each member of the student's graduate committee will sign final approval of the written Documentation only after the completion of the oral defense, and then only after any required corrections or changes are acceptably made. The signed original and four signed copies of the finally approved written Documentation must be submitted for permanent retention before the degree approval.

4. The oral defense of the Thesis Exhibition accompanying the oral defense of the written Documentation (as outlined above).

### DANCE (DAN)

Requirements for the B.A. Degree:

Modern majors are required to take, for a total of 63 hours:

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<thead>
<tr>
<th>Course (DAN)</th>
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<tbody>
<tr>
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<td>DAN 464</td>
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</tbody>
</table>

Ballet majors are required to take, for a total of 63 hours:

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<td>DAN 464</td>
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### MUSIC (MUS)

Requirements for the B.A. Degree:

All students seeking a degree in music are required to (1) complete successfully the secondary piano requirements as defined by the music faculty, (2) present a partial public recital during their junior year, (3) present a complete public recital during their senior year. These requirements are in addition to the actual course requirements listed below.

A total of 96 hours is required as follows:

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<thead>
<tr>
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<tbody>
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<tr>
<td>MUS 402</td>
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<td>MUS 403</td>
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</tbody>
</table>
For applied majors, 36 hours of applied music is required:

- MUS 204 (9)
- MUS 304 (9)

One ensemble per quarter is required in conjunction with applied music enrollment.

For Composition Majors:

Undergraduates majoring in composition must complete a minimum of 36 credit hours from among the following sequence of courses including MUS 307 and at least one quarter of MUS 458, satisfying all necessary prerequisites for all courses:

- MUS 205 Introduction to Electronic Music (3)
- MUS 208 Composition (3)
- MUS 308 Composition (3)
- MUS 309, 310, 311 Contemporary Techniques of Composition (3,3,3)
- MUS 408 Composition (3)
- MUS 455, 456, 457 Electronic Music—Real-Time Performance (3,3,3)
- MUS 458 Composition (3)
- MUS 459 Seminar in New Musical Systems (3)
- MUS 410, 411 Orchestration (3,3)

In consultation with, and with the approval of the entire composition faculty, the senior requirement for composition majors is to be satisfied in any of the following three ways, or in other ways so designated by the composition faculty: (1) a complete public concert of works by the student composer, (2) the public performance of several compositions in various concerts throughout the composer's senior year, (3) 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.

Requirements for the M.M. Degree:

The applicant for the Master of Music degree program will need to satisfy the following requirements in music before initial registration: (1) performance audition, and (2) placement examinations in music theory-literature.

The specific program for each student will vary according to his needs and interests. Each program must be approved by the student's adviser in conformance with the guidelines established by the Graduate Music Committee. The courses generally available to music graduate students are listed at the 500 and 600-level. A minimum of 54 quarter hours is required.

THEATRE ARTS (TAR)

Requirements for the B.A. degree: Total 180 hours

TAR MAJOR REQUIREMENTS: (total of 64 hours)

All students must take:

- TAR 201 (2)
- TAR 211 (4)
- TAR 212 (4)
- TAR 213 (4)
- TAR 311 (4)
- TAR 321 (4)
- TAR 339 (4)

Plus one from:

- TAR 403 (6)
- TAR 453 (4)
- TAR 430 (4)
- TAR 431 (4)
- TAR 434 (4)
- TAR 437 (4)

Depending upon choice of concentration, additional requirements are:

PERFORMANCE:

- TAR 410 (4)
- TAR 411 (4)
- TAR 412 (4)
- TAR 413 (4)
- TAR 414 (4)

Plus one from:

- TAR 415 (4)
- TAR 438 (4)
- TAR 439 (4)

TECHNOLOGY AND DESIGN:

- TAR 421(2), 422(2), 423(2)

Plus any three from:

- TAR 420 (2)
- TAR 424 (2)
- TAR 425 (2)

And a choice of either all of:

- TAR 461 (4)
- TAR 462 (4)
- TAR 463 (4)
- TAR 474 (4)
- TAR 475 (4)

or all of:

- TAR 464 (4)
- TAR 465 (4)
- TAR 472 (4)
- TAR 473 (4)

Special Requirements:

A. Courses inside or outside TAR department as suggested by TAR faculty or advisers as necessary for an individual student's progress; or additional Free Electives (see restrictions in catalog Part I) 12 hours

B. When the student makes an initial declaration of major, a reading list will be presented. The list is comprised of plays, books and articles which the department considers essential to the general knowledge of majors. The student will be expected to read independently from this collection.

University and College of Fine Arts Requirements:

A. General Distribution Requirements (details in catalog Part I) 60 hours

B. Free Electives (up to 28 hours may be taken in TAR courses beyond major requirements) 35 hours

C. Special Requirements—courses in other departments in College of Fine Arts 9 hours
The major objectives of the College of Medicine are, first, to create and maintain an academic environment in which medical education, the production of new knowledge, and community service may be continued in a quality manner. The second objective is to integrate the College of Medicine into the mainstream of the community and to participate in and lead in the up-grading and improvement of the health care standards of the community in which the College is located. The third objective is to function within the framework of the total University as an integral and valued part of the University community.

The philosophy of the educational program at this institution is to provide a strong academic basis for lifetime scholarship in medicine and growth in professional stature for our students; to lay the foundation for the development of ever increasing technical and professional competency and proficiency in the arts and sciences of medicine for each of the students; to instill in our students compassion and a sense of devotion to duty to their profession and to their patients; to provide relevance and continuity in instruction among the various disciplines related to medicine; to maintain and increase our students' motivation for community and human service in the practice of their profession; to stimulate the students to accept major responsibilities in learning; to orient teaching activities around the student and his desire and ability to learn.

With these concepts in mind, a curriculum has been developed which we believe will achieve an effective correlation between the pre-clinical and clinical instructional areas. This curriculum is designed to emphasize conceptually oriented teaching, thus affording the students a challenging and intellectual experience as opposed to a routine and the superficial presentation of a large volume of facts. Relevance to medicine will be emphasized in all areas of instruction in a way recognizable and understandable by the student of medicine. Increased correlation on an interdisciplinary basis will be instituted providing reinforcement between the various fields of study. The curriculum will also provide a close and ongoing experience for the student in the day-to-day and continuing health care delivery system within the community hospitals and in ambulatory care facilities. It is anticipated the program will produce graduating physicians who understand and desire the practice of medicine as a fruitful and meaningful choice for a lifetime career of service to their patients and the community.

It is recognized that the program does place heavy demands upon the students. They will be expected to utilize all resources provided by the College, to maintain a consistent level of academic achievement, and to demonstrate evidence of initiative and dedication to their chosen profession.

**MEDICINE**

Students admitted to the College of Medicine, seeking an M.D. degree, are selected on the basis of what appears by present standards to be the best suited for the successful study and practice of medicine. The selection is made by the Admissions Committee composed of members of Preclinical, Clinical and Volunteer faculty. Each applicant is considered individually and is judged strictly on his or her own merits. Characteristics evaluated include motivation, integrity, character, and general fitness. These are judged by recommendations of the applicant's Pre-Medical Advisory Committee as well as other letters of recommendation. The academic record and Medical College Admission Test furnish an estimate to academic achievement and intellectual competence. Interviews are arranged for applicants whose qualifications appear to warrant complete exploration.

All inquiries concerning admission should be directed to the Assistant Dean for Admissions, Office for Admissions, College of Medicine, University of South Florida, Tampa, Florida 33620.

**Requirements for Admission**

A minimum of three years of college or university work is required with some preference given to those applicants who present a bachelor's degree from a liberal arts college approved by one of the national accrediting agencies. The minimum requirement is three years of college work (90 semester hours or 135 quarter hours, exclusive of Physical Education and R.O.T.C.)

Regardless of the number of years involved in Pre-Medical training, the college credits submitted by the applicant must include the following:

- One Year—General Chemistry, including laboratory
- One Year—Organic Chemistry, including laboratory
- One Year—Physics, including laboratory
- One Year—Biology, including laboratory
- One Year—Mathematics

All applicants must arrange to take the Medical College Admission Test.

**Requirements for Graduation**

The awarding of the degree Doctor of Medicine will follow successful completion of the entire required course of study. Appropriate arrangements for post graduate training must be made. Grading of performance in academic subjects will be on a pass, fail, honors grading system, and the student must have achieved a grade of at least pass in all subjects in the curriculum.

**Doctor of Philosophy Degree in Medical Sciences**

A graduate program leading to the Doctor of Philosophy degree in Medical Sciences is offered by the Basic Science Departments of the College of Medicine. Information concerning this program may be obtained by contacting the Graduate Coordinator, College of Medicine, University of South Florida, Tampa, Florida 33620.
Further requirements in liberal arts training enlarges awareness of the past heritage, enhances appreciation of the arts, and increases effectiveness of inter-personal communication. For the student wishing to explore in depth areas in science and mathematics, the College of Natural Sciences offers graduate programs in every department.

BACCALAUREATE LEVEL DEGREE PROGRAMS

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

Admission to the College

A student who has been accepted as a first-time student at this University may be admitted to the College of Natural Sciences by declaring any major or program offered by the College. A student who wishes to transfer from the Division of University Studies or from another college of this University must in addition have an overall grade point average of 2.0. At the time of admission to this College, the student will be assigned a faculty adviser for counseling and program planning. Students preparing for a science or mathematics career must plan their courses carefully because of the sequential nature of the science curricula, and students seeking entrance into a professional school or medical technology internship program require specialized counseling. Because of this, immediate application for admission into the college is strongly recommended.

Information on departments, majors, programs, counseling and other services of the College can be obtained from the office of the dean or by contacting the Director of Advising, College of Natural Sciences, University of South Florida, Tampa, Florida 33620.

General Requirements for Degrees

In addition to the university graduation requirements found in Part I, the requirements for graduation in any undergraduate degree in the college are as follows:

1. Completion of a sequence of courses constituting a major program. A major program is defined to be courses in a department of concentration plus supporting courses in related departments. All courses in the major program must be taken with letter grade except those courses which are graded S/U only. A 2.0 grade point average must be achieved in courses in the department of concentration and a 2.0 grade point average must be achieved in the supporting courses of the major program. For a more detailed description of the major program requirements, consult the appropriate departmental section.

2. Satisfaction of the University distribution requirement, except:
   (a) In area III, the minimum requirement of eight hours in Mathematics may be waived by credit in at least eight hours of Mathematics courses required by the major.
   (b) In area IV, the minimum of eight hours in Natural Sciences may be waived by credit in at least eight hours of natural sciences courses required by the major.

3. Completion of 25 hours of courses from the Colleges of Fine Arts, Social and Behavioral Sciences, or Arts and Letters. The student may elect any course from any of these colleges provided:
   (a) The courses are approved by the students' adviser.
   (b) No more than 12 hours are taken in courses in any one prefix.

Courses taken to satisfy the University Distribution Requirement may not be used to satisfy this requirement.

4. At least 45 credit hours with letter grades must be earned in the College of Natural Sciences.

5. At least 45 of the last 90 hours of undergraduate credit must be in residence in courses (with letter grades) at the University of South Florida. The approval of the dean must be secured for any transfer credits offered for any part of these last 90 hours.

Credits transferred from other schools will not be included in the grade point average computed for graduation. However, graduation with honors requires a 3.5 average in USF work and also in any previous college work.
Typically, courses in the University receive letter grades (A,B,C,D,F,I). However, the college recognizes that educational competence may be achieved and demonstrated by experiences other than classroom attendance leading to letter grades. The attention of the student is directed to the following:

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

A. With the exception of courses graded S/U only, all courses required to satisfy the departmental major and all supporting courses required by the departmental major are considered in the students' major program and may not be taken S/U. However, once the requirements of the major program have been satisfied, subsequent courses taken in the major or supporting areas are considered free electives and may be taken S/U. All hours required to complete the 24-hour rule must be taken by letter grade.

B. With the exception of ENG 101, 102, 103 all courses in Distribution Requirements and all courses in free electives may be taken S/U. There is no restriction regarding the number of hours to be taken S/U except the graduation requirement that the student must earn at least 45 credit hours with letter grades in the College of Natural Sciences.

C. Students will be permitted to enroll in a course by an S/U on the basis of a written contract signed by the student, and the instructor of the course. This contract should be completed no later than the third week of the quarter in which the course is offered.

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

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

### GRADUATE LEVEL DEGREE PROGRAMS

Programs of graduate study are available in every department of the College of Natural Sciences. Students apply for graduate work through the College of Natural Sciences and are recommended for admission by the department in which they intend to concentrate. A departmental committee is appointed which supervises and guides the program of the candidate. The general University requirements for graduate work at the master's level are given on page 62, and for the Ph.D. degree on page 62. The specific requirements for each department are listed under that department below. For further information regarding admission and the availability of fellowships and assistantships a candidate should write to the appropriate departmental chairman, University of South Florida, Tampa, Florida 33620.

**Master's Degree Programs**

The College of Natural Sciences offers graduate programs leading to the Master of Arts degree in the fields of Astronomy (AST), Botany (BOT), Mathematics (MTH), Microbiology (MIC), Physics (PHY), and Zoology (ZOO); and a Master of Science degree in Chemistry (CHM), Geology (GLY), and Marine Science (MSC).

**Doctor’s Degree Programs**

The College of Natural Sciences offers three programs leading to the degree of Doctor of Philosophy:

- **Biology (BIO)**—This program leads to the Ph.D. in Biology, including the fields of Marine Biology, Systematics, Behavior, Ecology, and Physiology.
- **Chemistry (CHM)**—This program leads to the Ph.D. in Chemistry, including the fields of Analytical, Biochemistry, Inorganic, Organic and Physical Chemistry.
- **Mathematics (MTH)**—This program leads to the Ph.D. in Pure and Applied Mathematics.

### ASTRONOMY (AST)

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

1. Astronomy Courses (34 cr. hrs. of upper level courses minimum)
   
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**A minimum of 8 cr. hrs. from:**

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**A minimum of 1 cr. hr. from:**

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</table>

**Number of Electives: 1-6**

**Supporting Courses in the Natural Sciences (45-46 cr. hrs.)**

- **MTH 302-305 (17)**
- **MTH 401 (4)**
- **PHY 201-206, 315 (18)**
- **PHY 307 (3)**
- **PHY 309 (4)**
- **PHY 323 (4)**
- **PHY 331 (4)**

**At least one of the following Mathematics courses:**

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</thead>
<tbody>
<tr>
<td>MTH 311</td>
<td>4</td>
</tr>
<tr>
<td>MTH 323</td>
<td>4</td>
</tr>
<tr>
<td>MTH 345</td>
<td>5</td>
</tr>
</tbody>
</table>

**At least three of the following Physics courses:**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 301-306</td>
<td>12</td>
</tr>
</tbody>
</table>

**At least one of the following Mathematics courses:**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 445</td>
<td>3</td>
</tr>
<tr>
<td>MTH 447</td>
<td>4</td>
</tr>
</tbody>
</table>

**General Distribution Requirements**

(60 cr. hrs. excluding waivers)

The astronomy major must satisfy the General Distribution requirements of the College of Natural Sciences (See page 40).

**Liberal Education Electives**

The student must satisfy 24 hours of liberal education electives as described in item 3 of the graduation requirements of the College of Natural Sciences. (See page 40).

**Free Electives (40 cr. hrs. maximum)**

The student is expected to familiarize himself with the techniques of programming electronic computers before the end of his sixth quarter.

For students planning to attend graduate school, it is strongly recommended that they enroll in several courses numbered 500 or higher from group I above. They should also include FRE 101, 102, GER 101-102, or RUS 101-102 in their course work or achieve an equivalent level of competence in at least one of these three languages.
Teacher Education Programs:

For information concerning the M.A. degree for junior college teachers, see page 30.

Requirements for the M.A. Degree:

General requirements for graduate work are given on page 61. A minimum of 45 credits must include at least 24 for courses numbered 600 or higher and at least 18 for structured astronomy courses numbered 500 or higher. It will be assumed that the student knows enough mathematics and physics to follow any astronomy courses required in his curriculum. No credit is available for courses numbered 499 or lower which the student takes in order to make up for his initial deficiencies in this respect. Since candidates for the graduate degrees in astronomy may have a variety of backgrounds, including majors in astronomy, mathematics, or physics, the required course of studies may vary considerably among students.

A thesis is required and must be based on original work. In lieu of the thesis, however, the student may be permitted to enroll for at least 8 additional hours on a level of courses numbered 500 or above beyond the present requirements. It will be expected that the student will be assigned to a faculty member and perform research under this faculty member's direction. The student must also demonstrate, before the degree is granted, his ability to translate into English the pertinent scientific literature in at least one of the foreign languages: German, French, or Russian. This last requirement may, in exceptional cases, be replaced by an equivalent one agreeable to the student and the department chairman.

**BIOLOGY (BIO/BOT/MIC/ZOO)**

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

Four specific Bachelor of Arts degrees (Biology, Botany, Microbiology, and Zoology) are available for students interested in the biological sciences. They are all preparatory for careers in teaching agriculture, medicine, dentistry, marine biology, biotechnology, or for post-graduate study in any of the various life sciences. Students should study the requirements listed below and then make maximum use of the vigorous advising program maintained by the Department in structuring their total program. A reading knowledge of a modern foreign language (German, French, or Russian) is strongly recommended for those who intend to enter graduate school.

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

I. Department of Biology Courses

A. Biology Core Courses (Required for all B.A. Degrees, 35 cr.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 201</td>
<td>3</td>
</tr>
<tr>
<td>BIO 203</td>
<td>2</td>
</tr>
<tr>
<td>BIO 331</td>
<td>4</td>
</tr>
<tr>
<td>BIO 445</td>
<td>4</td>
</tr>
<tr>
<td>BIO 451</td>
<td>5</td>
</tr>
<tr>
<td>BIO 452</td>
<td>5</td>
</tr>
<tr>
<td>MIC 351</td>
<td>5</td>
</tr>
<tr>
<td>MIC 453</td>
<td>5</td>
</tr>
<tr>
<td>MIC 456</td>
<td>6</td>
</tr>
<tr>
<td>CHM 211</td>
<td>3</td>
</tr>
</tbody>
</table>

B. Individual Degree Requirements

Biology Major (BIO) (25 cr. hrs.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIO 201</td>
<td>3</td>
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<tr>
<td>BIO 203</td>
<td>2</td>
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<tr>
<td>BIO 331</td>
<td>4</td>
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<tr>
<td>BIO 445</td>
<td>4</td>
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<td>BIO 451</td>
<td>5</td>
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<td>BIO 452</td>
<td>5</td>
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<td>MIC 351</td>
<td>5</td>
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<td>MIC 453</td>
<td>5</td>
</tr>
<tr>
<td>MIC 456</td>
<td>6</td>
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<tr>
<td>CHM 211</td>
<td>3</td>
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Botany Major (BOT) (29 cr. hrs.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BOT 421</td>
<td>3</td>
</tr>
<tr>
<td>BOT 302</td>
<td>5</td>
</tr>
<tr>
<td>BOT 311</td>
<td>5</td>
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<tr>
<td>BOT 314</td>
<td>3</td>
</tr>
<tr>
<td>BOT 419</td>
<td>5</td>
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</table>

Microbiology Major (MIC) (25 or 26 cr. hrs.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MIC 351</td>
<td>5</td>
</tr>
<tr>
<td>MIC 453</td>
<td>5</td>
</tr>
<tr>
<td>MIC 456</td>
<td>6</td>
</tr>
<tr>
<td>CHM 211</td>
<td>3</td>
</tr>
</tbody>
</table>

Zoology Major (ZOO) (15 cr. hrs.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ZOO 421</td>
<td>5</td>
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<tr>
<td>ZOO 422</td>
<td>5</td>
</tr>
<tr>
<td>ZOO 423</td>
<td>0</td>
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</tbody>
</table>

II. Supporting Courses in the Natural Sciences (Required for all B.A. Degrees, 44 cr.)

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>CHM 211</td>
<td>12</td>
</tr>
<tr>
<td>CHM 217-219</td>
<td>12</td>
</tr>
<tr>
<td>CHM 331-334</td>
<td>10</td>
</tr>
<tr>
<td>PHY 201-204</td>
<td>10</td>
</tr>
<tr>
<td>MTH 12</td>
<td>12</td>
</tr>
</tbody>
</table>

III. General Distribution Requirements (Required for all B.A. Degrees, 60 cr.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BOT 421</td>
<td>3</td>
</tr>
<tr>
<td>BOT 302</td>
<td>5</td>
</tr>
<tr>
<td>BOT 311</td>
<td>5</td>
</tr>
</tbody>
</table>

IV. Liberal Education Electives

The student must satisfy 24 hours of liberal education electives as described in item 3 of the graduation requirements of the College of Natural Sciences (see page 40). The selection of courses within the requirement is to be done in conference with Biology Department advisers. Note: Based on allowable waivers, a maximum of 24 credit hours will be required for completion of General Distribution Requirements.

V. Free Electives (including General Distribution waivers) can be taken over and above major requirements and major electives.

**Teacher Education Programs:**

For information concerning the degree programs for secondary school teachers and junior colleges, see pages 23, 27, and 30 of this Bulletin.

**Marine Biology**

The field of marine biology is especially important in Florida and there is a good demand for trained personnel. Several faculty members in the Department teach courses and conduct research in this area. Undergraduates interested in specializing in marine biology may do so by taking marine-oriented courses offered within the Department. Appropriate courses include ZOO 313 (Introductory Invertebrate Zoology), ZOO 519 (Ichthyology), ZOO 520 (Echinoderm Biology), ZOO 545 (Zoogeography), ZOO 557 (Marine Animal Ecology), BOT 543 (Phycology), and BOT 547 (Marine Botany). The Biology Department offers M.A. degrees and the Ph.D. degree which allows specialization in marine biology.
Requirements for the M.A. Degree:

General requirements for graduate work are given on pages 61-62.

Major programs are offered in Botany, Microbiology, or Zoology. The M.A. degree may be obtained by completion of a research thesis or by appropriate substitution of structured courses and an approved paper. The satisfactory completion of all general requirements and those specifically stated below are the responsibility of the individual student.

The selection of a major professor must occur within the first three quarters after admission. Failure to do so will be cause for termination. The choosing of a major professor includes acceptance of the student by the faculty member. Until selection is accomplished, the departmental graduate coordinator will function as the student's adviser. The three-member supervisory committee, as approved by the departmental chairman and college dean, must include one faculty member from outside the student's area of specialization.

For students enrolled in the thesis program, a 45 credit hour minimum is required at the 500-600 level; 24 must be at the 600 level or above; 30 of the 45 credit hours must be in formally structured courses of which 22 must be in biology; 15 of the 22 credit hours must be at the 600 level or above. All students in the thesis program must complete the graduate seminar. (BIO 691) and may obtain up to 9 hours for thesis credit. For students enrolled in the non-thesis program, a 45 credit hour minimum is required at the 500-600 level; 40 credits must be in formally structured courses. 24 credits must be at the 600 level or above; 22 must be in biology.

A final comprehensive examination on basic biology is required for all students. This examination is open to all departmental faculty and is normally taken after the completion of formal course work and at least one quarter before thesis presentation.

In some cases, the ability to translate pertinent scientific literature from a foreign language must be demonstrated before taking the comprehensive examination.

Requirements for the Ph.D. Degree:

General requirements are given on page 62.

A doctorate program in biology is offered. Areas of specialization for the Ph.D. are marine biology, ecology (tropical ecology, population ecology, and physiological ecology), physiology (cellular physiology, microbial physiology, neurophysiology), systematics, and behavior. On admission to the Department for doctoral study, the student shall select a major professor from the departmental faculty for the direction of his program. Upon acceptance of the student by the faculty member and before the lapse of three quarters, a five-member supervisory committee will be named and approved by the Department chairman and College Dean. At least one member of the committee shall be from beyond the student's area of specialization. This committee shall approve the courses of study, choice of language skills, and the supervision of the student's research and dissertation.

It is expected that students will have had undergraduate training comparable to that of a USF undergraduate in biology.

A minimum of 30 credit hours are required in formally structured course work above the 500 level. At least 22 of the 45 credit hours must be at the 600 level. All students in the thesis program must complete the graduate seminar. (BIO 691) and may obtain up to 9 hours for thesis credit. For students enrolled in the non-thesis program, a 45 credit hour minimum is required at the 500-600 level; 40 credits must be in formally structured courses. 24 credits must be at the 600 level or above; 22 must be in biology.

A final comprehensive examination on basic biology is required for all students. This examination is open to all departmental faculty and is normally taken after the completion of formal course work and at least one quarter before thesis presentation.

In some cases, the ability to translate pertinent scientific literature from a foreign language must be demonstrated before taking the comprehensive examination.

Graduate Application Deadlines:

Applications must be completed by March 10th for Quarter 1 applicants who wish to be considered for assistantships. All other applications must be completed by the fourth week of the quarter preceding the one for which you are applying.

CHEMISTRY (CHS/CHM/CHC)

The Bachelor of Science degree in Chemistry (CHS) is a rigorous program which supplies the foundation in chemistry required for both the student who begins a chemical vocation immediately upon graduation as well as the one who pursues advanced study in chemistry or related areas (marine science, biochemistry, psychology, business administration, etc.). In accord with this goal the curriculum for the B.S. degree has been certified by the American Chemical Society.

The Bachelor of Arts degree (CHM) provides a course of study designed for the student who does not intend to become a professional chemist but whose career goals require a thorough understanding of chemistry. Inherent in this program is a high degree of flexibility which permits tailoring a course of study to the student's own educational objectives. As such it offers considerable advantages to pre-professional students planning careers in medicine and the other health-related fields and an excellent preparation for primary and secondary school teachers of chemistry or physical science.

A program leading to a B.S. degree in Clinical Chemistry (CHC) is offered by the Department of Chemistry. This program, one of only a few available in the country, will train chemists for a new and growing field serving the medical profession. This program is built upon a strong background of chemistry, biology, and related sciences. Graduates of this program could go on to graduate school in clinical chemistry, biochemistry, or even medical school. Interested students should see the Coordinator of the Clinical Chemistry Program in the Department of Chemistry for further information.

Requirements for the Baccalaureate Degree:

I. Chemistry Courses*

B.A. Chemistry (CHM) (54 cr. hrs.)

CHM 211-Chemistry (219-219) 219

CHM 311-Chemistry (300 level or above) (343 (8)

CHM electives (9)

336 (15)

B.S. Chemistry (CHS) (65 cr. hrs.)

CHM 211-Chemistry (219-219) 219

CHM 291-Chemistry (221) CHM 441-443 (12)

CHM 321-Chemistry (300 level or above) (445 (11)

CHM 491 (1)

CHM 411 (4)
The B.S. Clinical Chemistry (CHC) (66 cr. hrs.)

- CHM 211-217
- CHM 441-443
- CHM 485
- CHM 421
- CHM 423
- CHM 425
- CHM 426

The B.S. Clinical Chemistry (CHC) (54-61 cr. hrs.)

- PHY 201-206 Electives (except 370-470 series) (12)
- MTH 302-304 (13)
- BIO 201-203 (12)
- MIC 351 (5)
- B.S. Chemistry (CHS) (32 cr. hrs.)
  - MTH 302-306 (17)
  - PHY 301-306 (12)

III. General Distribution Courses (60 cr. hrs. excluding waivers)

The student is required to complete the General Distribution requirements of the College of Natural Sciences (see page 40).

IV. Liberal Education Electives

The student must satisfy 24 hours of liberal education electives as described in item 3 of the graduation requirements of the College of Natural Sciences (See page 40).

V. Free Elective* (Including General Distribution waivers)

- B.A. Chemistry (CHM): 31 cr. hrs.
- B.S. Chemistry (CHS): 23 cr. hrs.

The required sequence of Chemistry courses should be started immediately in the freshman year and the mathematics and physics requirements should be completed before the junior year so that CHM 341 (B.A. degree) or CHM 441 (B.S. degree) can be commenced at that time.

*Students taking CHM 215-216 must add 2 more hours of free electives.

Teacher Education Programs:

For information concerning the degree programs for secondary school teachers and junior college teachers, see pages 27 and 30 of this bulletin.

Requirements for the M.S. Degree:

General requirements for graduate work are given on pages 61-63.

All entering graduate students who have no advanced work beyond a B.A. or B.S. will be required to take the core course in each of the five areas: analytical, biochemistry, inorganic, organic, and physical chemistry. This requirement can be waived by recommendation of the supervisory committee on the basis of past work, performance on a diagnostic test, or substitution of more comprehensive and advanced courses. The required core courses are CHM 512, CHM 532, CHM 542, CHM 555, and CHM 621.

Beyond the required core courses, the curriculum for a chemistry major will vary with the area of his thesis. The specific course requirements will be determined by his supervisory committee and his proposed research, in consonance with the regulations given on page 62.

In order to gain the experience that comes from teaching, satisfactory service as a teaching assistant for two academic years is required (unless a specific exemption is recommended by the supervisory committee).

Comprehensive Examination. Each student must pass the written comprehensive examination in three of the five areas: analytical, biochemistry, inorganic, organic, and physical chemistry. Each examination will be administered by the faculty of that area and will be from one to three hours duration. Each examination will be graded by the members of the respective areas, each arriving at a fail-pass-high-pass verdict. A student may repeat any or all of the examinations provided that he has passed three by the time five quarters have elapsed from his admission as either a degree-seeking or a non-degree seeking full-time graduate student. Normally, the examinations will be given during the period preceding Quarters I, II, III, and IV after the preceding quarters have ended.

While it is anticipated that the core courses will bridge the gap between undergraduate and graduate courses, and will therefore help students prepare for the comprehensive examinations, it should be understood that the comprehensive examinations are general examinations in their respective fields and not merely final examinations in the core courses.

Final Thesis Defense. Upon completion of the thesis research and preliminary approval of the thesis by the supervisory committee, the M.S. candidate will be required to pass an oral examination conducted by the supervisory committee on his research. Final approval of the examination and of the thesis will require approval by the entire committee.

Requirements for the Ph.D. Degree:

General requirements for graduate work are given on page 62.

The Ph.D. in Chemistry does not require a specific number or distribution of course credits. The candidate, with the help of his adviser and the approval of his supervisory committee, will design a program of study and research that will result in a mature and creative grasp of chemical science. Approval of the candidate's program will rest with his supervisory committee.

While there are no specific course requirements for the Ph.D. degree, beginning graduate students who plan to circumvent the M.S. degree are advised to take the core courses or their equivalent before attempting the Qualifying Examinations.

In order to gain the experience that comes from teaching, satisfactory service as a teaching assistant for two academic years is required (unless a specific exemption is recommended by the supervisory committee).

Qualifying Examinations. The Qualifying Examination requirement for the Ph.D. degree will be the same as the comprehensive examination for the M.S. degree except that the Ph.D. candidate must pass the examinations in four out of five areas, and he must also pass two of these examinations (one of which is in his major area) "with distinction". In other words, the Ph.D. candidate must demonstrate a very real grasp of the principles in his major area and one other area (probably related to his major area, but not necessarily so). As in the case of the M.S. requirements, a student may repeat any or all examinations, provided that he has passed four, two with high pass, by the time five quarters have elapsed from his admission as either a degree-seeking or non-degree seeking full-time graduate student. The Qualifying Examinations shall be given in the form of one to three hour examinations in each of the five areas—analytical, biochemistry, inorganic, organic, and physical.

While it is anticipated that the core courses will bridge the gap between undergraduate and graduate courses, and will therefore help students prepare for the qualifying examinations, it should be understood that the qualifying examinations are general examinations in their respective fields and not merely final examinations in the core courses.
Language Examinations. Before a student is eligible to qualify for candidacy for the Ph.D. degree, he must demonstrate a reading knowledge of the chemical literature in any two of the languages—German, Russian, and French (or any other language approved as appropriate by the supervisory committee); or he must demonstrate reading knowledge in one of these languages and demonstrate proficiency in a skill or specialization outside the discipline of chemistry. The latter could include (1) proficiency in computer programming; (2) advanced specialization in mathematics, physics, biology, geology, or any other appropriate area pertinent to scholarly work in chemistry; (3) any other field of advanced study of proficiency deemed appropriate by the supervisory committee.

The language requirement must be met by one of the following: (1) reading knowledge in two foreign languages as demonstrated by a test to be specified; (2) reading knowledge in one foreign language and some other proficiency such as computer programming; (3) in-depth knowledge of one foreign language (speaking and reading knowledge); (4) three quarters of a foreign language at the college level with a minimum of C grade in each quarter may be used to waive one language, or, if two foreign languages are taken, the language requirement is fulfilled; (5) periodic translations to be administered by the student's supervisory committee.

The language requirement must be met one year before graduation.

Major Comprehensive Examination. A comprehensive major examination will be required of Ph.D. candidates sometime after satisfactory completion of the qualifying examination. This examination must be taken one year before graduation.

Advancement to Candidacy. Completion of all the foregoing requirements admits the student to candidacy for the Ph.D.

Final Thesis Defense. Upon completion of the dissertation research and approval of the dissertation by the supervisory committee, the Ph.D. candidate will give a public oral presentation of his research. This presentation can be scheduled only after all members of the supervisory committee have approved and signed the final form of the dissertation. The oral presentation will be chaired by a member of the faculty outside of the Department of Chemistry appointed by the Dean of the College. The candidate may expect questions concerning the details and significance of his research after the oral presentation. Final approval of the candidate's degree will require approval by a majority of the supervisory committee, which shall include the chairman of the oral presentation.

GEOLOGY (GLY)

Geology is one of the broadest of all sciences because of its dependence on fundamentals of biology, chemistry, mathematics, and physics as applied to the study of the earth. As a result, undergraduate students are expected to obtain a broad background in the other sciences as well as a concentration in geology. This bachelor's degree program is designed to provide the geology major with a broad foundation that will prepare him for employment in industry or with various governmental agencies as well as the necessary training to continue study in graduate school.

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

In addition to the staff in the Department of Geology, there are a number of geologists on the faculty in the Department of Marine Science located in nearby St. Petersburg. Close ties are maintained between the two departments and students interested in marine aspects of geology are encouraged to take advantage of this situation for both course work and research.

Requirements for the B.A. Degree:

I. Geology Courses (49 cr. hrs.)
- GLY 210 (4)
- GLY 211 (4)
- GLY 212 (4)
- GLY 302 (5)
- GLY 361 (4)
- GLY 405 (4)
- GLY 410 (4)
- GLY 411 (4)
- GLY 412 (4)
- GLY electives

II. Supporting Courses (35-41 cr. hrs.)
- CHM 211-213 (12)
- MTH 211 and 212 (8)
- MTH 123 and 302 (8)
- PHY 201-206 (15)
- PHY 301-306 (12)

Plus one additional course in mathematics, statistics, or computer science as approved by the student's adviser.

III. General Distribution Courses (60 cr. hrs. excluding waivers)

The student is required to satisfy the General Distribution requirements of the College of Natural Sciences. See page 40.

IV. Liberal Education Electives

The student must satisfy 24 hours of liberal education electives as described in item 3 of the graduation requirements of the College of Natural Sciences (See page 40.)

V. Free Electives (Including Distribution waivers) (41-47 cr. hrs.)

The student will choose, in consultation with his Geology adviser, such courses in the College of Natural Sciences that support his major interest within the field of Geology. A foreign language, preferably French, German or Russian, is strongly recommended, especially for those students who anticipate continuing for a doctorate in graduate school. All geology majors are strongly urged to attend a summer field camp.

An entering student anticipating a major in Geology is advised to enroll in GLY 210, 211, 212 and CHM 211, 212, 213, 217, 218, 219, in the freshman year and to seek curriculum counseling with a Geology adviser.

Teacher Education Programs:

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

For information concerning the M.A. degree program for junior college teachers, see page 30.

Requirements for the M.S. Degree:

Requirements for admission to the Division of Graduate Studies and general graduate curriculum guidelines are given on pages 61-63.

Students are admitted for graduate work in Geology if they present the requisite background in Geology and supporting sciences. The bachelor's degree with a major in Geology or a major in other sciences with strong supporting program in geosciences is required. Students who wish to enter the graduate program in Geology without the proper background will be required to take some undergraduate courses without receiving credit toward their master's program. In addition, a formal summer field course is strongly recommended.

The curriculum for a Geology graduate student will vary depending on the area interest and thesis topic of the individual. A minimum of 45 credit hours is required for the master's degree of which a minimum of 24 credits must be in courses numbered 600 or above. All graduate students must take Graduate Seminar (GLY 691) at least twice. Although a written thesis in the student's field of specialization is normally required, an equivalent amount of course work in Geology may be substituted if the program is approved in advance by the graduate committee of
the Department. Satisfactory performance on a comprehensive examination covering the student's course work and thesis is also required.

■ INTERDISCIPLINARY NATURAL SCIENCES (INS)

The Bachelor of Arts in the Interdisciplinary Natural Sciences major is designed for majors in an interdisciplinary program in the college and for majors in Science Education and Mathematics Education. For information on teacher certification in science or mathematics, prospective teachers should consult the section entitled Teacher Education Programs on page 23, and also consult the College of Education section of this bulletin.

The requirements for graduation for this degree are the same as those contained on page 40 except that item 1 of the requirement is altered as follows:

1a. Completion of a major program consisting of a minimum of 68 hours in College of Natural Sciences courses. In these hours there must be a minimum of 36 credit hours in a discipline of major concentration and a minimum of 24 credit hours in supporting courses in the College of Natural Sciences outside the discipline of major concentration. All courses in the major program must be applicable to a major in that department and must have the approval of the student's advisor. At least three of the supporting courses must be at the 300 level or above. Except for courses that are graded S/U only, all courses in the major program must be taken by letter grade. The student must earn 2.0 grade point averages in all attempted course work of both major concentration and supporting courses and must complete at least 45 hours after acceptance into the major, all of which must have prior approval of his adviser.

■ MARINE SCIENCE (MSC)

The Department of Marine Science has its headquarters at the St. Petersburg campus, at Bayboro Harbor, Tampa Bay. There are excellent dockside, classroom, laboratory and research facilities in proximity to the Marine Laboratory of the Florida Department of Natural Resources, as well as the State University System Institute of Oceanography (SUSIO). Field stations are located at the Anclote River and Crystal River areas, and a new aquaculture laboratory is being established at St. Petersburg Beach in cooperation with the Pinellas Marine Institute. The Department operates a fleet of small vessels from 14' to 36' in length, utilizes the SUSIO-chartered vessel, Bellows (67) as well as ships of opportunity from major Atlantic coast oceanographic institutions and agencies.

The majority of graduate students in marine science are supported through research assistantships based on grants and contracts for activities in basic and applied areas. These include: environmental baseline studies on the continental shelves of the eastern Gulf of Mexico, including sediment properties, pollutants, histology and community structure of organisms; estuarine environmental studies near southwest Florida power plants, including ecology of benthos, plankton and fishes, and hydrodynamic modeling; deep sea food chain studies; aquaculture of algae, invertebrates and fishes; nutrient cycles in sea water and sediment-water interfaces; optical and chemical studies of deep ocean particulate matter; sedimentology of Tampa Bay, and geo-physical, geological and geochemical studies in the western Caribbean and Gulf of Mexico.

Cooperation with departments on the Tampa campus is extensive and strongly encouraged.

Requirements for the M.S. Degree:

General requirements are given on pages 61-62. A minimum of 45 credits must include MSC 521, 531, 541, and 551 unless the student, as determined by this graduate committee, has had the equivalent of one or more of these courses.

The student may emphasize biological, geological, chemical, or physical oceanography through his thesis research and course work. A thesis is required but a foreign language is not.

Courses taken in addition to those required are determined by the area of specialty in consultation with the student's graduate committee. Normally, a student entering this program spends one or two quarters in residence at the Tampa campus taking courses in those departments most closely related to his specialty. Following course work at the Tampa campus, the student will usually move to St. Petersburg to complete his course work and thesis research.

■ MATHEMATICS (MTH)

Requirements for the B.A. Degree:

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

1. Mathematics Requirements (47 cr. hrs.)

Majors must complete at least 47 credits in mathematics courses above the 100 level, including MTH 302 (5), 303 (4), 304 (4), 305 (4), 309 (3), and 323 (4). In addition, except for majors in mathematics for teaching, the following sequence is required: MTH 405 (3), 406 (3), and 407 (3). Majors in mathematics for teaching must have MTH 423 (3), and 424 (3).

Suggested upper level courses for a major in mathematics are:

- MTH 401 (4) MTH 520 (4)
- MTH 445 (3) MTH 523 (4)
- MTH 447 (4) MTH 531 (4)
- MTH 511 (4) MTH 547 (3)

Variation in course selection for special needs is to be done in consultation with the appointed adviser.

2. Mathematics Related Courses (21-26 cr. hrs.)

Majors, except for majors in mathematics for teaching, must take PHY 301-302, 303-304, and 305-306 and one of the following sequences:

- 1. AST 301, 302 and one of AST 413, 443, 521, 522, 533, or 536.
- 2. BIO 201, 202, 203.
- 3. CHM 211, 212, 213, 217, 218, 219.
- 4. GLY 210, 211, 212.
- 5. ECN 201, 202, and one of ECN 301 or 323.
- 6. EGB 311, 312, 313.
- 7. EGB 321, 322, and one of EGR 311 or 315.
- 8. EGB 340, 341.
- 9. PSY 201, 311, 312, and one of PSY 402, 403, 404, 405.

Majors will not receive credit toward graduation for the following courses: AST 371, PHY 371, ECN 231, ECN 331, ECN 431, SSI 301. Majors wishing to take a course which requires a knowledge of statistics should take MTH 345.

III. General Distribution Courses (60 cr. hrs. excluding waivers)

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

- FRE 101, 102
- GER 101, 102
- RUS 101, 102

IV. Liberal Education Electives

The student must satisfy 24 hours of liberal education electives as described in item 3 of the graduation requirements of the College of Natural Sciences (See page 40).

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

<table>
<thead>
<tr>
<th>Fall Quarter (I)</th>
<th>Winter Quarter (II)</th>
<th>Spring Quarter (III)</th>
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</thead>
<tbody>
<tr>
<td>Freshman Year</td>
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</tbody>
</table>
Teacher Education Programs:

For information concerning the degree programs for secondary school teachers and junior college teachers, see pages 23, 27, and 30 of this Bulletin.

Requirements for the M.A. Degree:

General requirements for graduate work are given on pages 61-62.

A thesis is optional. The thesis program requires a minimum of 45 credits of course work, of which the thesis may carry three to nine credits. The non-thesis program requires 45 credits of course work. In either case, 24 hours of the course work must be taken in courses numbered 600 or above and the program must total at least 45 credits.

For each of the above programs, one of the following three 8-hour courses is required: MTH 614-615, 624-625, 632-633, and eight hours in each of disciplines—analysis, algebra, and topology. MTH 691 or MTH 681 is required each quarter, and may be omitted or taken more than six times only with the permission of the chairman.

A reading knowledge of either French, German, or Russian is required.

A comprehensive examination will be given to candidates before recommending that the degree be granted.

Requirements for the Ph.D. Degree:

In addition to the general University requirements for the Ph.D. degree, on page 62, the Mathematics department requires the following:

1. The two languages required must be chosen from French, German, and Russian.
2. Written preliminary examinations, usually taken during the second year, must be passed in four of the five following subjects: Algebra, Complex Analysis, Differential Equations, Real Analysis, and Topology.
3. Specific numbers or distributions of course credits are not required. It is assumed that at this level the candidate, with the help of his adviser, and the approval of his advisory committee, will design a program of study and research that will result in a mature and creative grasp of mathematics. Approval of the student's program will rest with his advisory committee.

■ PRE-MEDICAL SCIENCES AND PROFESSIONAL

Medical Technology (MET)

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

During the first three years, the medical technology student will complete the liberal arts and basic science requirements for entrance into the fourth year of the program for clinical training. To remain in good standing as a Medical Technology major during this period, a reasonable grade point average, determined by the College of Natural Sciences, must be maintained. To be eligible for entrance into the program's fourth year, the student must have completed not less than 135 credit hours of work (excluding physical education courses). Of these hours, at least 30 credit hours must be from the College of Natural Sciences at the University of South Florida (in courses approved by the Director of the Medical Technology Program). The following courses must be included in the three years of work which precedes the fourth year of clinical training:

1. Biological Sciences
   A minimum of 24 hours is required with at least one course in microbiology. Physiology (ZOO 321) is strongly recommended.

2. Chemistry
   A minimum of 24 hours is required including organic chemistry. Biochemistry (CHM 351) and Elementary Analytical Chemistry (CHM 321) are strongly recommended.

3. Physics
   A minimum of 12 hours (one full-year majors-type course) is required.

4. Mathematics
   One course in mathematics (above the level of MTH 110) is required. A year of math or its equivalent is strongly recommended.

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

6. Courses in non-science fields to insure a broad background.

Upon successful completion of this curriculum, recommendations by the College, and acceptance by one of the affiliated hospitals or clinical laboratories the student will complete 12 continuous months of training at that hospital or laboratory.

This training period begins in early August or September of each year. During this period, one will continue to be registered as a full-time student of the University and will receive a total of 45 credits hours of work in MET 311, 431, 432, 442, 451, 453, 454, and 485. Theses courses will be taught at the hospital or clinical laboratory. Students successfully completing this program will be granted a Bachelor of Science degree in Medical Technology.

Pre-Medical Sciences Program

The pre-medical sciences program provides a complete array of courses and educational experiences necessary for preparing oneself for admission to a professional school. Pre-medical science students should major in a discipline which is of the greatest appeal to them, whether it be in the sciences or non-sciences, and fulfill all requirements in that major for graduation. The following science courses are the minimum requirements for admission to virtually every accredited professional school:

One year of Biology: BIO 201, 202, 203.
One year of Physics: PHY 201-202, 203-204, 205-206.

Additional science requirements vary according to the professional school to which the student will be applying. Part of these additional requirements may be fulfilled by the following courses:

Chemistry: CHM 321, 341, 351
Mathematics: MTH 211, 212, 213, (or MTH 122, 123, 302, 303, 304)
Biology: BIO 331, 401, 402, ZOO 311

Beyond the science course requirements, it is essential that students acquire an inventory of courserelate and a sensitive understanding of cultural and moral values, and basic social problems. It is understood that the quality of academic performance should be of the highest level.

It may be noted that well-prepared students with exceptional qualifications may be admitted to some professional schools as early as the completion of the junior year of pre-medical work.

B.A. Degree for Medical and Dental Students

Students who are admitted to a medical or dental school after completing their junior year at USF may be awarded the B.A. degree in Interdisciplinary Natural Sciences from the College
of Natural Sciences subject to the following conditions:
1. Transfer of a minimum of 45 hours in science courses from an approved medical or dental school.
2. In attendance at the University of South Florida, the minimum requirements from the Interdisciplinary Natural Sciences major must be fulfilled as follows:
   A. 135 credit hours with at least a "C" average (2.0) in those credit hours completed at the University of South Florida.
   B. Completion of a sequence of courses constituting a major program with courses in a department of concentration and supporting courses in related departments. There must be a minimum of 36 credit hours in the discipline of major concentration and a minimum of 24 credit hours in supporting courses in the College of Natural Sciences outside the discipline of major concentration. The 36 credit hours in the discipline of major concentration must be in courses applicable to a major in that department (and the student must earn a 2.0 grade point average in these courses). The 24 credit hours in supporting courses must be taken in courses applicable to a major in that department and must include a minimum of three courses at the 300 level or above. The student must earn 2.0 grade point averages in all attempted course work of both major concentration and supporting courses, except for any courses graded S/U only, all courses must be taken by letter grade.
3. Credit in the following courses:
   BIO 201, 202, 203
   CHM 211, 212, 213, 217, 218, 219, 331, 332, 333, 334, 335, 336
   PHY 201, 202, 203, 204, 205, 206
4. A minimum of 30 credits from the following courses:
   BIO 331, 401, 402
   CHM 321, 341, 351
   MTH 211, 212, 213
   ZOO 311
5. The General Distribution requirements of the College of Natural Sciences as approved by the student's adviser.
6. At least 45 credit hours with letter grades must be earned in the College of Natural Sciences.
7. The last 45 credit hours prior to transfer to a medical or dental school must be in residence at the University of South Florida.
   Application for the baccalaureate degree must be received no later than two years from the date of entrance into the professional school.

** PHYSICS (PHY/PHS)**

Requirements for the Baccalaureate Degree:

1. Physics Courses

   **B.A. Physics (PHY)** 45-51 cr. hrs.
   - PHY 201-
     - 206 (15)
   - PHY 315
   - or* (3)
   - PHY 301-
     - 306 (12)
   - PHY 307 (3)
   - PHY 407 (3)
   **B.S. Physics (PHS)** 56-63 cr. hrs.
   - PHY 201-
     - 206 (15)
   - PHY 315
   - or* (3)
   - PHY 301-
     - 306 (12)
   - PHY 307 (3)
   - PHY 407 (3)
   - PH 417 (3)
   - PH 309 (4)
   - PH 409 (3)
   - PH 419 (3)
   - PH 341 (2)

   **PHY Electives**
   - (10)

   **PHY 417** (3)
   - (12)
   - PH 409 (3)
   - PH 419 (3)
   - PH 341 (2)
   - PH 417 (3)
   - PH 409 (3)
   - PH 419 (3)
   - PH 341 (2)

   **PHYSICS (PHY)** 301-306
   - PHY 437 (3)
   - PHY 421 or
   - PHY 517 or
   - PH 523 (4)
   - PH 415 (4)
   - PH 501 (4)
   - PH 541 (4)

   **Credit will not be given for both general physics sequences PHY 201-206 and PHY 301-306.**

   **With the consent of the Physics Adviser, either or both of the following substitutions may be made: PHY 437 for PHY 417 and PHY 331 for PHY 419.**

11. Supporting Courses in the Natural Sciences

   **B.A. and B.S. Physics**—(28-33 cr. hrs.)
   - CHM 211-
     - 213 and 217-
   - 219 or (12)
   - CHM 215-
     - 216 (10)
   - MTH 302-
     - 305 or (17)
   - MTH 351-
     - 354 (14)
   - MTH 401 (4)

111. General Distribution Requirements

   **(60 cr. hrs. excluding waivers)**
   The student is required to complete the General Distribution requirements of the College of Natural Sciences (See page 40). Selection of a foreign language, preferably French, German, or Russian, is also strongly recommended.

1V. Liberal Education Electives

   The student must satisfy 24 hours of liberal education electives as described in item 3 of the graduation requirements of the College of Natural Sciences (See page 40).

V. Free Electives (Including General Distribution waivers)

   **B.A. Physics (PHY): 47-58 cr. hrs.**
   **B.S. Physics (PHS): 55-67 cr. hrs.**

Teacher Education Programs:

For information concerning the degree programs for secondary school teachers and junior college teachers, see pages 23 and 30 of this Bulletin.

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

General requirements are given on page 61. When a student is admitted to the graduate program in physics, he will consult with the Graduate Physics Adviser, who will be his course adviser and will also keep a close check on the progress of the student in his work. After a decision has been made concerning the student's academic goals, the duties of the Graduate Adviser will be reassigned to the Graduate Committee of the College of Natural Sciences.

The student desiring the M.A. degree with a thesis is required to take a minimum of 45 credits no more than nine of which may be for PHY 681, 691, and 699. Of these 45 credits, 24 must be in courses numbered 600 or above. Required courses are PHY 537, 541, 607, 631, and 641. The Advisory Committee will administer a comprehensive examination before recommending that a degree be granted.

The student desiring the M.A. degree without a thesis is required to take a minimum of 45 credits, no more than three of which may be for PHY 681 and 691. Of these 45 credits, 24 must be in courses numbered 600 or above. Required courses are PHY 541, 542, 543, 605, 608, 633, 637, and 641. The Advisory Committee will administer a written and oral comprehensive examination before recommending that a degree be granted.
Teacher Education Programs

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

B.A. Degree Program for Secondary School Teachers:

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

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

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

2. The student may complete requirements of the Interdisciplinary Natural Sciences major with concentration in Biology, Chemistry, Physics, and Mathematics. A complete description of this major is found on page 98. This major is particularly appropriate for Science Education majors (SCE).

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

M.A. Degree Program for Secondary School Teachers:

The College of Natural Sciences in cooperation with the College of Education offers the M.A. degree in Mathematics (MAE) and in Science (SCE). In science, concentrations are available in Biology, Chemistry, and Physics. Because requirements exist in both colleges the student will have an adviser in each college. At the outset the planned courses in mathematics and science must be approved by the student's adviser in the College of Natural Sciences.

The University requirements for the M.A. degree are found on page 61. Mathematics majors must complete a minimum of 51 quarter hours; science majors must complete at least 27 quarter hours in the discipline of concentration. For requirements in education the student should consult the College of Education portion of this bulletin entitled "Master's Level Degree Programs—Science Education (SCE)."

M.A. Degree Program for Junior College Teachers:

The M.A. degree program for junior college teachers is available in the College of Natural Sciences with specializations in astronomy, biology, chemistry, geology, mathematics, or physics. Students seeking certification to teach in the state of Florida may select either of the following options:

1. The student may complete the Master of Arts degree program in any department of the College of Natural Sciences and in addition enroll in at least 9 hours of Directed Teaching which is numbered 689 in the appropriate departmental course listing. The master's degree program is normally 45 credit hours. University requirements for an M.A. degree are found on page 61. The specific departmental requirements are found under the appropriate departmental description of this portion of the bulletin.

2. The student may complete the M.A. degree in a program offered jointly by the College of Natural Sciences and the College of Education. This program requires 36 hours in mathematics or science specialization courses which must be approved by the student's adviser in the College of Natural Sciences; 9 hours are required in Professional Education courses and 1-9 hours are required in internship depending on the amount of teaching experience of the student. For requirements in education, the student should consult the College of Education portion of the bulletin entitled "Junior College Teaching Program."
The College of Nursing is committed to the improvement of nursing and health care services through its educational programs, community service and related research activities. The College offers a National League for Nursing accredited upper division program in nursing that leads to a Bachelor of Science degree with a major in nursing. The program is designed so that students with appropriate preparation equivalent to two years of college level study can enroll in the nursing major and complete requirements for the degree in the equivalent of two additional years of full-time study.

Applications from all qualified students are accepted without regard to age, sex, cultural, racial, religious or ethnic background. Qualified students with no previous preparation in nursing and registered nurses who are graduates of associate degree and hospital programs are admitted.

Student may meet all requirements at the University of South Florida or they may complete lower division prerequisites elsewhere and transfer to USF for the nursing major. Students who enroll at the first or second year level at USF are admitted to the Division of University Studies. They meet the same requirements as other applicants for admission to the University and should follow the admission procedures outlined elsewhere in the Bulletin. College graduates and transfer students from other nursing programs are also eligible for admission to the major.

The practice of professional nursing involves problem-solving and decision-making based on knowledge from the humanities and the physical, biological, social and behavioral sciences. Shortages of qualified personnel, technological advances and increasing demands for health care services have brought changes in the functions and responsibilities of those in the health care professions. As a result, nursing practice has become increasingly complex and demanding in terms of knowledge and skills required to assume added responsibilities and functions. The goal of this program is to provide students with opportunities to develop cognitive, affective and psychomotor skills basic to general nursing practice in any setting where professional nursing services are provided: acute care hospitals, community health agencies, extended care facilities, industry, physicians' offices, military health services, the American Red Cross, and so on.

The program also focuses on interpersonal and leadership skills essential to meeting their responsibilities as professionals in the health care system and as citizens. An additional goal is that of assisting students to establish investigative and independent study habits that will persist throughout a lifetime of professional growth and development.

Graduates of this program are eligible for admission to examinations leading to licensure to practice as professional nurses in the State of Florida or to apply for licensure in other states. Graduates also have the educational background necessary for graduate study in nursing to prepare for expanded roles in clinical nursing practice or for teaching, administration, research and other leadership responsibilities.

Admission to the College

The College of Nursing is a quota program in that limitations are set on enrollments on the basis of availability of sufficient qualified faculty, laboratory and classroom facilities, and clinical resources for nursing practice experience for students. Therefore, admissions are upon a selective basis through special application directly to the College of Nursing. One class is admitted in the fall quarter of each year. The deadline for acceptance of applications is February first. Applications may be obtained by contacting the Coordinator of Advisement, College of Nursing.

The academic requirements used as a basis for evaluating eligibility of applicants for admission to the upper division major are outlined below. These are minimum requirements and the selection process also includes consideration of overall academic performance, academic performance in sciences basic to nursing, nature of courses taken and degree of difficulty, individual goals and interests and other factors pertinent to the purposes of this program and professional nursing practice. All applicants are interviewed as part of the admissions process. Qualified applicants who are Florida residents are given priority for admission.

**Minimum Requirements**

1. Completion of 90 quarter (60 semester) hours of college level work with a cumulative average of "C" or better. Credit received on the basis of CLEP examinations or other appropriate procedures may be included as part 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 60 quarter hours (40 semester hours) in the following areas with not less than 8 quarter hours (6 semester hours) in each area: English composition; humanities; mathematics/quantitative methods; natural sciences; social sciences.

Courses in chemistry and biology may be used to meet general distribution requirement in natural science. Additional credits derived from these courses contribute toward meeting the overall general education distribution requirements. Credits from psychology and sociology also contribute toward meeting general education requirements. Students with an A.A. degree will be considered to have met the above requirements.

3. Completion with a "C" average or better:
   a) One year of chemistry with laboratory. (Courses that include general, biochemistry and organic chemistry are recommended).
   b) One year of biology (courses which includes cell structure, ecology, and genetics). Human anatomy, physiology or microbiology cannot be used to meet requirements in this area.
   c) Psychology or behavioral science—at least two courses, one of which is beyond the introductory level (e.g., human growth and development, group dynamics, child psychology, aging, adolescent psychology, developmental psychology, abnormal psychology).
   d) Sociology—at least two courses, one of which is beyond the introductory level (e.g., cultural anthropology, family relationships, social and cultural issues, gerontology, etc.).
   e) At least one of the following: microbiology, human anatomy, nutrition, or growth and development.

**Transfer students** seeking admission to the College of Nursing follow the procedure outlined for transfer students in the USF Bulletin and the procedure outlined here for admission to the College of Nursing. All transfer students must apply for admis-
sion to the University and be accepted prior to acceptance by the College of Nursing. Transcripts certifying completion of all requirements for admission must be available to the College of Nursing before admission will be confirmed.

Applications for admission to the University may be obtained by contacting the Office of Admissions, University of South Florida, 4202 Fowler Avenue, Tampa, Florida 33620. Applications can be submitted as much as one full year in advance of intended enrollment.

**Admission procedures for registered nurses** vary from those outlined above. Graduates of associate degree and hospital programs in nursing have widely varied backgrounds. Therefore, the admissions process for them is designed to permit evaluation early in order to ensure optimum educational experiences and expedite completion of degree requirements.

1. All registered nurses seeking admission to the College of Nursing should submit an application to the College of Nursing. These applications will be sent upon request.
2. When the completed application, transcripts, etc. are received, faculty assess them in terms of the requirements for admission to the major. Applicants who have not met the prerequisites will be advised of their standing and the alternatives available for meeting requirements: a) CLEP examinations if appropriate, b) courses at USF, or c) courses at a junior college or other institution. Applicants who have met the requirements for admission will be advised as to when they can be admitted to take courses in the major and (if not already enrolled in the University) will be provided with a USF application stamped “RN Applicant” to complete and forward with admission fee to the Office of Admissions.
3. Registered nurse applicants seeking admission to the major who apply first to the Office of Admissions will be referred to the College of Nursing to complete the process outlined above.

**Curriculum for Nursing Majors**

Following are curriculum requirements for the upper division major in nursing.

**Supporting Sciences**

Those required of all nursing majors include the following:

- NUR 301 Human Anatomy (4)
- NUR 302 Nutrition (3)
- MIC 351 Introduction to Microbiology (5)
- SSI 427 Life Cycle (5)
- NUR 304 Human Physiology (5)

*At least one of these courses (or its equivalent) is required for admission to the nursing major. The others must be completed during the first quarter of the junior year. Human physiology is offered during the second quarter of the junior year. Transfer credit in lieu of this course will be granted only for comparable physiology courses taken elsewhere.*

**Nursing Courses**

**Junior Year**

- NUR 300 Community Health Resources (3)
- NUR 303 Nursing Process I (4)
- NUR 305 Nursing Process II (3)
- NUR 310 Nursing Process Laboratory (3)
- NUR 306 Seminar in Nursing I (2)
- NUR 307 Nursing Core I (5)
- NUR 308 Nursing Intervention I (5)
- NUR 309 Seminar in Nursing II (2)

**Senior Year**

- NUR 400 Nursing Core II (5)
- NUR 401 Nursing Intervention II (5)
- NUR 402 Seminar in Nursing III (2)
- NUR 403 Nursing Inquiry I (3)
- NUR 404 Nursing Core III (5)
- NUR 405 Nursing Intervention III (5)
- NUR 406 Seminar in Nursing IV (2)
- NUR 407 Nursing Core IV (3)
- NUR 408 Nursing Intervention IV (7)
- NUR 409 Seminar in Nursing V (2)
- NUR 412 Independent Study (2-5)
- NUR 483 Selected Topics in Nursing (2-4)

*These courses are available on an elective basis.*

Nursing courses include substantial theory and nursing practice in care of the physically and mentally ill, the young and the old, the acutely and chronically ill. They also provide opportunities for learning in health maintenance, preventive and rehabilitative services and for functioning as members of nursing and health care teams in highly responsible and complex patient care settings. Learning experiences in nursing are developed and guided by registered professional nurses with graduate preparation in clinical nursing. Nursing practice experiences are provided in a variety of institutions and agencies involved in the delivery of nursing services.

**Special Requirements for Nursing Majors**

Tuition and fees for students enrolled in nursing are the same as for other undergraduate students at the University of South Florida. However, there are substantial expenses not covered by the basic tuition and fees.

Textbooks, laboratory manuals and standardized tests are essential tools for students enrolled in the nursing major. Texts in nursing are somewhat more expensive than those in general education, and it is estimated these costs run from $35.00-$50.00 per quarter. Since texts are used over the two year major, these costs are somewhat higher at the junior level.

**Uniforms** including watch with sweep second hand, scissors, shoes, stethoscope, etc., are required after the first quarter of the junior year. Uniform specifications and policies have been developed by students enrolled in the first class and costs vary depending upon personal choice. In addition, lab coats or aprons are necessary during the first quarter.

**Medical care insurance** is required. Professional liability insurance is highly desirable for all and required for registered nurse students. An annual physical examination is required. The first one must be done before enrollment in courses involving patient contact in Quarter II of the junior year.

**Transportation** to and from community health agencies for clinical nursing experience is also the responsibility of the student. Since public transportation in the Tampa area is not usually convenient to the hours of clinical schedules, students must have access to some other means of transportation or form car pools. Also, from time to time, field trips to an institution or agency at some distance from the campus will be required for an entire class or section of a class. In these instances, students making the trip share the costs.

**Financial Aid**

Policies and procedures pertaining to financial aid are the same for students in nursing as for other students. Specific information can be obtained from the Office of Financial Aid, Student Affairs, University of South Florida, Tampa, Florida 33620.

**Requirements for Graduation**

Students will be certified for graduation with a Bachelor of Science degree, major in nursing, upon completion of a minimum of 180 quarter hours (with a cumulative grade point average of 2.0 or better) distributed among courses in general education, supporting sciences, nursing, and electives.
The social and behavioral sciences are concerned with man, his development, problems, and institutions. They help the student to understand the world around him and to become an informed citizen. Social and behavioral sciences provide the student with an adequate background and knowledge for later application in business, government, and social service professions, either upon graduation or upon completion of additional graduate study.

The College is concerned with the broad development of students' knowledge. Thus it offers interdisciplinary programs and the opportunity to earn credit through independent study and examination. Two programs in the College, Urban Community Psychology and Gerontology, have been approved by the Board of Regents as Programs of Distinction. Although the programs are housed in the Department of Psychology and the Aging Studies Program, they utilize faculty expertise from many disciplines. Approval is being requested to formally extend the Program of Distinction to include Applied Anthropology, Communicology, Criminal Justice, Geography, Political Science, Rehabilitation Counseling, and Sociology to further emphasize the human sciences and services. Students majoring in these areas will receive high quality educational experiences in both university and community settings.

It is important that the student develop basic skills for research and creative scholarship; hence the provision of senior seminars and special courses on research methodology. These skills are important for the critical appraisal of scholarly work even though the student might not go on to graduate study. There is opportunity for students to collaborate with their professors on research projects and to render services to the community.

BACCALAUREATE LEVEL DEGREE PROGRAMS

Admission to the College

Students may be admitted by application to the college and are encouraged to apply early in their freshman year.

Application for admission to the college is made in the Office of the Coordinator of Advising. Upon admission the student will be counseled in his selection of courses by an adviser from the major field. He will then plan the remainder of his college program to fulfill his educational needs and satisfy requirements for the Bachelor of Arts degree. The academic adviser for the student will generally supervise his progress; however, the student assumes the responsibility for meeting all University, college, and departmental requirements.

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

General Requirements for Degrees

The College of Social and Behavioral Sciences currently offers one undergraduate degree: Bachelor of Arts. The requirements (referred to in Part I of this catalog) are summarized as follows:

1. 180 credits with at least a "C" average (2.0) in work done at the University of South Florida. At least 60 of the 180 credits must be in courses numbered 300 or above. (A maximum of 4 quarter hours physical education course credit may be counted toward graduation.)

2. 60 hours of general distribution courses as required by the University in the areas of English Composition, Humanities/Fine Arts, Mathematics/Quantitative Methods, Natural Sciences, and Social and Behavioral Sciences. (See Distribution Requirements in Part I.) It should be noted that a student is allowed to apply a maximum of 12 hours in a single department toward distribution requirements.

a. Area I—English Composition: ENG 101, 102, 103.

b. Area II—Humanities/Fine Arts: AMS, ART, CLS, DAN, ENG (excluding 100, 101-103), HUM, any Modern Language, LIN 301 and 321, MUS, PHI (excluding 303), REL, SPE, TAR.

c. Area III—Mathematics/Quantitative Methods: ECN 231, 331, ESC, MTH, PHI 303, SSI 301.

d. Area IV—Natural Sciences: AST, BIO, BOT, CHM, GLY, NAS, MSC, PHY, PHS, ZOO.

e. Area V—Social and Behavioral Sciences: AFA, AGE, ANT, CFP, ECO 100, EDF 377, GPY, HTY, POL, PSY, SOC, SSI (excluding 301), WSP.

Advisers may suggest up to a maximum of 20 additional hours to count toward the general distribution requirements. Each student should check with his departmental adviser regarding these requirements.

3. Completion of a major in a subject or an integrated major involving several subjects. There must be at least a 2.0 average in this major for all USF work. To insure breadth experience and to preclude undue specialization, a student must earn a minimum of 120 academic credits outside his discipline of concentration, including at least 90 credits outside the college of the major.

4. Work transferred from other schools will not be included in grade point average computed for graduation. (However, graduation with honors requires at least a 3.5 average in USF work and any previous college work.)

5. A student must complete at least 45 of the last 90 hours of his undergraduate credit in on-campus courses. The approval of the dean of the college granting the degree must be secured for any transfer credits offered for any part of these last 90 hours.

Most of the social and behavioral science majors require statistics, therefore, the student should take courses as appropriate to properly prepare himself. All social and behavioral science majors require clarity and accuracy of English expression.

The student must fulfill all the requirements for his major as indicated on the following pages, or receive written permission from the department chairman for any substitution or exemption.
Programs Leading the Baccalaureate Degree
The College of Social and Behavioral Sciences offers a major in 13 fields as described in the following pages. In addition to the departmental majors, interdisciplinary majors are offered. (See Interdisciplinary Social Science, International Studies, and Social Science Education listed below.) Economics offers two majors in the College of Social and Behavioral Sciences and the other in the College of Business Administration.
A Bachelor of Arts Degree is offered in the following:
- Afro-American Studies (AFA)
- Anthropology (ANT)

GRADUATE LEVEL DEGREE PROGRAMS
Graduate level courses are now offered in most social and behavioral science areas and the Master of Arts Degree is offered in the following:
- Anthropology (ANT)
- Criminal Justice (CJP)
- Geography (GPY)
- Gerontology (AGE)*
- History (HTY)
- Political Science (POL)
- Psychology (PSY)
- Rehabilitation Counseling (REH)
- Rehabilitation Counseling (REF)
- Sociology (SOC)

*Offered by the Aging Studies Program

In addition to the Master of Arts degree offered from the College of Social and Behavioral Sciences, joint degrees are offered with the College of Education in Social Science Education, School Psychology, and the Junior College Teachers' Program.

The Department of Communicology (formerly Speech Pathology and Audiology) also offers a Master of Science Degree in:
- Audiology (AUD)
- Post-Baccalaureate Audiology (AUF)
- 5-year program
- Aural (Re) Habilitation (ARH)
- Post-Baccalaureate
- 5-year program
- Speech Pathology (SPP)
- Post-Baccalaureate
- 5-year program

A Doctor of Philosophy Degree is offered in:
- Psychology (PSY)

SPECIAL NON-DEGREE PROGRAMS
The AGING STUDIES undergraduate program consists of a core of courses designed for interested students. These courses are: AGE 301, 325, 405. Additional information will be found in the Aging Studies Program section of the catalog.
The LEISURE STUDIES PROGRAM is concerned with leisure in its broadest sense and provides a core of courses for interested students. This program is presently housed in the Department of Interdisciplinary Social Sciences and the courses are listed under Social Sciences (Interdisciplinary) (SSI) as SSI 413, 421, 522, 523, 525.
The OFF-CAMPUS TERM PROGRAM offers a wide variety of opportunities for self-designed, supervised experiences for credit. This program is presently housed in the Department of Interdisciplinary Social Sciences and the courses are listed under Off-Campus Term (OCT).

PROGRAMS AND CURricula

AFRO-AMERICAN STUDIES (AFA)
Requirements for the B.A. Degree:
The major in Afro-American Studies consists of a minimum of 56 hours in the field specified as follows:
- Required Core Courses (32 cr. hrs.):
  - AFA 230 (4)
  - AFA 333 (4)
  - AFA 334 (4)
- Elective Courses (24 cr. hr.):
  - AFA 335 (4)
  - AFA 336 (4)

Plus three of the following:
- AFA 343 (4)
- AFA 432 (4)
- AFA 481 (1-4)

Elective Courses (24 cr. hr.):
- AFA 337 (4)
- AFA 341 (4)
- AFA 428 (4)
- AFA 431 (4)
- AFA 438 (4)
- AFA 442 (4)
- AFA 484 (4)
- AFA 440 (4)
- AFA 491 (4)

- AFA 443 (4)
- AFA 444 (4)
- AFA 483 (1-4)
- AFA 485 (2-4)
- AFA 499 (4)
Requirements for the M.A. Degree in Gerontology:
The M.A. degree requires five university quarters of full-time study including one quarter of supervised field experience. Most of the courses required were developed specifically to meet the objectives of the program and are offered under the label "AGE". The M.A. degree in Gerontology requires a minimum of 54 credit hours in approved courses including 12 hours of field placement. Of the 54 hours, 47 hours must be in courses labeled "AGE". Required courses for the M.A. degree include:

AGE 501 (3) AGE 610 (3)
AGE 502 (3) AGE 691 (3)
AGE 503 (3) AGE 692 (2)
AGE 507 (3) AGE 693 (2)
AGE 603 (3) AGE 694 (2)
AGE 606 (3) AGE 695 (12)

Majors are also required to take a minimum of 6 hours from the following:

AGE 504 (2) AGE 585 (1-3)
AGE 509 (2) AGE 611 (1-6)
AGE 605 (4) AGE 612 (1-6)

Electives from other departments must be approved by the student's adviser: There are no language or theses requirements.

Admission Requirements
To be eligible for admission to the M.A. program, the applicant must:
1. Hold a baccalaureate degree or its equivalent from an accredited college or university.
2. Have a minimum score of 1000 on the Graduate Record Examination (total of Quantitative and Verbal Aptitude scores) plus a minimum grade point average of 2.5 (A = 4.0) on the last half of courses taken for the bachelor's degree.

Have a minimum score of 800 on the Graduate Record Examination (total of Quantitative and Verbal Aptitude scores) plus a minimum grade point average of 3.0 (A = 4.0) on the last half of courses taken for the bachelor's degree.

Preference is given to applicants who demonstrate commitment to or experience in programs for older persons. In addition to the University graduate studies application, a program application is required and should be obtained from the Aging Studies Program.

Because of the sequential nature of the graduate courses, entering students are ordinarily admitted only in the Fall Quarter (September) each year. At that time a new cycle of courses begins and runs for five academic quarters.

Requirements for the B.A. Degree in Anthropology (ANT):
The major in Anthropology consists of a minimum of 44 credit hours in the field. Students may take more than this minimum if they desire. ANT 201 is prerequisite to all subsequent courses. ANT 311, 321, 331, and LIN 301* are required as intermediate level training in the main subdivisions of the field and ANT 461 and ANT 491 complete the specific course requirements. Majors may not include more than two each of any of the 400-level courses in the total of the 44 hours required. Anthropology majors are required to take Social Science Statistics (SSI 301) or the equivalent, and urged to become competent in the use of a foreign language. Exceptions to course prerequisites require the consent of the instructor.

Required Core Courses (28 cr. hrs.)

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<td>ANT 461</td>
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<td>ANT 491</td>
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Requirements for the B.A. Degree in Anthropology—Linguistics (ANL):
This sequence is designed for students who are particularly interested in the role of language in human behavior and cultural development.

Required Core Courses (43 cr. hrs. minimum)

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<td>LIN 301*</td>
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Required Supporting Courses (12 cr. hrs. minimum from the following group)

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<td>LIN 321</td>
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<td>ANC 373</td>
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<td>HII 401*</td>
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*A section of LIN 301 is for anthropology majors and requires ANT 201 as a prerequisite.

Requirements for the M.A. Degree
General requirements for graduate work are listed on page 61-62 and should be studied carefully.

The student must complete 45 credit hours of graduate coursework. All students must complete the four core seminar courses, then proceed to take minimally, one methods course, one selected topics course, and one regional problems course in one of the three tracks (medical anthropology, urban anthropology, public archaeology). In addition, each student must: complete a statistics course and two courses outside the department chosen in mutual agreement by the student and his committee; successfully pass the comprehensive examinations; undertake graduate research; and write a thesis. The student must maintain a "B" average in all course work. In addition, our program requires a "B" average for all four core seminars before the student can proceed to take the comprehensive examinations.

I. COURSES REQUIRED OF ALL STUDENTS

A. Core Courses

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<th>Course Code</th>
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<td>ANT 601</td>
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<td>ANT 611</td>
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B. Additional Requirements

Two electives courses outside the department; one statistics course;

ANT 681 (1-15)  ANT 699 (1-6)

II. COURSES IN ONE OF THREE TRACKS

A. Medical Anthropology Track

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B. Urban Anthropology Track

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C. Public Archaeology Track

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<td>ANT 647</td>
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COMMUNICOLGY
(AUD/AUF/ARH/ARF/SPP/S PF)

A Master of Science Degree is offered through the Department of Communicolgy that is structured to meet the preparation requirements of the American Speech and Hearing Association for the Certificate of Clinical Competence or the national basic certification requirements of the Council on Education of the Deaf. In addition to the core subject material each student may elect to pursue a program of specialization in the areas of Speech Pathology, Audiology or Aural (Re)Habilitation.

Undergraduate students enroll in a five-year program terminating in the Master of Science degree in Speech Pathology, Audiology, or Aural (Re)Habilitiation. Students may apply for acceptance in the M.S. degree program upon attaining Junior Class standing, completion of the CLY 300-level course sequence with a 3.0 grade average, and submitting cumulative Graduate Record Examination scores of 850 or above. Student may not apply for a baccalaureate degree. Programs are planned through the master's degree at the time of acceptance.

Applicants holding a baccalaureate degree from an accredited college or university will be eligible for admission to the fifth year of the M.S. program if the following minimal requirements are met:

1. Submission of a cumulative score of 1000 for the Graduate Record Examination Aptitude Tests plus a grade point average of 3.0 (A = 4.0) for the last half of their undergraduate course work; or
2. Submission of a cumulative score of 850 for the Graduate Record Examination Tests plus a grade point average of 3.0 (A = 4.0) for the last half of their undergraduate course work.

Requirements for the M.S. Degree in Speech Pathology—Post-Baccalaureate (SPP):

General requirements for graduate work are to be found in the section of this bulletin titled “Division of Graduate Studies.” A minimum of 45 credits is required as well as completion of sufficient course work and practicum to meet the American Speech and Hearing Association’s requirement for clinical certification in speech. The student with an existing bachelor’s degree and appropriate prerequisites may plan his degree program from among the following courses:

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Requirements for the Combined Undergraduate/Graduate M.S. Degree in Speech Pathology (SPF):

A minimum total of 225 credits is required for the combined undergraduate/graduate M.S. program. In addition to the General Distribution requirements the following courses will be required for all programs:

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Requirements for the Combined Undergraduate/Graduate M.S. Degree in Audiology (AUF): A minimum of 225 credits is required for the combined program. In addition to the General Distribution requirements the following courses will be required for all programs:

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<td>CLY 680</td>
<td>(4)</td>
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<tr>
<td>CLY 681</td>
<td>(1-12)</td>
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</tbody>
</table>

Requirements for the Combined Undergraduate/Graduate M.S. Degree in Audiology (AUF): A minimum of 225 credits is required for the combined program. In addition to the General Distribution requirements the following courses will be required for all programs:

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<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
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<td>CLY 301</td>
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<td>CLY 302</td>
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<td>CLY 680</td>
<td>(4)</td>
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<tr>
<td>CLY 681</td>
<td>(1-12)</td>
</tr>
</tbody>
</table>
specialization with the hearing impaired and to meet the national basic certification requirements of the Council on Education of the Deaf. Students may plan programs with emphasis in the areas of preschool, school age, multiple handicapped, and adult hearing impaired. All teachers of the deaf programs will be planned from among courses offered by the appropriate teacher preparation areas within the College of Education as well as from the following:

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

A minimum of 225 credits is required for the combined programs as well as sufficient coursework, practicum, and internship to meet the Florida State Department of Education certification requirements for specialization with the hearing impaired and to meet the national basic certification requirements of the Council on Education of the Deaf. Students may plan programs with emphasis in the areas of preschool, school age, multiple handicapped, and adult hearing impaired. In addition to the General Distribution requirements all teacher of the deaf programs will be planned to include coursework from the appropriate teacher preparation areas within the College of Education as well as the following:

- **CJP 301** (6)  
  - **CJP 302** (6)  
  - **CJP 303** (4)  
  - **CJP 501** (6)  
  - **CJP 502** (4)  
  - **CJP 503** (4)  
  - **CJP 504** (6)  
  - **CJP 505** (4)  
  - **CJP 506** (4)  
  - **CJP 507** (4)  
  - **CJP 508** (4)  

**ECONOMICS**

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

Economics is one of the vital disciplines investigating the complex problems and relationships in modern society. Indeed, the very breadth of economics had led to major areas within the discipline, including labor economics, international economics, urban and regional economics, monetary economics, public finance, industrial organization, comparative economic systems, and the like. In addition, students are given a sound grounding in economic theory and economic statistics to facilitate the investigation of the problems of human behavior, decision-making and organizational effectiveness in these problem areas.

A student may earn a Bachelor of Arts degree with a major in Economics by completing satisfactorily 48 credits in Economics in addition to College requirements. Normally, these 48 credits include:

- **ECN 201** (4)  
  - **ECN 202** (4)  
  - **ECN 301** (5)  
  - **ECN 323** (5)  

In addition to this core, students are encouraged to select 300-level courses in several of the applied areas during their junior year. The remaining economics electives may be selected from those 300 and 400 level courses that provide the type of program that best suit the students' interests and objectives.

Students majoring in economics are encouraged to supplement their programs with appropriate courses in other social sciences. Political science, psychology, sociology and others contribute greatly to an enriched plan of study. Similarly, a variety of courses in economics are designed to permit student majoring in other disciplines to acquire the skills and insights provided in economics. The Department of Economics offers a concentration area for majors in the other social sciences. The concentration area will be designed for the individual students program. Thus students have the option of broad interdisciplinary programs, a general grounding in many areas of economics, or a more intensive concentration in one of the areas within economics.

Students interested in majoring in economics or having a concentration area are encouraged to contact the departmental adviser for more information about the program. In addition, the department maintains a file describing the varied career opportunities for economists in business, government and education.

**GEOGRAPHY (GPY)**

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

A major in geography consists of 50 credit hours as follows:

- **GPY 301** (5)  
  - **GPY 302** (5)  
  - **GPY 303** (5)  
  - **GPY 371** (5)  
  - **GPY 403** (5)  
  - **GPY 405** (5)  
  - **GPY 407** (5)  
  - **GPY 409** (5)  

**Electives in geography (10 cr. hrs.)**

Any 10 hours in GPY 400- or 500-level courses.
Requirements for the M.A. Degree:

General requirements for graduate work are given on pages 61-62.

All students must complete 45 credit hours in graduate geography courses, following one of the two plans outlined below. A written and oral comprehensive examination covering the general field of geography is required before graduation, and the student must demonstrate his ability to translate into English the pertinent scientific literature from one modern foreign language. Foreign students, whose mother tongue is not English, may use English as their foreign language. A computer language (such as Fortran) may be used to meet the language requirement.

**Thesis Program:** The 45 credit hours in geography must include: GPY 501, 503, 507, 603, 605, 607, and 699. Up to eight credits outside the department may be elected with the approval of the student's committee and major professor. An oral defense of the thesis is required.

**Non-Thesis Program:** The 45 credit hours in geography must include: GPY 501, 503, 507, 601, 603, 605, 607, and 689. Up to four credits outside the department may be elected with the approval of the student's committee and major professor.

**HISTORY**

Requirements for the B.A. Degree:

A minimum of 48 quarter hours is required for a major in history. 16 hours of 200-level courses, or their equivalent, constitute the lower level requirements. HTY 487, 491 and 492 constitute the upper level requirements for the degree. At least 20 hours of course work must be drawn from the 300-400 level. With the prior written consent of the student's adviser, majors may take up to eight (8) hours of course work offered by other departments and apply these hours toward meeting the course requirements in history. The course work undertaken outside the Department of History must complement the student's program in history.

It is recommended that history majors take ENG 350, "Advanced Expository Writing," SPE 201, "Fundamentals of Speech Communication," LLI 200, "Use of the Library," and 27 quarter hours drawn from the following disciplines: Afro-American Studies, Anthropology, Economics, Geography, Political Science, Interdisciplinary Social Science, Psychology, Philosophy, Sociology, Literature, the Humanities, and the Fine Arts. Majors intending to pursue graduate work should take a minimum of two years of classical or modern foreign language.

Requirements for the M.A. Degree:

The graduate curriculum in history is composed of a core program, a thesis, and course work in the following fields: *Field I,* American history to 1877; *Field II,* American history since 1877; *Field III,* Early Modern European history; *Field IV,* Modern European history; *Field V,* Ancient and Medieval history; *Field VI,* Latin American history.

In addition to the general requirements of the University, a candidate is required to complete a total of 48 credit hours divided as follows: 8 hours of core courses; 16 hours in a major field; 8 hours in a minor field; 8 hours of thesis, and 8 hours of electives. Of the 48 hours, at least 30 must be in formal, regularly scheduled course work, 24 of which must be at the 600 level. Subject to the satisfaction of above requirements, courses at the 500 level are acceptable as part of a planned degree program and, in special circumstances major advisers may approve up to 8 hours at the 400 level with the definite understanding that additional and superior work will be required of the graduate student. The core courses, HTY 600, 601 are required of all candidates.

A reading proficiency in one foreign language must be demonstrated. A satisfactory preparation in the core program, two fields, the completion of a comprehensive examination, and a thesis are required for graduation.

**INTERDISCIPLINARY SOCIAL SCIENCES (SSI/INT)**

The Department of Interdisciplinary Social Sciences is responsible for offering two types of courses: (1) a series of courses which provide the social science facet of that part of a formal university education which should be common to all graduates of the University of South Florida; and (2) courses designed to deal with cross-disciplinary problems in the social sciences by using the "convergence" concept of interdisciplinary treatment. Its courses are provided as a service to all interested departments of the University. Certain of the courses offered by the department are either required or recommended by a number of departments in other colleges within the University and by several interdisciplinary degree programs.

The Department of Interdisciplinary Social Sciences includes several related programs and course sequences. It coordinates the college major (SSI) and offers a B.A. degree in International Studies. In addition, the department provides several courses which were formerly part of the Basic Studies College program as a service to all students. These courses include SSI 201, 202, 383, formerly known as CBS 201, 202, 203 (Behavioral Science) and SSI 100 and 300 which now substitute for CBS 301 and 302 (American Idea). They constitute part of the University's distribution requirements.

Requirements for the B.A. Degree in Interdisciplinary Social Sciences (SSI):

The college major offers students whose educational and vocational interests and objectives cross disciplinary lines an opportunity to undertake a program of study individually designed to serve those interests and objectives. That program of study must include 64 credits in courses offered in the college of which 12 must be taken in courses bearing the SSI prefix (Interdisciplinary Social Sciences) and one of these must be SSI 301, Social Science Statistics.

Within these parameters each student's program of study is to be evolved in consultation with and must be formally approved by the major adviser. The program of study must include an area of concentration of at least 20 credits in one discipline; it will normally be expected to include a second area of concentration with either a disciplinary or multidisciplinary focus. The choice of areas of concentration and of courses within them is to be directly related to the educational goals of the student and such as to provide an educational experience of excellent quality.

A different kind of interdisciplinary major for prospective teachers of social studies is described under the College of Education requirements.

Requirements for the B.A. Degree in International Studies (INT):

The major in International Studies is designed to enable students to undertake programs of study based upon the course offerings of not less than three departments of the college, which will emphasize (a) preparation for careers in international activities, or (b) the study of particular international themes or topics, or (c) the study of particular regions or cultures.

The program of study is developed by each student in consultation with the major adviser so as best to serve the individual's educational goals. The program is to include not less than 48 credits. Of these 24 (6 courses) must be in the international studies offerings of the Department of Interdisciplinary Social Sciences, bearing the prefix SSI.

**Required Core Courses (24 cr. hrs.):**

<table>
<thead>
<tr>
<th>SSI 300</th>
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<tbody>
<tr>
<td>SSI 361</td>
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**One of the following:**

<table>
<thead>
<tr>
<th>SSI 339</th>
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<tbody>
<tr>
<td>SSI 341</td>
<td>(4)</td>
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<tr>
<td>SSI 343</td>
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</tbody>
</table>
The Leisure Studies program must be planned with the international studies adviser and complement their major program. Each student's minor program must be selected from course offerings of at least two other departments which have international, regional, or cultural content.

### Required Supporting Courses

- 18 cr. hrs. (or equivalent proficiency) of appropriate foreign language.

Students will be provided with advice as to choices of other courses offered throughout the University which will best reinforce and complement their major program. Each student's program must be planned with the international studies adviser who is empowered to make appropriate substitutions when educationally justified. Up to nine credits may be substituted for these requirements by successfully passing SSI 395 (1-9).

## Leisure Studies Program

The Leisure Studies Program is perhaps the only university agency in America devoted entirely to the subject of leisure in the broadest sense: a concern with the total pattern of work and nonwork trends of the post-industrial society related to cyberspace, increases in bulk time, flexible work patterns, urbanization, changing values, public policy, expenditures for recreation, and new demands on education and other social institutions. This is done through conferences, consultations, field research, lectures, writings and newsletters, workshops and seminars. Its quarterly Newsletter is widely distributed; Technology, Human Values and Leisure (Abingdon Press, 1971) results from one of its conferences. The USF Program represents the United States in a research team including France, West Germany, Canada, Sweden, Switzerland, Poland, Bulgaria, and Czechoslovakia. Students in the introductory and advanced seminars participate in field studies, such as family interviews, questionnaire surveys, and observations of activities.

Courses staffed by Leisure Studies and offered through the Interdisciplinary Social Science Department:
- SSI 413 Leisure in Society
- SSI 421 Sport in Society
- SSI 522 Leisure Theory
- SSI 523 Leisure Planning: Community and State
- SSI 525 Leisure Policy

### POLITICAL SCIENCE (POL)

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

A minimum of 44 credit hours is required for a major. The core curriculum consists of 8 credit hours and, in addition, the student must take at least one course each from three of the four fields with a total of nine courses and 36 credit hours. While some courses may be listed under two fields, a course may be used only once to fill a field requirement.

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

**Required Core Courses (8 cr. hrs.)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>POL 199</td>
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<td>or POL 201</td>
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<tr>
<td>or POL 203</td>
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<tr>
<td>and SSI 301</td>
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**Electives from three of the four fields (36 cr. hrs.)**

Field I American Government

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<th>Course</th>
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<tbody>
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<td>POL 338</td>
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<td>POL 341</td>
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<td>POL 345</td>
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<td>POL 441</td>
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<td>POL 455</td>
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<td>POL 463</td>
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<td>POL 530</td>
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Field II Public Administration & State and Local Government

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<th>Course</th>
<th>Credits</th>
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<tr>
<td>POL 351</td>
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<td>POL 453</td>
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<td>POL 520</td>
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<td>POL 525</td>
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<td>POL 527</td>
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<td>POL 530</td>
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Field III Political Theory and Philosophy

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<th>Credits</th>
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<td>POL 431</td>
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<td>POL 443</td>
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<td>POL 461</td>
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<td>POL 463</td>
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<td>POL 464</td>
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Field IV Comparative Politics & International Relations

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<td>POL 311</td>
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<td>POL 331</td>
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<td>POL 333</td>
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<td>POL 436</td>
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<td>POL 438</td>
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<td>POL 550</td>
<td>(4)</td>
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<tr>
<td>POL 561</td>
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</table>

The following are to be used as elective hours only and may not be used to fill a field requirement:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>POL 481</td>
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<tr>
<td>POL 491</td>
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<tr>
<td>POL 571</td>
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</table>

### Requirements for Pre-Law

Pre-law (preparation for the successful study of law) is not a prescribed program of study. No specific college major is required for admission to law school. Those students intending to pursue the study of law must obtain a bachelor of arts in an area of his personal choice.

The American Association of Law Schools suggests that students preparing for law school must acquire basic skills in: (1) rapid reading and comprehension, and (2) the English language. Mastery of the English language, both written and oral, and ability to read rapidly and comprehensively are positively essential for successful performance in the study of law. As there is no prescribed pre-legal program, any courses that help develop clear and systematic thinking, logic, command of the English language and a broad understanding of our society would constitute sound preparation. A good lawyer must have knowledge of an understanding of the economic, political, and social context within which legal problems arise.

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

The Law School Admission Test is given simultaneously several times each year at University of South Florida and numerous other testing centers throughout the state. Students should plan to take the test not later than February of the year in which they make application to a law school. Information pamphlets and application blanks for the test are obtainable from the Department of Political Science, University of South Florida.

### Requirements for the M.A. Degree:

General requirements for graduate study are given on pages 61-62.

The student must complete a minimum of 45 credit hours of graduate level courses. At least 24 hours must be at the 600 level. The minimum of 30 credit hours must be taken in formal, regularly scheduled classes, 15 hours of which must be at the 600 level. Courses at the 500 level are acceptable for credit towards the master's degree when taken as part of a planned degree program, approved by both the student's adviser and the Department of Political Science. A required number of core courses must be taken by all students in the graduate program.

A minimum of 28 credit hours must be taken in political science; 8 credit hours of approved electives may be taken outside the Department. All graduate students must write a thesis (9 credit hours) or petition for substitution with 12 credit hours of regular courses. A comprehensive oral examination will follow the completion of the course work.
Students who do not have an undergraduate major in Political Science, or its equivalent, may be admitted to candidacy in the program upon consent of the Department. Such students may be required to take additional courses beyond the minimum requirements.

A minimum of one-half of the master's degree program must be completed on campus. The student must be registered as full-time graduate student for at least one quarter of study.

More detailed instructions may be obtained from the Department of Political Science.

■ PSYCHOLOGY (PSY)

Requirements for the B.A. Degree:

Majors must complete at least 42 credit hours in the field. All majors must complete PSY 201 (5), SSI 301 (4), PSY 311-312 (4:1), and select four courses as follows: one of PSY 402 or 441 (4); one of PSY 403 or 404 (4); one of PSY 405 or 445 (4); and one of PSY 452 or 455 (4). In addition, 12 elective credits in psychology courses must be completed. PSY 411 (4) is strongly recommended for all majors and required of students planning graduate training. Functional mathematics and biological science are recommended. Otherwise, students majoring in psychology are encouraged to complete a varied undergraduate program.

Admission to Graduate Study:

Applications for admission to the M.A. or Ph.D. degree program are considered only once per year, for admission into the program in September of that year. The deadline for completed applications is March 1. A completed application includes a complete transcript of college work, a copy of scores on the GRE Aptitude Test, and three letters of recommendation (preferably from college instructors). Admission to the program is on a competitive basis. Details concerning the program, including a description of the credentials needed to be competitive with other applicants, are available from the Chairman, Graduate Admissions Committee, Department of Psychology, USF, Tampa, Florida 33620.

Requirements for the M.A. Degree:

General requirements for graduate study are given on pages 61-62.

The student must complete 50 credit hours of graduate psychology courses. All students must take at least two of the three methods courses, each of which must have a different topic, listed under PSY 630. In addition, the student must complete a minimum of five of the following nine courses: PSY 609, 612, 614, 634, 635, 636, 638, 639, and 641. The selection of these courses will be made by mutual agreement of the student and his advisory committee. Students with prior work in these areas may waive any of these courses by successfully passing a special examination given by the Psychology Department. Successful waiver may be used to reduce the overall credit hours requirement, if approved by the Psychology Department. A research thesis, PSY 699, is required and the student must successfully pass an oral examination of the thesis as well as maintain a B average in course work, exclusive of thesis and research courses.

In addition to the M.A. degree in psychology, the Psychology Department and the Department of Educational Psychology in the College of Education jointly grant the M.A. degree in School Psychology (PSE). (See College of Education, page 29.)

Requirements for the Ph.D. Degree:

The Ph.D. in Psychology is offered in the fields of Clinical, General Experimental, and Industrial-Organizational Psychology. Specific requirements are determined by the student and his supervisory committee.

Assuming that the student has completed an M.A. degree in Psychology or its equivalent, the Psychology Department requires the following in addition to the general University requirements for the Ph.D. degree, on page 62.

1. Reading knowledge of two foreign languages, or substitution for either or both languages by demonstrated competency in an area or areas approved by the Psychology Department. Two substantive areas currently approved are computer usage skills and electronic skills.

2. Supervised undergraduate psychology teaching experience.

3. A one-year internship in an approved clinical facility for Ph.D. students in the Clinical Psychology program.

4. Six-months of internship in approved industries or community agencies for Ph.D. students in the Industrial-Organizational Psychology program.

■ REHABILITATION COUNSELING (REH/REF)

Requirements for the M.A. Degree:

General requirements for graduate work are given on pages 61-62.

The M.A. program in Rehabilitation Counseling requires a minimum of 60 credit hours and offers the student the flexibility of entering while he is a University senior (REF) or after he has earned a baccalaureate degree (REH).

Minimum admission requirements for students electing the 5-year approach include completion of 135 quarter hours, a score of at least 1000 on the GRE or a B average on all work beyond 90 credit hours, and a personal interview. He must complete all General Distribution requirements and may not apply for a baccalaureate degree.

Minimum admission requirements for students entering the program as regular graduate students after they have earned a baccalaureate degree include a score of at least 1000 on the GRE or a B average during the last two years of college work, and a personal interview. The GRE must be taken by all students entering the program whether or not they meet the B average requirement.

Requirements for graduation for all students include a minimum of 60 credit hours in the post-baccalaureate program and a total of no less than 225 for those in the 5-year program. The following 47 hour core courses are consistent with national certification standards for rehabilitation counselors and must be taken by all students:

REH 501 (5) REH 602 (5)
REH 502 (5) REH 610 (4)
REH 503 (5) REH 611 (2)
REH 507 (4) REH 620 (15)
REH 508 (2)

Additional hours to complete either the minimum of 60 credit hours or the minimum of 225 credit hours may be elected from other REH offerings or from related graduate programs, with the consent of the student's adviser. There are no language or thesis requirements; however, a comprehensive examination is required involving both written and practical work.

■ SOCIOLOGY (SOC)

As an undergraduate major, sociology provides students with three different kinds of program concentrations. One, attractive to the majority of possible students, may be described as "useful sociology." Many of the courses taken involve skills valuable in employment. For example, in a research methods course, interviewing skills can be used in sales, personnel work, social action careers, management, as well as in research. Similarly, careers which involve inter-personal relations can benefit enormously from courses in social psychology or small group analysis. Also, pre-professional training, as in law school, business administration, social work, and the like, can rest on courses that have "useful" aspects in them. Another concentration can be styled that of "liberal education." In this concentration, the central point is the question of the nature of man, the social being. Experience has shown that the truly liberally educated person is prepared for a variety of life experiences because that person understands how to ask important questions and how to
go about getting answers. More importantly, the liberally educated person is equipped to take seriously the matter of being a human being. Sociology courses are aimed largely at problems on the nature of one's social world, the nature of man collectively, and on the individual person—the student as a unique being. Finally, sociology can be a major in the sense that it represents an intellectual discipline. Some students will find that it is interesting in its own right and that they would like to continue educational pursuits beyond the bachelor's degree.

These different concentrations differ as much in the attitude of the student taking the courses as in the selection of courses making up the individual program of study. They are not logically distinct concentrations: any one course may have elements of all three. For example, a student majoring in sociology as an academic discipline may at the same time involve himself in questions of a liberal education and at the same time pick up skills which will lead to satisfying employment. While the department is developing an undergraduate track in social work, students should understand that sociology majors are not restricted to social work or even social action types of careers. Any career involving human interaction, and that covers an extremely wide range of careers, actually benefits from sociological training.

Requirements for the B.A. Degree:

The major consists of a minimum of 40 credit hours. The following courses may not be counted in the 40-hour minimum for the major but may be elected as additional courses: SOC 181, 251, 326, 401, 481. A model program of recommended sequences may be obtained from the Department of Sociology.

Transfer students should be aware that by University regulations, the equivalent of one academic year must be taken in “on-campus” courses. In Sociology, we require that of the 40 credits needed to make up the major, no more than 10 credits earned elsewhere can count towards the major, and in addition, the 10 credits offered for the major must reflect courses offered here. The purpose of this rule is to insure that our certification that an individual has majored in sociology genuinely reflects our understanding of sociology as a major and that there is no fundamental difference between the transfer student and those whose work was entirely or mostly completed at the University of South Florida.

Required Core Courses (16 cr. hrs.)
SOC 201 (4)   SOC 315 (4)   SOC 321 (4)   SSI 301 (4)

Additional Requirements (8 cr. hrs.)
One course of:
SOC 331 (4)  SOC 433 (4)  SOC 535 (4)

One course of:
SOC 341 (4)  SOC 345 (4)  SOC 543 (4)

Requirements for the M.A. Degree:

A minimum of 45 credit hours and a thesis.

Required Courses (23 cr. hrs.)
SOC 611 (4)   SOC 690 (2)   SOC 699 (1-15)
SOC 621 (4)   SOC 622 (5)

University requirements for graduate study are given on pages 61-62.

Admission to the M.A. Program: Satisfactory score on the Graduate Record Examination (Aptitude); two letters of reference from previous instructors; four courses in sociology, including statistics, theory, and methods of research (SSI 301, SOC 315, and SOC 321, or equivalent). Documents are sent to the Admission Office. Instructions for applicants are available from the Department of Sociology.
Regulations Governing Graduate Study

The development of University policies and principles for graduate work is the responsibility of the Graduate Council. In addition, the Council exercises the right of inquiry and review to insure that high scholarly standards are being maintained. It is responsible for the establishment of University standards and regulations for graduate students and faculty. The Council also reviews all new graduate courses and degree programs and modifications to existing courses and programs. The membership of the Graduate Council includes the Chairman, nine faculty members, two graduate students, and three ex-officio members.

Major Professor

An adviser or major professor will be appointed for the student in his first term of work and will be designated by the chairman of the department or area in which the degree is sought upon a mutual recommendation from the student and professor concerned.

Quality of work

Graduate students must attain an overall average of 3.0 (B) in all courses. No grade below "C" will be accepted toward a graduate degree, but all grades will be counted in computing the overall average.

Any graduate student who at the end of a quarter is not in good standing shall be considered to be on probationary status. Such a student may be dropped from degree seeking status after one quarter of probation by the dean of his college. Notification of probation shall be made to the student in writing by his major professor, with a copy to the college dean. At the end of the probationary quarter, the major professor shall recommend to the college dean, in writing, one of three alternatives: (1) removal of probationary status; (2) continued probation; or (3) drop from degree program. Every effort will be made during the probationary period to aid the student in reestablishing his standing.

Appeals

Graduate students may appeal actions regarding their academic status:
1. In actions based on departmental requirements, the student may appeal first to his department through his major professor, then to the college dean or his representative, and then to the Graduate Council if necessary.
2. In actions based on the University minimum requirements, appeal shall be made directly to the Graduate Council.

Reports of actions and appeals will be maintained in the student's permanent file.

Enrollment Requirements—Minimum University Regulations

A student taking eight or more hours toward his/her degree in a quarter will be classified as a full-time student. The normal graduate load is 12-15 credit hours.

Students who continue to occupy space and to receive faculty supervision, but who have not made a final thesis submission at the start of a quarter, shall register for a minimum of three hours. The exact number of hours is determined by staff and facilities needed to support the student.

Graduate Teaching and Research Assistants will hold their appointments for no more than six quarters (excluding summer quarter) while working toward the Master's degree (eight quarters for the MFA) and no more than nine additional quarters while working toward the Ph.D. degree.

Transfer Credit

Transfer of credit from another recognized graduate school is limited to nine quarter hours. All transferred credit must (1) be approved by the program or college concerned, and (2) have been completed with grades of "B" or better.

Transfer credits must be posted to the student's permanent record no later than one full term prior to his graduation. It is the student's responsibility to make certain that his department properly notifies the Office of Records & Registration regarding transfer credits.

Common Courses

The University has designated a series of common courses to be used by all departments with graduate programs. These courses, which were adopted too late to be included in this Catalog, are to be used by any student who is advised to register for research or other work as an individual (as opposed to being a member of a regularly scheduled class). Also, special common courses must be used if a student is to receive credit for training as graduate teaching or research assistant. All graduate students must consult their advisers before attempting to register for such courses.

Change of Graduate Degree Program

A student who wishes to change his advanced degree program must obtain a Graduate Change of Program Status Application from the Office of Records and Registration. The change of program is completed upon acceptance of the student by his new department.

Application for Degree

Each student who plans to complete his graduate requirements by the end of a term must complete the Application for Graduation within 15 class days after the beginning of that term. The application is available at, and after completion must be returned to, the Office of Records and Registration.

S/U Grades in the Graduate Programs

No graduate student may take a course in his major on an S/U basis except for certain courses such as seminars, theses, research projects, practicum, and internship that are specifically approved by the Graduate Council to be given on this basis. The student may apply a maximum of 6 hours of such credit in his major (excluding Research, Design, Practicum, or Internship) toward a master's degree. A graduate student can take courses outside his major on an S/U basis even though the courses are in fulfillment of the degree requirements. To do so, he must have prior approval of the professor of the course, his major professor and the Dean of the College who will approve his degree.

Other procedures involving grades such as drops, withdrawals, audits, etc. are the same as those used for undergraduates.
Exclusions

Members or former members of the faculty who hold or have held the rank of Assistant Professor, Associate Professor, or Professor are not eligible to be granted degrees from the University of South Florida except upon prior authorization of the Graduate Council, and approval of the Vice President for Academic Affairs.

In cases where the immediate family of the faculty are enrolled in graduate degree programs, the faculty member may not serve on any advisory or examination committee nor be involved in any determination of academic or financial status of that individual.

Faculty Eligibility

In order to teach a graduate course at the University of South Florida, a person must have a current USF faculty appointment. The director of a thesis or dissertation must be a USF faculty member with an advanced degree, or equivalent professional qualifications, appropriate to the required level of supervision.

MASTER'S DEGREE

Program of Study and Course Requirements

During the first term of study, in consultation with his major professor, the student should plan a program of work to be completed for satisfaction of degree requirements. A copy of this program signed by the student and professor should be maintained in the student's department file.

A minimum of 45 quarter hours is required for a master's degree, at least 24 hours of which must be at the 600 level. At least 30 hours must be in formal, regularly scheduled course work, 15 of which must be at the 600 level. Courses at the 500 level are acceptable for credit toward the master's degree when taken as a part of a planned degree program.

A major professor may approve up to 8 hours of 400-level courses if taken as part of a planned degree program. Additional courses at the 600 level. At least 30 hours must be in formal, regularly scheduled course work, 15 of which must be at the 600 level. Courses at the 500 level are acceptable for credit toward the master's degree when taken as a part of a planned degree program.

A major professor may approve up to 8 hours of 400-level courses if taken as part of a planned degree program. Additional courses at the 500 level are acceptable for credit toward the master's degree when taken as a part of a planned degree program.

Supervisory Committee

Students working toward a thesis degree will have the benefit of a supervisory committee. The committee, consisting of the major professor and at least two other members of the department or area in which the degree is sought, will be appointed by the appropriate dean upon recommendation from the student and his major professor. Notification of the committee appointment will be sent to the Dean of the College and to the Director of Graduate Studies. The committee will approve the course of study for the student, supervise his research, and accept his thesis.

Time Limit

All work applicable to the master's degree requirements must be completed within the seven years immediately preceding the awarding of the degree.

Final Comprehensive Examination

Prior to clearance for the degree, the candidate must perform satisfactorily on a comprehensive examination in his major field.

Thesis

When a thesis is required, an original and one copy of the approved thesis must be submitted to the Director of Graduate Studies at least three weeks before the end of the quarter in which the student is to receive his degree. Only after the thesis and the copy have been approved for filing in the University Library can the student be certified for his degree. The thesis must conform to the guidelines in the Handbook of Graduate Theses and Dissertations available in the University Bookstore.

Second Master's Degree

A second master's degree may be granted so long as there is no duplication of credit. If there is any duplication of credit, the request must be considered by the Graduate Council.

Ph.D. DEGREE

The degree of Doctor of Philosophy is granted in recognition of high attainment in a specific field of knowledge. It is a research degree and is not conferred solely upon the earning of credit and completion of courses or by the acquiring of a number of terms of residency. The amount of residence and the requirements suggested below are a minimum. The degree shall be granted on evidence of proficiency and distinctive achievement in a specified field, by the demonstration of the ability to do original independent investigation and the presenting of these findings with a high degree of literary skill in a dissertation.

Student Committees

An advisory Committee shall be appointed by the chairman of the appropriate department or program for each student during his or her first quarter of residency at the University of South Florida. This Committee shall advise the student on indicated subject matter deficiencies and provide aid in choice of a major professor and an area of research. As soon as an area of research is determined and a major professor is chosen, a Dissertation Committee shall be appointed for the student by the chairman of the department or program in which the degree is sought. Notice of the appointment of the Dissertation Committee shall be sent by the chairman to the Dean of the College and the Director of Graduate Studies immediately after the appointment is made. The Dissertation Committee will approve the student's course of study, supervise the research, and the written comprehensive qualifying examination, and conduct the final examination. The Dissertation Committee shall consist of at least five members, at least three of whom must come from the academic area in which the major work for the degree will be done.

Language Requirement

Before a student is eligible to take the comprehensive qualifying examination, he must normally have completed a reading knowledge of two foreign languages. However, special work done outside the student's field of concentration, and related subjects may be substituted for one or both languages, provided this exception is recommended by the student's dissertation committee and approved by his department's Graduate Committee.

Residency

The minimum requirement shall be three academic years of work beyond the bachelor's degree. At least one academic year of residence must be on a campus of the University of South Florida. An academic year's residency shall be defined as a minimum of eight hours of graduate work per term, or the chairman of the student's supervisory committee may certify that the student be considered as in full-time residence. Any graduate work counted toward the fulfillment of the requirement of the Ph.D. degree after admission to candidacy must be done within a seven-calendar-year period.
Comprehensive Qualifying Examination

As soon as a substantial majority of the course work is completed the student must pass a written comprehensive qualifying examination over the subject matter of the major and related fields. This examination may be supplemented by an oral examination. If the degree is not conferred within five calendar years of the comprehensive examination, the examination must be taken again.

Admission to Candidacy

A graduate student does not become a candidate for the Ph.D. degree until he is formally admitted to candidacy. This admission is granted when the dissertation committee certifies that the student has successfully completed his comprehensive qualifying examination and in the opinion of his committee he has demonstrated the qualifications necessary to successfully complete his requirements for the degree. The certificate of admission shall be issued by the dean of his college through the Director of Graduate Studies.

Dissertation

Students in the Ph.D. programs must take an appropriate number of credits for dissertation, the exact number to be determined by departmental and/or individual requirements.

At least two weeks before the end of the quarter in which the student is to receive his degree, a candidate must submit to the Director of Graduate Studies a typewritten original and one copy of a completed dissertation that has been signed by his committee. An abstract is also required. Upon approval of the dissertation by the Director, the student will be certified for his degree. The two copies of the dissertation will then be deposited in the University Library. Each dissertation will be microfilmed with the student being assessed a fee for this service. The dissertation must conform to the guidelines in the Handbook of Graduate Theses and Dissertations available in the University Bookstore.

Final Examination

When the Dissertation Committee has inspected the final draft of the dissertation and finds it suitable for presentation, the Committee will complete a form requesting the scheduling and announcing of the final oral examination. The request form will be submitted via the appropriate department chairman to the college dean and the Director of Graduate Studies for approval. The final oral examination must be held at least three weeks before the end of the quarter in which the student is to be awarded the degree.

The chairman of the examination shall be appointed by the Dean of the College and shall not be a member of the student's Dissertation Committee or the department or program in which the degree is sought.
COURSES DESCRIBEDS

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

The first line of each description includes the prefix and course number, title, and number of credits. Credits separated by a colon indicate concurrent lecture and laboratory courses taught as a unit:

**PHY 201-202. GENERAL PHYSICS** (4:1)

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

**HTY 211, 212. AMERICAN HISTORY** (4,4)

Credits separated by a hyphen indicate variable credit:

**EDR 633. PRACTICUM IN READING** (3-6)

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.-lab. Lecture and laboratory
- **Lec.-dem. Lecture and demonstration
- **Lec.-pro. Lecture and problem
- **Lec.-lab. Lecture and laboratory
- **Lec.-dem. Lecture and demonstration
- **Lec.-pro. Lecture and problem

Course descriptions are listed under the following department and program headings (prefix in parentheses):

- Accounting (ACC)
- Afro-American Studies (AFA)
- Aging Studies (Gerontology) (AGE)
- American Studies (AMS)
- Anthropology (ANT)
- Art (ART)
- Astronomy (AST)
- Biology (BIO)
- Botany (BOT)
- Microbiology (MIC)
- Zoology (ZOO)
- Chemistry (CHM)
- Communicology (CLY)
- Cooperative Education (COE)
- Criminal Justice (CJP)
- Dance (DAN)
- Developmental Courses:
  - Developmental Mathematics (DM)
  - Developmental Study Skills (DRS)
- Economics (ECN)
- Education:
  - Art Education (EDA)
  - Curriculum (EDC)
  - Elementary Education (EDE)
  - English Language Education (EDT)
  - Exceptional Child Education (EDS)
  - Foreign Language Education (EDX)
  - Foundations (EDF)
  - Guidance (EDG)
  - Health Education (HEN)
  - Humanities Education (EDY)
  - Junior College Education (EDH)
  - Library-Audiovisual Education (EDL)
  - Music Education (EDM)
  - Natural-Science-Mathematics Education (EDN)
- Physical Education for Teachers (EDP)
- Measurement-Research-Evaluation (EDQ)
- Reading Education (EDR)
- Social Science Education (EDW)
- Speech Communication-English Education (EDT)
- Vocational and Adult Education (EDV)

Engineering:

- Basic Engineering (EGB)
- Electrical and Electronic Systems (EGE)
- Energy Conversion and Mechanical Design (EGR)
- Industrial Systems (EGS)
- Structures, Materials, & Fluids (EGX)
- Computer Science Service Courses (ESC)
- Engineering Technology (ETK)
- English (ENG)
- Environment (ENV)
- Finance (FIN)
- Fine Arts (Interdisciplinary) (FNA)
- Foreign Languages:
  - General Foreign Languages (FOL)
  - Arabic (ARA)
  - Classics (CLS)
  - French (FRE)
  - German (GER)
  - Greek (GRE)
  - Hebrew (HEB)
  - Italian (ITA)
  - Latin (LAT)
  - Portuguese (POR)
  - Romance (ROM)
  - Russian (RUS)

Spanish (SPA)
- General Business Administration (GBA)
- Geography (GPY)
- Geology (GLY)
- History (HTY)
- History of Ideas (HII)
- Humanities (HUM)
- Interdisciplinary Language-Literature (LLI)
- Linguistics (LIN)
- Management (MAN)
- Marine Science (MSC)
- Marketing (MKT)
- Mass Communications (COM)
- Mathematics (MTH)
- Medical Sciences (MSG)
- Medical Technology (MET)
- Medicine (MED)
- Music (MUS)
- Natural Sciences (NAS)
- Nursing (NUR)
- Off-Campus Term (OCT)
- Philosophy (PHI)
- Physical Education, Elective (PEB)
- Physical Sciences (PHS)
- Physics (PHY)
- Political Science (POL)
- Psychology (PSY)
- Rehabilitation Counseling (REH)
- Religious Studies (REL)
- Senior Seminar (CBS)
- Social Sciences, Indisciplinary (SSI)
- Sociology (SOC)
- Speech Communication (SPE)
- Theatre Arts (TAR)
- Women's Studies (WSP)

Cross-Listing of Departments and Programs Alphabetically by Prefix

| ACC | Accounting |
| AFA | Afro-American Studies |
| AGE | Aging Studies (Gerontology) |
| AMS | American Studies |
| ANC | Ancient Studies (Religious Studies) |
| ANT | Anthropology |
| ARA | Arabic (Foreign Languages) |
| ART | Art |
| AST | Astronomy |
| BIO | Biology |
| BOT | Botany (Botany) |
| CBS | Senior Seminar |
| CHM | Chemistry |
| CIP | Criminal Justice |
ACCOUNTING (ACC)


LOWER LEVEL COURSES

ACC 201. ELEMENTARY ACCOUNTING I (3)
Study of basic accounting principles including the recording and reporting of financial activity. The preparation and interpretation of financial statements.

ACC 202. ELEMENTARY ACCOUNTING II (3)
PR: ACC 201. Accounting theory and practices for various equity structures.

UPPER LEVEL COURSES

ACC 300. ACCOUNTING FOR MANAGEMENT CONTROL (3)
PR: ACC 202. Study of accounting from user's point of view. Includes measurement theory, use of financial statements, and accounting measurement in planning and control.

ACC 301. INTERMEDIATE ACCOUNTING I (4)
PR: ACC 300 or concurrent registration in ACC 300. Measurement theory and methodology underlying income measurement and reporting of financial position. The study of cash, time value analysis, receivables, and inventories.

ACC 302. INTERMEDIATE ACCOUNTING II (4)
PR: ACC 301. Continuation of theory and principles underlying financial statements, current and long term liabilities, plant and equipment, investments, intangible, leases and pensions, and owner's equity.

ACC 303. INTERMEDIATE ACCOUNTING III (3)
PR: ACC 302 Required for Accounting majors. Continuation of theory and principles underlying financial statements, earnings per share, income tax allocation, price level changes, accounting changes, statements from incomplete records, statements of change in financial position, and contemporary accounting issues.

ACC 401. ADVANCED ACCOUNTING (3)
PR: ACC 302; MTH 211 or College Algebra. Quantitative application in accounting, partnerships, governmental accounting and price level changes.

ACC 402. CONSOLIDATED FINANCIAL STATEMENTS (3)
PR: ACC 302. Accounting for home office and branch operations and business combinations.
AFFRO-AMERICAN STUDIES (AFA)

Director: F. U. Ohaegbulam; Associate Professor: F. U. Ohaegbulam; Assistant Professors: J. W. Dudley, S. J. Garcia, K. R. Glover; Instructor: M. E. Metz.

LOWER LEVEL COURSES

AFA 230. INTRODUCTION TO AFRO-AMERICAN STUDIES (4)
Fundamental perspectives on the nature and meaning of the Afro-American experience and the role of Afro-American Studies in articulating major problems in American and world society. (Formerly AFA 130.)

AFRO-AMERICAN STUDIES (AFA)
American political process including their political socialization, and struggle to become effective participants in the American political process.

AFA 341. ARTS AND MUSIC OF THE AFRICAN PEOPLE (4)
An examination of the visual arts — painting, sculpture, architecture and music of African people in the Sub-Saharan Africa, the Caribbean and the United States. Particular attention to how blacks have expressed the meaning, suffering and triumph of their lives through legitimate theatre, visual arts, and musicals and the role of black artists in the historical struggle for black consciousness and liberation.

AFA 343. THE AFRICAN DIASPORA AND PAN-AFRICANISM (4)
An examination of the African Diaspora and the influence of African culture and civilization on the growth and development of world cultures. Emphasis on the extent to which African culture has enriched the development of mankind, the cultural significance of African voyages and migrations to Asia, Europe and the Americas, and the historical quest for racial and continental pan-Africanism including Garveyism.

AFA 428. GOVERNMENT AND POLITICS OF AFRICA (4)
Designed to provide the information and analytical tools necessary to interpret current Sub-Saharan African policies. Survey of political organizations in traditional African societies; politics under colonial rule; the struggle for independence, and post-independence politics.

AFA 431. SOCIAL INSTITUTIONS AND THE GHETTO (4)
A study of social institutions as they relate to the American Black ghetto, with emphasis on social systems operating within and on the ghetto. (Formerly AFA 302.)

AFA 432. BLACK AMERICANS IN THE AMERICAN ECONOMIC PROCESS (4)
Brief economic history of Black America emphasizing the impact of racial discrimination and evaluating proposals for improvement as they apply to Black Americans and other minority groups. (Formerly AFA 310)

AFA 438. AFRICA IN WORLD POLITICS (4)
Study of international relations in the new Africa including the relations of the new states with the major world powers and their role in the United Nations.

AFA 440. CONTEMPORARY BLACK PHILOSOPHY (4)
Major themes and participants in the Black liberation movement since 1990 (Formerly AFA 410)

AFA 422. GOVERNMENT AND POLITICS OF WEST AFRICA (4)
In depth study of government, political systems and processes in West Africa including political developments, ideologies, problems and prospects of political and economic development and military regimes in the area.

AFA 443. GOVERNMENT AND POLITICS OF EAST, CENTRAL AND SOUTHERN AFRICA (4)
In depth study of political developments, ideologies and modernization in East, Central and Southern Africa including race relations and white minority rule and Portuguese colonialism in Southern Africa.

AFA 444. EDUCATIONAL DEVELOPMENT IN THE AFRICAN WORLD (4)
An examination of educational systems and experiences of African peoples' cultural past and needs for their future. In tracing the development of education in the African world, close attention will be paid to changing structures and functions of education as manifestations of governmental needs and desires. Similarities and contrasts of African and Afro-American educational patterns will be explored.

AFA 481. RESEARCH AND FIELD STUDIES (1-4)
A course linking the study pursued by the student with research and work projects in the Tampa Black community.

AFA 483. SELECTED TOPICS IN AFRO-AMERICAN STUDIES (1-4)
Topics offered are selected to reflect student needs and faculty interests. In depth study in such areas as the Black Student and the American Educational Process; the Black Experience in the Americas; European Expansion in Africa to 19th century; Contemporary Economic Problems in Africa.

AFA 484. AFRICA AND THE UNITED STATES (4)
A consideration of the nature and character of African cultural survivals in America including an examination of the historical and current political, economic, and cultural relations between the United States and Africa.

AFA 485. DIRECTED READINGS (2-4)
Independent readings in a particular area of Afro-American Studies, selected by student and instructor.

AFA 491. SENIOR SEMINAR (4)
In-depth study of a particular topic in the area of Afro-American Studies. Individual research by students required.

AFA 499. SEMINAR IN TEACHING BLACK STUDIES (4)
An examination of instructional media, resources and approaches relevant to the study and teaching of the black experience.

AGING STUDIES (GERONTOLOGY) (AGE)

Director: T. A. Rich; Professors: T. A. Rich, S. V. Saxon; Associate Professor: W. P. Mangum; Adjunct Assistant Professor: R. L. Davis.

UPPER LEVEL COURSES

AGE 301. 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.

AGE 315. APPLIED GERONTOLOGY (4)
PR: CI. This course is designed to provide an integration of empirical data in the study of aging with practical experience in working with older people. Students will spend time actually working with older people in an agency or institutional setting and then will use experiences in conjunction with other available data to gain perspective in this field.

AGE 325. CULTURE, SOCIETY AND AGING (4)
This course is designed to allow the student to consider aging within the context of culture and society. Emphasis will be given to cultural attitudes toward aging in the U.S. and to implications of cultural attitudes for human behavior.

AGE 405. SEMINAR IN SELECTED TOPICS IN SOCIAL GERONTOLOGY (3)
PR: CI. 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.

AGE 485. DIRECTED READINGS (1-3)
PR: CI. A reading program with topics in gerontology conducted under the supervision of a faculty member.

FOR SENIORS AND GRADUATE STUDENTS

AGE 501. PHYSIOLOGY OF AGING (3)
PR: CI. Lectures and discussion concerned with the biological bases of the aging phenomenon as it occurs on the levels of the cells, organs, tissues, and organism.

AGE 502. PSYCHOLOGY OF AGING (3)
PR: CI. Consideration of basic psychological processes as related to the aging process, changes in functioning and perceptual motor and cognitive-areas from the developmental perspective.

AGE 503. SOCIOLOGICAL ASPECTS OF AGING (3)
PR: CI. Examines, within a sociological frame of reference,
the inter-relationships between the aged (or aging) and the structure and function of the social system and its major institutionalized subsystems.

AGE 504. AGING AND PERSONALITY
PR: CI. An introduction to personality theory and concepts of adjustment with an overview of counseling techniques and rehabilitative efforts with the aged.

AGE 507. ECONOMICS AND AGING
PR: CI. A study of the basic processes of macroeconomic thought in the modern mixed economy and what influences these processes have on the subject of aging. The course will include discussions on economic issues pertinent to aging such as income maintenance, problems, theories of consumption and income, and labor force problems.

AGE 509. LEISURE FOR THE AGING
PR: CI. This seminar consists of general data and observations on trends and research in the leisure field, directed theoretical analysis of these studies as they pertain to the elderly and contact with progress by visits, interviews, and reports.

AGE 585. DIRECTED READINGS
PR: CI. A reading program with topics in gerontology conducted under the supervision of a faculty member.

FOR GRADUATE STUDENTS ONLY

AGE 603. SOCIAL RESEARCH METHODS APPLIED TO GERONTOLOGY
PR: CI. Systematic study of the methods and techniques employed in social, psychological, and health studies of population groups. Directed toward the consumers of research findings—persons whose positions call for the ability to interpret, evaluate, and apply the findings produced by others.

AGE 605. INTERPERSONAL RELATIONS PRACTICUM
PR: CI. A practicum involving students in group and individual settings in interaction with older persons. Content will include implications from interviewing, counseling, and current conceptions of personality in the aged.

AGE 606. INSTITUTIONAL ADMINISTRATION
PR: CI. This course deals with the management problems and practices in the administration of institutions in the field of aging. Consideration is given to the economics of aging, federal and state legislation, the management of people, and fiscal management.

AGE 608. HUMAN RELATIONS IN ORGANIZATIONS
PR: CI. An analytical view of the modern human relations movement with stress on development since the 1930's. Incorporates the philosophy of the behavioral sciences and alternative theories and relates them to the management process.

AGE 610. ADMINISTRATIVE APPLICATIONS OF DEMOGRAPHY
PR: CI. Acquaints the student with various sources of demographic data and its use. Emphasis is placed upon applicability in program planning and student experience in locating, tabulating, and interpreting data from selected publications.

AGE 611. PROJECTS IN AGING I
PR: AGE 611 and CI. A continuation of AGE 611.

AGE 612. PROJECTS IN AGING II
PR: AGE 611 and CI. A continuation of AGE 611.

AGE 691, 692, 693, 694. SEMINAR IN SOCIAL GERONTOLOGY
PR: CI. Designed to give the graduate student an opportunity to integrate concepts within the field of gerontology and relate these to other fields of study. Guest lecturers from a variety of disciplines participate in the seminar.

AGE 695. FIELD PLACEMENT
PR: CI. Internship in an agency or setting. An assignment to an agency or organization engaged in planning or administering programs for older people or in providing direct services to older people (S/U only.)

AMERICAN STUDIES (AMS)


LOWER LEVEL COURSES

AMS 201. ISSUES IN AMERICAN CIVILIZATION
Through lecture and demonstration an examination of such topics as natural environment and the quality of life, Architecture and American society, leisure and technology, jazz music, the role of higher education in America, the American success myth and the status of the arts in America.

UPPER LEVEL COURSES

AMS 301. INTRODUCTION TO AMERICAN CIVILIZATION
Integration of major aspects of American life between 1898 and 1914. Should be taken the first term a student becomes an American Studies major. Elective for non-majors.

AMS 311. THE COLONIAL PERIOD
Puritan heritage: The pattern of American culture as revealed through an examination of selected writings and pertinent slides and recordings dealing with the art, architecture and music of the period. Elective for non-majors.

AMS 312. THE AGRARIAN MYTH
Frontier heritage: The pattern of American culture as revealed through an examination of selected writings and other pertinent materials dealing with American faith and the American frontier environment (the land, city, machine). Elective for non-majors.

AMS 313. AMERICA DURING THE TWENTIES AND THIRTIES
Heritage of the nineteen twenties and thirties: selected interdisciplinary materials are used to examine the relationships among regionalism, nationalism and internationalism during the twenties and thirties. Emphasis is placed on the measure of cultural nationalism attained by the United States during this period. Elective for non-majors.

AMS 321. ARCHITECTURE AND THE AMERICAN ENVIRONMENT
By means of slides, lectures and discussion the course examines 350 years of American architectural history. Architectural styles, aesthetics and the relation between a building and its social environment are stressed.

AMS 331. THE AMERICANIZATION OF ENGLISH
An overview of American attitudes toward the English language from colonization to the present. Among the topics discussed are: the American mania for correctness, the influence of the school marm, place and proper names and language prudery.

AMS 383. SELECTED TOPICS IN AMERICAN STUDIES
Offerings include Cultural Darwinism in America, Creative American Women, American Painting: its social implications, American Jazz Music, American Utopias and Communes.

AMS 481. INDIVIDUAL RESEARCH
The content of the course will be governed by student demand and instructor's interest. Instructor's approval required prior to registration.

AMS 483. SELECTED TOPICS IN AMERICAN STUDIES
Offerings include The American Success Myth, The American Counter Culture, The American City: Past, Present and Future, America as seen by Foreign Travelers.
AMS 491. SENIOR SEMINAR IN AMERICAN STUDIES (4)
PR: Senior in American Studies or Cl.

AMS 492. SENIOR SEMINAR IN AMERICAN STUDIES (4)
PR: AMS 491.

AMS 493. SENIOR SEMINAR IN AMERICAN STUDIES
PR: AMS 491, AMS 492.

ANCIENT STUDIES (ANC)—see Religious Studies

ANTHROPOLOGY (ANT)


LOWER LEVEL COURSES

ANT 201. INTRODUCTION TO ANTHROPOLOGY (4)
A general survey of physical anthropology, archaeology, linguistics and cultural anthropology.

ANTHROPOLOGY (ANT)

ANT 301. PHYSICAL ANTHROPOLOGY (4)
PR: ANT 201 or Cl. The comparative study of human physical variations and origins.

ANT 321. ARCHAEOLOGY (4)
PR: ANT 201 or Cl. The comparative study of past cultures and societies.

ANT 331. CULTURAL ANTHROPOLOGY (4)
PR: ANT 201 or Cl. The comparative study of cultures and societies.

ANT 371. THE ANTHROPOLOGICAL PERSPECTIVE (4)
Anthropological concepts relevant to contemporary life. Designed for non-anthropology majors. May not be counted for credit toward an anthropology major.

ANT 401. SELECTED TOPICS IN LINGUISTIC ANTHROPOLOGY (3-6)
PR: LIN 301, ANT 201 or Cl. A detailed study of current issues such as the relationship of language and culture, ethnographic semantics, or paralinguistic phenomena. May be repeated as topics vary.

ANT 411. SELECTED TOPICS IN PHYSICAL ANTHROPOLOGY (3-6)
PR: ANT 201-311 or Cl. A detailed study of current issues such as paleo-pathology, human races, or social biology. May be repeated as topics vary.

ANT 421. SELECTED TOPICS IN ARCHAEOLOGY (3-6)
PR: ANT 201-321 or Cl. A detailed study of current issues such as the development of civilization, regional chronologies, or historical archaeology. May be repeated as topics vary.

ANT 431. SELECTED TOPICS IN CULTURAL ANTHROPOLOGY (3-6)
PR: ANT 201-331 or Cl. A detailed study of current issues such as socio-cultural change, ethnopsychology, or social structure. May be repeated as topics vary.

ANT 441. REGIONAL ANTHROPOLOGY (3-6)
PR: ANT 201-331 or Cl. A survey of cultures and societies in a limited area or region. May be repeated as topics vary: (1) Indians of North America; (2) Cultures of Africa; (3) Cultures of the Pacific; (4) Cultures of Mesoamerica; (5) Cultures of the Middle East; (6) Specified areas such as Asia, Southeastern U.S. or Florida depending on current interest and staff.

ANT 461. HISTORY OF ANTHROPOLOGICAL THEORY (4)
PR: LIN 301, ANT 311-321-331 or Cl. Survey and analysis of the development of theory and method.

ANT 471. METHODS IN ANTHROPOLOGY (3-6)
PR: CI. Study and application of a selected field or laboratory method in anthropology. Prerequisites will depend on area of study and will be determined by consultation with instructor in advance of registration. May be repeated as topics vary: (1) Archaeological Field Methods; (2) Field Methods in Cultural Anthropology; (3) Laboratory Methods in Archaeology; (4) Laboratory Methods in Physical Anthropology; (5) Others as specified.

ANT 481. INDIVIDUAL RESEARCH (3-6)
PR: CI. Individual guidance in a selected research project.

ANT 485. DIRECTED READING (1-6)
PR: CI. Individual guidance in concentrated reading on a selected topic in anthropology.

ANT 491. SENIOR SEMINAR IN ANTHROPOLOGY (4)
PR: Senior standing with major in anthropology, or equivalent. A seminar approach to the integration of the fields of anthropology. Designed to help the student refocus on and come to a better understanding of the nature of anthropology.

FOR SENIORS AND GRADUATE STUDENTS

ANT 571. SEMINAR IN ANTHROPOLOGY (3)
PR: CI. Topics to be chosen by students and instructor.

ANT 581. INDIVIDUAL RESEARCH (3)
PR: CI. Individual guidance in a selected research project.

ANT 585. DIRECTED READING (1-6)
PR: CI. Individual guidance in concentrated reading on a selected topic in anthropology.

FOR GRADUATE STUDENTS ONLY

ANT 601. SEMINAR IN ANTHROPOLOGICAL LINGUISTICS (3)
PR: Graduate standing. One of four core courses required of all students. A critical survey of anthropological linguistics emphasizing contributions to applied anthropology. Open to non-majors.

ANT 611. SEMINAR IN PHYSICAL ANTHROPOLOGY (3)
PR: Graduate standing. One of four core courses required of all students. A critical survey of physical anthropology emphasizing contributions to applied anthropology. Open to non-majors.

ANT 621. SEMINAR IN ARCHAEOLOGY (3)
PR: Graduate standing. One of four core courses required of all students. A critical survey of archaeology emphasizing contributions to applied anthropology. Open to non-majors.

ANT 631. SEMINAR IN CULTURAL ANTHROPOLOGY (3)
PR: Graduate standing. One of four core courses required of all students. A critical survey of cultural anthropology emphasizing contributions to applied anthropology. Open to non-majors.

ANT 634. ANTHROPOLOGY TODAY (4)
PR: CI. A graduate level survey of contemporary anthropology primarily intended for graduate students in Social Science Education.

ANT 641. METHODS IN MEDICAL ANTHROPOLOGY (4)
PR: Three of the core courses, or CI. Field techniques, methods of collection, analysis, and interpretation of data. May be repeated up to 8 credit hours as topics vary. Open to non-majors. Lec-lab, field trips.

ANT 644. METHODS IN URBAN ANTHROPOLOGY (4)
PR: Three of the core courses, or CI. Field techniques, methods of collection, analysis, and interpretation of data. May be repeated up to 8 credit hours as topics vary. Open to non-majors. Lec-lab, field trips.

ANT 647. METHODS IN PUBLIC ARCHAEOLOGY (4)
ART


LOWER LEVEL COURSES

ART 201. VISUAL CONCEPTS I (4)
Studio problems supplemented by reading and discussion. Consideration of spatial organization of the two-dimensional surface.

ART 202. VISUAL CONCEPTS II (4)
Studio programs supplemented by reading and discussion. Consideration of three-dimensional organization of space and mass.

ART 301. BASIC SEMINAR (2)
Philosophical dimensions of art. Discussion of purposes of art and the relationship of art to life.

ART 304. DRAWING I (4)
PR: ART 201 and ART 301. Drawing as a means of formal organization. Introduction to intermediate drawing methods and media.

ART 310. INTRODUCTION TO ART (3)
An introductory course for the student who does not intend to major in art. (S/U only.)

ART 311. PAINTING I (4)
PR: ART 201 and ART 301. Intermediate problems in painting with an emphasis on the exploration of methods and media and the development of individual concepts.

ART 321. SCULPTURE I (4)
PR: ART 202 and ART 301. Intermediate problems in sculpture with emphasis on the exploration of materials and media and the development of individual concepts.

ART 331. CERAMICS I (4)
PR: ART 202 and ART 301. Intermediate problems in ceramics with emphasis on the exploration of methods and media and the development of individual concepts.

ART 340. GRAPHICS I (4)
PR: ART 201 and ART 301. Introduction to the graphics media: Intaglio, Lithography, Silkscreen.

ART 341. PHOTOGRAPHY I (4)
PR: ART 201 and ART 301. Intermediate problems in photography with emphasis on the exploration of materials and media and development of individual concepts.

ART 365. CINEMATOGRAPHY I (4)
PR: ART 201 and ART 301. Intermediate problems in cinematography with emphasis on the exploration of materials and media and development of individual concepts.

ART 391. TECHNIQUES SEMINAR: SELECTED TOPICS (2)
PR: ART 201, ART 202, ART 301 and CL. Concentration in specialized technical data and process. May be repeated for credit for different topics only.

ART 401. DRAWING II (4)
PR: ART 304. Continued problems in drawing. May be repeated.

ART 411. PAINTING II (4)
PR: ART 311. Continued problems in painting. May be repeated.

ART 421. SCULPTURE II (4)

ART 431. CERAMICS II (4)
PR: ART 331. Continued problems in ceramics. May be repeated.

ART 441. LITHOGRAPHY II (4)

ART 442. INTAGLIO II (4)

ART 443. SILKSCREEN II (4)

ART 453. ART SENIOR SEMINAR (3)
PR: Senior Status. To aid majors to understand, appraise and perfect their own art and technique through critical and aesthetic judgments of their colleagues. Discussion and critical evaluation.

ART 461. PHOTOGRAPHY II (4)
PR: ART 361. Continued problems in photography. May be repeated.

ART 464. INTRODUCTION TO THE PERSONAL FILM (4)
PR: ART 365. Comparison of philosophical and technical to non-majors.

ANT 654. REGIONAL PROBLEMS IN URBAN ANTHROPOLOGY (4)
PR: Three of the core courses, or CL. Contemporary problems in anthropology in the context of a specific region. May be repeated up to 8 credit hours as topics vary. Open to non-majors.

ANT 667. REGIONAL PROBLEMS IN PUBLIC ARCHAEOLOGY (4)
PR: Three of the core courses, or CL. Contemporary problems in archaeology in the context of a specific region. May be repeated up to 8 credit hours as topics vary. Open to non-majors.

ANT 681. GRADUATE RESEARCH (1-15)
PR: Successful passing of comprehensives and approval of a field work proposal by the student's committee. The implementation of a research project including data gathering and analysis through an appropriate methodological and theoretical framework. May be repeated up to 15 credit hours. Open to majors only.

ANT 699. THESIS (1-6)
PR: Approval by the student's committee. A study in depth in applied anthropology approved by the thesis committee. May be repeated up to 6 credit hours. Open to majors only.
ART 465. CINEMATOGRAPHY II (4)
PR: ART 365. Continued problems in cinematography. May be repeated.

ART 467. SOUND TECHNIQUES (4)
PR: ART 365. The recording and editing of sound for film. Collaboration with other departments, particularly Music and Theatre, is encouraged. To be taken concurrently with ART 465 or ART 565 whenever possible.

ART 470. PREHISTORIC AND ANCIENT ART (4)
A comprehensive study of Paleolithic, Neolithic, Egyptian, Assyrian and Mesopotamian painting, sculpture and architecture.

ART 471. GREEK AND ROMAN ART (4)
A comprehensive study of Aegean, Mycenaean, Etruscan, Greek and Roman painting, sculpture and architecture.

ART 472. MEDIEVAL ART (4)
A comprehensive study of early Christian, Byzantine and Medieval painting, sculpture, architecture and manuscript illumination.

ART 473. RENAISSANCE ART (4)
A comprehensive study of Renaissance and Manerist painting, sculpture and architecture in Italy and Northern Europe.

ART 474. BAROQUE AND ROCOCO ART (4)
A comprehensive study of the painting, sculpture and architecture in France, Italy, Spain and the Netherlands in the seventeenth and early eighteenth centuries.

ART 475. NINETEENTH CENTURY ART (4)
A comprehensive study of nineteenth century painting, sculpture and architecture in France and England.

ART 476. TWENTIETH CENTURY ART (4)
A comprehensive study of painting, sculpture and architecture from Cezanne to the present in Europe and the United States. Required of all art majors.

ART 477. ORIENTAL ART (4)
An introduction to concepts of the arts of China, Japan and other Far Eastern countries.

ART 481. DIRECTED STUDY (1-6)
PR: CC. Independent studies in the various areas of Visual Arts. Course of study and credits must be assigned prior to registration. May be repeated.

ART 482. VIDEO ARTS I (4)
PR: ART 201 and ART 301 and CI. A course designed to acquaint the student with the use and maintenance of primary portable equipment and introduction to the design and realization of creative TV presentation as an art form.

ART 482. VIDEO ARTS II (4)
PR: ART 482. An elaboration of portable recording techniques for use in individual art projects.

ART 484. SEMINAR IN VIDEO ARTS (4)
PR: ART 201 and ART 301. An examination of various aspects of transmission of visual images as they relate to the concerns of artists.

ART 485. DIRECTED READING (1-6)
PR: CI and CC. A course of reading and study in an area of special concern governed by student demand, instructor interest, and/or departmental requirements. Selection of study area and materials for the course must be agreed upon and appropriate credit must be assigned prior to registration. A contract with all necessary signatures is required for registration. May be repeated for credit for different study areas only.

ART 491. IDEA SEMINAR (2)
PR: ART 301. Readings, discussion. Subjects will change each quarter, determined by mutual student and faculty interests. May be repeated.

ART 498. CRITICAL STUDIES IN ART HISTORY (4)
PR: CI. Specialized intensive studies in art history. Specific subject matter varies. To be announced at each course offering. May be repeated for different topics only. (Formerly ART 570.)

ART 499. SEMINAR IN THE HISTORY OF ART HISTORY (4)
PR: Four courses in Art History at the 400 level, CI. An examination of the origins of Art History as a discipline and the changing nature of Art History from Vasari to the present. (Formerly ART 573.)

FOR SENIORS AND GRADUATE STUDENTS
Admission to all 500-level studio courses by Consent of Instructor.

ART 501. DRAWING (4)

ART 511. PAINTING (4)
PR: ART 411. Advanced problems in the various painting techniques. Emphasis on individual creative expression. May be repeated.

ART 521. SCULPTURE (4)
PR: ART 421. Advanced problems in the various techniques of sculpture. Emphasis on individual creative expression. May be repeated.

ART 531. CERAMICS (4)
PR: ART 431. Advanced problems in the various ceramic techniques, including throw and glaze calculation. May be repeated.

ART 541. LITHOGRAPHY (4)
PR: ART 441. Advanced problems in various lithographic techniques. Emphasis on individual creative expression. May be repeated.

ART 542. INTAGLIO (4)
PR: ART 442. Investigations into more complex intaglio processes including photoengraving and color printing procedures. Emphasis on personal conceptual development in graphic media. May be repeated.

ART 543. SILKSCREEN (4)
PR: ART 443. Advanced problems in the various silkscreen techniques. Emphasis on individual creative expression. May be repeated.

ART 561. PHOTOGRAPHY (4)
PR: CI. Advanced work in photography and related media leading to development of personal/expresive statements. May be repeated.

ART 562. ADVANCED EDITING TECHNIQUES (4)
PR: ART 465. Focus on advanced techniques and theory of editing for the film artist. May be repeated.

ART 563. ADVANCED FILM TECHNIQUES (4)
PR: ART 465. Description and demonstration of specific film manipulation techniques for the artist. Optical printing, infrared film, computer filmmaking, polyvision, television manipulated film. Students will create original experimental works. May be repeated.

ART 564. ANATOMY OF THE PERSONAL FILM (4)

ART 565. CINEMATOGRAPHY (4)
PR: ART 465. Advanced studio work using black and white, color and sound as technical and aesthetic factors in visual, artistic productions. May be repeated.

ART 566. ANATOMY OF THE COLLABORATIVE FILM (4)
PR: ART 465. Analysis of aesthetic and other selected aspects of film produced through collaborative efforts. May be repeated.

ART 567. SEMINAR IN THE PERSONAL FILM (4)
PR: ART 464, ART 465 and ART 566. Discussion of techniques, approaches and motivations open to and pursued by established film artists. May be repeated.

ART 568. SELECTED TOPICS IN THE HISTORY OF FILM (4)
PR: ART 569. In depth investigation of a selected period, development or school in the history of film as art. May be repeated.
ART 591. CERAMICS (4)
PR: ART 461 or CI. May be repeated. PR: CI. May be repeated.}

ART 601. DRAWING (4)
PR: Cl. May be repeated.

ART 611. PAINTING (4)
PR: Cl. May be repeated.

ART 621. SCULPTURE (4)
PR: Cl. May be repeated.

ART 631. CERAMICS (4)
PR: Cl. May be repeated.

ART 641. LITHOGRAPHY (4)
PR: Cl. May be repeated.

ASTRONOMY (AST)

AST 300. INTRODUCTORY ASTRONOMY I (4)
CR: MTH 212 or MTH 302 or Cl. Introduction to basic astrophysics and stellar structure and evolution; interstellar medium, nebulae and pulsars; nature and dynamics of the Milky Way and other galaxies, quasars and cosmology. A quantitative introduction to stellar and galactic astronomy for science and math majors.

AST 301. INTRODUCTORY ASTRONOMY II (3)
CR: MTH 212 or MTH 302 or Cl. Introduction to astronomical instruments and observing practice, and actual observations at the telescopes. Use of auxiliary instruments and reduction of observations.

AST 302. INTRODUCTORY ASTRONOMY III (4)
CR: MTH 302 or MTH 212 or Cl. Introduction to basic astrophysics and stellar structure and evolution; interstellar medium, nebulae and pulsars; nature and dynamics of the Milky Way and other galaxies, quasars and cosmology. A quantitative introduction to stellar and galactic astronomy for science and math majors.

AST 303. HISTORY OF THE SCIENCE OF ASTRONOMY (5)
To familiarize seriously interested students with the history of astronomy and the influence of this discipline on the development of human knowledge.

AST 304. DESCRIPTIVE ASTRONOMY I (5)
Distances, fundamental properties and evolution of stars; the sun as a star, unusual stars (exploding stars, pulsating stars, etc.); the nature of the Galaxy and other galaxies, cosmology. Descriptive approach with a minimum of mathematics. No credit for astronomy majors.

AST 305. HISTORY OF THE SCIENCE OF ASTRONOMY (5)
CR: MTH 212 or MTH 302 or Cl. History of astronomy, celestial phenomena, timekeeping, astronomical instruments, properties of light, contents and elementary dynamics of the solar system. Descriptive approach with a minimum of mathematics. No credit for astronomy majors.

AST 306. DESCRIPTIVE ASTRONOMY II (5)
Constellations, use of small telescopes, etc., apparent motions of celestial objects, comets and meteors, seasons and weather. Current events in the space program. Planetarium and open sky demonstrations. Lecture-laboratory. No credit for astronomy majors.

AST 307. DESCRIPTIVE ASTRONOMY III (5)
CR: MTH 212 or MTH 302 or Cl. Timekeeping, use of sextant, constellations, navigation with minimum equipment, some spherical astronomy.

AST 308. NAVIGATION (3)
PR: Some knowledge of geometry, algebra and trigonometry. Timekeeping, use of sextant, constellations, navigation with minimum equipment, some spherical astronomy.

AST 309. HISTORY OF THE SCIENCE OF ASTRONOMY (5)
To familiarize seriously interested students with the history of astronomy and the influence of this discipline on the development of human knowledge.

AST 310. INTRODUCTORY ASTRONOMY IV (5)
CR: MTH 212 or MTH 302 or Cl. Introduction to basic astrophysics and stellar structure and evolution; interstellar medium, nebulae and pulsars; nature and dynamics of the Milky Way and other galaxies, quasars and cosmology. A quantitative introduction to stellar and galactic astronomy for science and math majors.

AST 311. ASTRONOMICAL LABORATORY I (1)
CR: AST 301, required of majors, open to non-majors. Exercises in connection with AST 301. Use of small telescopes, introduction to the use of small calculators.

AST 312. ASTRONOMICAL LABORATORY II (2)
Required of majors. Introduction to astronomical instruments and observing practice, and actual observations at the telescopes. Use of auxiliary instruments and reduction of observations.

AST 313. NAVIGATION (3)
PR: Some knowledge of geometry, algebra and trigonometry. Timekeeping, use of sextant, constellations, navigation with minimum equipment, some spherical astronomy.

AST 314. ANALYTICAL TECHNIQUES IN ASTRONOMY (4)
PR: Calculus and analytic geometry, AST 301, AST 302, AST
Newton's and Kepler's laws, two body problem, elementary perturbation theory, rigid body dynamics, tides, numerical analysis, planetary interiors and atmospheres, solar system cosmogony.

**AST 443. STELLAR ASTROPHYSICS** (5)  
PR: AST 302 or CI, MTH 303. The physical characteristics of stars, their measurement, and their distribution. Analysis of stellar radiation. Double stars, associations, clusters, galaxies.

**AST 481. UNDERGRADUATE RESEARCH** (1-6)  
PR: Senior or advanced junior standing and CI: Participation in professional research with a view to publication of results. May be repeated. (S/U only.)

**AST 491. ASTRONOMY SEMINAR** (1)  
PR: Senior or advanced junior standing. May be repeated twice. (S/U only.)

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**FOR SENIOR AND GRADUATE STUDENTS**

**AST 521. INTRODUCTION TO CELESTIAL MECHANICS** (5)  
PR: AST 302 or CI, MTH 302 and some knowledge of differential equations, or CI. The two-body problem, artificial satellites, elements of perturbation theory.

**AST 522. BINARY STARS** (4)  
PR: AST 302 or CI, MTH 302 or CI. Principles used to find the properties of astrometric, eclipsing, spectroscopic and visual binaries.

**AST 533. STELLAR CONSTITUTION AND EVOLUTION** (4)  
PR: AST 443 or CI, PHY 405. CR: MTH 405. Internal constitution of stars, physics of gas spheres, energy generation in stars, theories of stellar evolution.

**AST 536. INTRODUCTION TO RADIO ASTRONOMY** (4)  

**AST 583. SELECTED TOPICS IN ASTRONOMY** (1-6)  
PR: Senior or advanced junior standing or CI. Intensive coverage of special topics to suit needs of advanced students.

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**FOR GRADUATE STUDENTS ONLY**

**AST 611. POSITIONAL ASTRONOMY** (6)  
PR: AST 413 or CI. The accurate determination of relative and absolute star positions and related problems.

**AST 621. CELESTIAL MECHANICS** (6)  
PR: AST 521 or CI. Planetary theory, lunar theory, Hamiltonian systems, canonical variables, restricted three-body problem, artificial satellite theory, equilibrium and resonance. Certain topics will be emphasized according to the needs of the students.

**AST 631. STELLAR ATMOSPHERES** (4)  
PR: AST 443 and MTH 406 or CI. Basic observational data. Thermodynamics of the gaseous state. Elements or spectroscopy. The transfer equation (continuum and lines). The problem of calculation of atmospheres.

**AST 661. PHOTOMETRY** (4)  
PR: AST 302 or CI. MTH 305. Theoretical, observational and instrumental concepts required in astronomical photometry.

**AST 681. GRADUATE RESEARCH** (1-15)  
PR: CI. May be repeated (S/U only.)

**AST 683. SELECTED TOPICS IN ASTRONOMY** (1-6)  
PR: CI.

**AST 689. DIRECTED TEACHING** (1-5)  
Not applicable toward thesis degree requirements. Supervised teaching for graduate teaching assistants in elementary and/or laboratory courses. A formalized, structured activity wherein a faculty member, by discussion and assignments, considers the principles, rationale, and modus operandi of elementary college courses. Designed to train teaching assistants and to provide help and training to those graduate students who plan to follow a college teaching profession. (S/U only.)

**AST 691. GRADUATE SEMINAR** (2)  
PR: CI. May be repeated. (S/U only.)

**AST 699. MASTER'S THESIS** (1-9)  
PR: CI. (S/U only.)
BIOLOGY
(BIO, BOT, MIC, ZOO)


Biology (BIO)

LOWER LEVEL COURSES

BIO 201. FUNDAMENTALS OF BIOLOGY I (4)
A brief overview of living organisms, respiration, photosynthesis, cell structure, and specialization. Lec.-Lab. Qtr. I, II.

BIO 202. FUNDAMENTALS OF BIOLOGY II (4)
Cell division, genetics, reproduction and development, physiology. Lec.-Lab. Qtr. II, III.

BIO 203. FUNDAMENTALS OF BIOLOGY III (4)
Neurophysiology, behavior patterns, genetics, and evolution; ecology. Lec.-Disc. Qtr. I, III.

BIO 205. FOODS AND DRUGS (4)
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. Qtr. I-IV.

BIO 206. GENES AND PEOPLE (4)
The application of basic biological principles of human heredity to relevant problems and topics through the consideration of scientific and popular literature. For non-majors. Qtr. I-IV.

BIO 207. ENVIRONMENT (4)
The application of basic principles of ecology to relevant problems and topics relating to man's environmental interactions through consideration of scientific and popular literature. For non-majors. Qtr. I-IV.

BIO 255. SEX, REPRODUCTION AND POPULATION (4)
The application of basic biological principles from subject areas to relevant problems and topics through the consideration of scientific and popular literature. For non-majors. Qtr. I-IV.

BIO 256. EVOLUTION (4)
The application of basic principles of evolution with an emphasis upon man through the consideration of scientific and popular literature. For non-majors. Qtr. I-IV.

BIO 271. TOPICS IN BIOLOGY (4)
Lectures, individual reading, movies, classroom discussion and evaluation of selected biological topics reflecting biological principles. For non-majors. Qtr. I-IV.

UPPER LEVEL COURSES

BIO 315. HISTOLOGICAL TECHNIQUES (5)
PR: BIO 201-203. Theory and practice of tissue fixation, imbedding, sectioning, and staining; chromosomal squash preparations; nuclear isolation techniques; photomicrography. Lec.-Lab.

BIO 331. GENERAL GENETICS (4)
PR: BIO 201-203. Introduction to genetics including the fundamental concepts of Mendelian, molecular and population genetics. Lec. Qtr. I, II, III.

BIO 345. MAN'S BIOLOGICAL ENVIRONMENT (4)
PR: BIO 201-203. A biological consideration of man's deteriorating relationship with his environment. Emphasis on pollution, pesticides and population.

BIO 372. MAN, MICROBE AND MOLECULE (4)
Origin of life, control of diseases, environmental quality and the use of microorganisms as tools in searching for molecular explanations of living phenomena. For non-majors.

BIO 401. CELL BIOLOGY I (5)
PR: CHM 331, 332, 333, 334, and BIO 331. A discussion of the concept and significance of the cell to biology; biological molecules and metabolic processes within the cell; cellular energy conversion systems; and control of cellular metabolism. Qtr. I, II.

BIO 402. CELL BIOLOGY II (5)
PR: BIO 401. A continuation of Cell Biology I. The structure and function of cells and their organelles; irritability and contraction; cell differentiation, growth, and integration of cellular activity. Qtr. II, III.

BIO 412. INTRODUCTION TO TROPICAL BIOLOGY (5)
PR: BIO 201-203 or Cl. The tropical environment and its effect on plant and animal communities. Plant and animal interactions and man's impact on the environment.

BIO 431. EXPERIMENTAL GENETICS (4)
PR: BIO 331 or Cl. Experimental analysis of genetic systems. Lec.-Lab.: 2 hr. lec.; 2-3 hr. labs.

BIO 445. PRINCIPLES OF ECOLOGY (4)
PR: BIO 201-203. An introduction to the basic principles and concepts of ecology at the ecosystem, community, and population level of organization. Lec.-Disc. Qtr. I, II, III.

BIO 465. ORGANIC EVOLUTION (4)
PR: BIO 331 or Cl. An introduction to modern evolutionary theory. Lecture on population genetics, adaptations, speciation theory, phylogeny, human evolution and related areas.

BIO 481. UNDERGRADUATE RESEARCH (1-6)
PR: Cl. Individual investigation with faculty supervision. (S/U only).

BIO 483. SELECTED TOPICS IN BIOLOGY (1-4)
PR: Cl.

BIO 485. RESEARCH METHODS IN BIOLOGY I (2)
PR: Cl. A laboratory course for advanced students to become acquainted with contemporary biological research, instrumentation and techniques.

BIO 486. RESEARCH METHODS IN BIOLOGY II (2)
PR: Cl. See BIO 485.

BIO 491. SEMINAR IN BIOLOGY (1)
PR: Cl. Senior or advanced junior standing. May be repeated once. (S/U only).

FOR SENIORS AND GRADUATE STUDENTS (BIO)

BIO 510. CYTOLOGY (4)
PR: BIO 210-203. Survey of the structure and function of cytoplasmic and nuclear components of plant and animal cells. Lec.-Lab.

BIO 515. SUBCELLULAR CYTOLOGY (4)
PR: BIO 201-203. A review of biophysical techniques used in biology to include an introduction of X-ray diffraction, bright field, phase, ultra-violet, interference, and electron microscopy. The course will consist of three hours of lecture and one three-hour lab for demonstration of techniques. Lec.-Lab.

BIO 522. NEUROPHYSIOLOGY (4)

BIO 532. MOLECULAR GENETICS (4)
PR: BIO 331. Detailed examination of DNA, RNA and protein synthesis; the effects of mutations on proteins, cellular control; selected aspects of viral, bacterial, and fungal genetics. Lec.-Lab. Qtr. II.
BIO 535. EVOLUTIONARY GENETICS (4)
PR: BIO 331 or CI. Examination of factors such as mutation, migration, natural selection, and genetic drift which modify the genetic structure of populations.

BIO 583. SELECTED TOPICS IN BIOLOGY (1-4)
PR: CI. Each topic is a course in directed study under supervision of a faculty member.

FOR GRADUATE STUDENTS ONLY

BIO 681. HISTORY OF BIOLOGY (3)
PR: CI. The historical development of biology with emphasis on the origin of important theories and principles.

BIO 612. CHROMOSOME STRUCTURE AND CHEMISTRY (4)
PR: BIO 510. Introduction to the molecular organization of the Eukaryotic chromosome.

BIO 615. ULTRASTRUCTURE TECHNIQUES IN ELECTRON MICROSCOPY (6)
PR: BIO 201-203, BIO 515 or CI. Discussion of theory and techniques in electron microscopy. Emphasis on preparation of biological specimens, electron microscopic optics and use of the electron microscope. Lec.-Lab.

BIO 616. BIOMETRY (4)
PR: MTH 211-213 or CI. An introduction to statistical procedures for research in the biological sciences. Experimental design, analysis of data and presentation of results are emphasized. (Formerly ZOO 616)

BIO 636. POPULATION BIOLOGY (4)
PR: BIO 535 and BIO 616 or CI. Introduction to the theory of population dynamics with emphasis on the genetic and ecological components of population growth, natural selection, and competition between species. Lec.

BIO 641. TROPICAL ECOLOGY (4)
PR: BIO 445, Graduate Standing or CI. A discussion of a series of related ecological topics to illustrate the features peculiar to the tropics.

BIO 651. MARINE PLANKTON SYSTEMATICS (4)
PR: BIO 451, or CI. An introduction to the classification of the major plant divisions, including the algae, fungi, mosses, liverworts, ferns and fern allies, and seed plants considered from an evolutionary perspective. Lec.-Lab.

BIO 652. PLANT DEVELOPMENT (3)
PR: CI. Directed research on selected topics. For Ph.D. students only. May be repeated. (S/U only).

BIO 689. DIRECTED TEACHING (1-5)
Not applicable toward thesis degree requirements. Supervised teaching for graduate teaching assistants in elementary and/or laboratory courses. A formalized, structured activity wherein a faculty member, by discussion and assignments, considers the principles, rationale, and modus operandi of elementary college courses. Designed to train teaching assistants and provide help and training to those graduate students who plan to follow a college teaching profession. (S/U only).

BIO 691. GRADUATE SEMINAR IN BIOLOGY (1)
PR: CI. (S/U only.)

BIO 781. GRADUATE RESEARCH (1-15)
PR: CI. Directed research on selected topics. For Ph.D. students only. May be repeated. (S/U only).

BIO 799. PH.D. DISSERTATION (1-12)
PR: CI. May be repeated to a maximum of 12 credits. (S/U only).

Biology-Botany (BOT)

UPPER LEVEL COURSES

BOT 301. TREES AND SHRUBS OF FLORIDA (3)
Introduction to field and laboratory identification of trees and shrubs, structure of woody plants, forests of Florida, economic uses of principle woods, conservation. (For non-majors).

BOT 302. EVOLUTIONARY SURVEY OF PLANT KINGDOM (5)
PR: BIO 201-203. The major plant divisions, including the algae, fungi, mosses, liverworts, ferns and fern allies, and seed plants considered from an evolutionary perspective. Lec.-Lab.

BOT 311. SYSTEMATIC BOTANY (5)
PR: BIO 201-203 or CI. Identification and classification of the more interesting vascular plants of Florida; angiosperm evolution; principles of taxonomy. Conducted largely in the field.

BOT 313. HORTICULTURAL BOTANY (3)
PR: Course in botany, biology of CI. Application of principles of botany to give an understanding of basic horticultural operations; seed sowing, dormancy growth requirements, vegetative propagation, pruning, and related problems. Lec.-Lab.

BOT 314. FIELD BOTANY (3)
PR: BIO 201-203 or CI. 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.

BOT 371. PLANTS AND MAN (4)
PR: Junior or Senior Standing or CI. The relation of plants to human history and contemporary life. Botanical and economic aspects of plants used as sources of foods, drugs, and other products of importance in everyday life. Origins of cultivated plants. For non-majors.

BOT 417. MYCOLOGY (5)
PR: BIO 201-203. A survey of the fungi with emphasis on their taxonomy, morphology, physiology and economic importance. Lec.-Lab.

BOT 419. PLANT ANATOMY (5)
PR: BIO 201-203. Comparative studies of tissue and organ systems of fossil and present-day vascular plants. Functional and phylogenetic aspects stressed. Lec.-Lab.

BOT 421. PLANT PHYSIOLOGY (5)
PR: BIO 201-203, CHM 331-334, or CI. Fundamental activities of plants; absorption, translocation, transpiration, metabolism, growth, and related phenomena. Lec.-Lab.

BOT 491. SEMINAR IN BOTANY (1)
PR: Senior or advanced junior standing and CI. May be repeated once. (S/U only).

FOR SENIORS AND GRADUATE STUDENTS

BOT 511. TAXONOMY OF FLOWERING PLANTS (4)
PR: BOT 311 or CI. A phylogenetic study of Angiosperms; relationship of the principal orders and families, problems of nomenclature, identification of specimens, comparisons of recent systems of classification, dissection of representative flower types. Field trips and lab work. Lec.-Lab.

BOT 517. PHYSIOLOGY OF THE FUNGI (5)
PR: BOT 417 or CI. The biochemical, physiological, and hormonal basis involved in morphogenesis and cellular control in fungi. Lec.-Lab.

BOT 521. PHYSIOLOGY OF PLANT GROWTH AND DEVELOPMENT (3)
PR: BOT 421, BIO 201-203 and CI. A study of plant development with emphasis of the role of light and growth hormones on the process of flowering, fruit set, ripening, and senescence.

BOT 543*. PHYIOLOGY (5)
PR: BIO 201-203 and CI. A detailed survey of the algae emphasizing both taxonomy and morphology of fresh and marine water forms; field and laboratory investigations, including individual projects. Lec.-Lab.

BOT 546*. PLANT ECOLOGY (4)
PR: BIO 201-203, BIO 445 or CI. Distribution and nature of vegetation in relation to climatic, physiographic, edaphic, and biotic factors; field investigations of subtropical Florida plant communities. Lec.-Lab.

BOT 547*. MARINE BOTANY (5)
PR: BIO 201-203, BIO 445 or CI. A field course in marine plants with emphasis on ecology and functional morphology. Field work will stress the ecological aspects of plants in a subtropical marine environment in Florida. Lec.-Lab.

*Students will be required to pay travel expenses for field trips.
FOR GRADUATE STUDENTS ONLY

BOT 611. BIOSYSTEMATICS (4)
PR: BOT 311 or equivalent. Application of cytology, ecology, genetics, biochemistry, and morphological analyses to the study of evolution and classification of species of higher plants. Lec.

BOT 612. BIOLOGY OF TROPICAL PLANTS (3)
PR: BIO 412. Special topics in the systematics, morphology, physiology, genetics, and ecology of tropical plants with consideration of habitat diversity that leads to rich florals. Lec.

BOT 613. LABORATORY IN TROPICAL PLANTS (2)
PR: Must be taken concurrently with BOT 612. Extended field trip to some area of the New World Tropics to examine major types of vegetation and gain familiarity with field techniques; research problem development. Lab.

BOT 621. PLANT METABOLISM LECTURE (3)
PR: BOT 421, CHM 336 or CI. A study of plant metabolism with emphasis on the biosynthetic pathways and their regulation.

BOT 622. PLANT METABOLISM LABORATORY (4)
PR: BOT 421, CHM 336, or CI. An intensive exposure to the methods used in experimenting with plant material.

BOT 650. MARINE ALGAL ECOLOGY (3)
(Also listed as MSC 650, q.v.). (Formerly BIO 650)

BOT 699. MASTER'S THESIS (1-15)
PR: CI. (S/U only).

Biology-Microbiology (MIC)

UPPER LEVEL COURSES

MIC 351. INTRODUCTION TO MICROBIOLOGY (5)
PR: BIO 201-203; one quarter of organic chemistry and a course in genetics is recommended. Introduction to the biology of microorganisms; structure, physiology and ecology of bacteria, algae, viruses, rickettsiae, and protozoa; basic lab methods in microbiology. Lec.-Lab. Qtr. I, II, III and IV.

MIC 451. APPLIED BACTERIOLOGY (5)
PR: MIC 351. A study of the applications of microbiology to industry, agriculture, medicine, and sanitary engineering. Lec.-Lab. Qtr. IV.

MIC 452. ADVANCED BACTERIOLOGY (5)
PR: MIC 351 and CI. An indepth consideration of structure-function relationships in procaryotes and their significance in the microbial world. Lec.-Lab. Qtr. I. (Formerly MIC 552).

MIC 453. DETERMINATIVE BACTERIOLOGY (5)
PR: MIC 351 or equivalent; CHM 331-336 or equivalent. Survey of bacterial classification; detailed examinations of bacteria important to man in agriculture, in industry and as pathogens. Lec.-Lab. Qtr. II. (Formerly MIC 553.)

MIC 456. MICROBIAL PHYSIOLOGY (5)
PR: MIC 351 or equivalent, CHM 331-334, or CI. A study of physiological and metabolic phenomena pertinent to the growth, development, regulation, inhibition, and death of microorganisms and to the chemical alterations they catalyze. Laboratory emphasis will be on quantitative methods for the study of microbic activity. Lec.-Lab. (Formerly MIC 556.)

MIC 457. VIROLOGY (5)
PR: MIC 351 or equivalent and CI. The biology of viruses associated with plants, animals, and bacteria will be considered; the nature of viruses, mechanisms of viral pathogenesis, and interactions with host cells. Lec.-Lab. Qtr. II. (Formerly MIC 557.)

MIC 491. SEMINAR IN MICROBIOLOGY (1)
PR: Senior or advanced junior standing and CI. May be repeated. (S/U only).

FOR SENIOR AND GRADUATE STUDENTS

MIC 518. MEDICAL MYCOLOGY (5)
PR: MIC 351 or CI. 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. Lec.-Lab. Qtr. I.

MIC 583. SELECTED TOPICS IN MICROBIOLOGY (1-4)
PR: CI. Each topic is a course in directed study under supervision of a faculty member.

FOR GRADUATE STUDENTS ONLY

MIC 654. BACTERIAL GENETICS (3)
PR: MIC 331, MIC 351, MIC 456 or CI. A survey of the recombinational systems found among the bacteria and bacterial viruses with emphasis on the molecular mechanisms of gene transfer, replication and expression and on the significance of these systems for our understanding of cellular functions. Lec.

MIC 655. ADVANCED IMMUNOLOGY (5)
PR: MIC 351 or equivalent, CHM 331-336 or equivalent. Discussion of the basic immune reaction, nature of antigenicity; basic immunological techniques and their use in biological research and the medical sciences.

MIC 699. MASTER'S THESIS (1-15)
PR: CI. (S/U only).

Biology-Zoology (ZOO)

UPPER LEVEL COURSES

ZOO 311. COMPARATIVE VERTEBRATE ANATOMY (6)
PR: BIO 201-203. Anatomy of selected vertebrate types emphasizing evolutionary trends. Lec.-Lab. Qtr. I.

ZOO 313. INTRODUCTORY VERTEBRATE ZOOLOGY (5)
PR: BIO 201-203. An introduction to the major invertebrate groups, with emphasis on local forms. Field work will be required. Lec.-Lab. Qtr. II.

ZOO 321. INTRODUCTORY ANIMAL PHYSIOLOGY (5)
PR: BIO 201-203. Functional histology and the primary functions of the organ systems will be stressed and related to the survival of the whole animal. The approach will be comparative and evolutionary and the emphasis will be on the vertebrates. Lec.-Lab-Disc. Qtr. III.

ZOO 411. HISTOLOGY (4)
PR: ZOO 311 and/or ZOO 422. Comparative approach to the study of tissues and the relation of their structure and function. Lec.-Lab.

ZOO 415. INTRODUCTION TO ENTOMOLOGY (4)
PR: BIO 201-203. An introduction to general aspects of insect morphology, development, and classification. The identification of local forms will be emphasized. Lec.-Lab. Qtr. III, IV.

ZOO 416. VERTEBRATE ZOOLOGY (5)
PR: BIO 201-203. Natural history, morphology, phylogeny and taxonomy of vertebrates. Lec.-Lab. Qtr. II.

ZOO 422. DEVELOPMENTAL BIOLOGY (5)

ZOO 423. ANIMAL PHYSIOLOGY (5)
PR: BIO 201-203 and CHM 333. Advanced presentation of mechanisms employed by animals to interact with their environment, and to maintain their organization.

ZOO 440. WILDLIFE AND FISH MANAGEMENT (3)
PR: BIO 201-203, BIO 445. An introduction to the principles of wildlife and fisheries management. Certain methods and techniques utilized in the managements of exploited animal species will be introduced. Designed primarily for students interested in the wildlife and fish management profession.

ZOO 461. ANIMAL SOCIAL BEHAVIOR (5)
PR: CI. An introduction to the physical, chemical, and emphasis on social behavior and the evolutionary behavior. Lec.-Lab.

*Students will be required to pay travel expenses for field trips.
ZOO 491. SEMINAR IN ZOOLOGY (1)
PR: Upper level. May be repeated once. (S/U only).

FOR SENIORS AND GRADUATE STUDENTS

ZOO 513. PARASITOLOGY (5)
PR: BIO 201-203. Fundamentals of animal parasitology and parasitism; the biology of selected animal parasites, including those of major importance to man. Lec.-Lab. Qtr. II.

ZOO 514. AQUATIC ENTOMOLOGY (4)
PR: ZOO 415. Taxonomy, development, and ecology of aquatic insects with emphasis on local forms. Lec.-Lab. Qtr. II (odd numbered years).

ZOO 515. LIMNOLOGY (5)
PR: Cl. An introduction to the physical, chemical, and biological nature of fresh-water environments. Lec.-Lab. Qtr. III.

ZOO 517. ORNITHOLOGY (4)
PR: BIO 445, ZOO 311, and Cl. The biology of birds. Field trips emphasize local avifauna. Lec.-Lab. Qtr. III.

ZOO 518. MAMMALOLOGY (5)
PR: BIO 201-203 and Cl. The biology of mammals, including systematics, ecology, natural history, and geographical distribution. Lec.-Lab.

ZOO 519. ICHTHYOLOGY (5)
PR: ZOO 311. Systematics of fishes, including major classification, comparative anatomy, embryology, and general distribution. Lec.-Lab. (Also offered as MSC 519.)

ZOO 520. BIOLOGY OF ECHINODERMS (5)
PR: ZOO 313. BIO 402. A study of the anatomy, physiology, and ecology of echinoderms. Lec.-Lab. Qtr. I (even numbered years).

ZOO 521. COMPARATIVE PHYSIOLOGY (5)
PR: BIO 401-402. The evolution of physiological mechanisms. Lec.-Lab. Qtr. I.

ZOO 525. BIOLOGY OF THE AMPHIBIA (5)
PR: ZOO 311, BIO 445, and Cl. Major aspects of amphibian biology emphasizing fossil history, evolutionary morphology, sensory physiology, life history, and reproductive behavior. Lec.-Lab. Field Trips. Qtr. III (even-numbered years).

ZOO 526. BIOLOGY OF THE REPTILIA (5)
PR: ZOO 311, BIO 445, and Cl. Major aspects of reptilian biology emphasizing fossil history, evolutionary morphology, sensory physiology, life history, and reproductive behavior. Lec.-Lab. Field Trip. Qtr. III (odd numbered years).

ZOO 545. ZOOGRAPHY (3)

ZOO 556. TERRESTRIAL ANIMAL ECOLOGY (4)
PR: BIO 445. Field and laboratory investigations of the basic principles of ecology as applied to terrestrial animals. Lec.-Lab. Qtr. I.

ZOO 557. MARINE ANIMAL ECOLOGY (5)
PR: BIO 445 and ZOO 313. Investigations of energy flow, biogeochemical cycles and community structure in marine environments. Lec.-Lab. Qtr. III.

ZOO 562. MECHANISMS OF ANIMAL BEHAVIOR (5)
PR: BIO 201-203, CHM 331-333, and Cl. A comparative approach to communication and orientation in animals including homing behavior and biological clocks. Lec.-Lab. Qtr. I.

ZOO 583. SELECTED TOPICS IN ZOOLOGY (1-4)
PR: Cl. Each topic is a program in directed study under supervision of a faculty member.

FOR GRADUATE STUDENTS ONLY

ZOO 611. EXPERIMENTAL EMBRYOLOGY (4)
PR: BIO 401-402, ZOO 422 and Cl. Lectures, laboratories, readings and discussions relating to contemporary advances in the area of biochemistry of development. Experimental techniques will be studied.

ZOO 618. ADVANCED MAMMALOLOGY (4)
PR: ZOO 518. Important literature and developments in mammalogy. Students will undertake individual research projects. Lec.-Lab.

ZOO 620. INVERTEBRATE REPRODUCTION AND DEVELOPMENT (5)
PR: ZOO 313 and Cl. An analysis of modes of reproduction and patterns of larval development in major invertebrate phyla. Emphasis is on classical descriptive embryology, modern mariculture techniques, and larval ecology. Lec.-Lab.

ZOO 621. PHYSIOLOGICAL ECOLOGY (5)
PR: Cl. Effect of environmental factors on animal function at the cellular and organ system level with emphasis on control and mechanisms. Lec.-Lab.

ZOO 623. PHYSIOLOGY OF MARINE ANIMALS (5)

ZOO 624. COMPARATIVE ENDOCRINOLOGY (5)
PR: ZOO 521 or Cl. An analysis of the similarities and differences between the hormonal mechanisms of mammals, other vertebrates and invertebrates. Lec.-Lab.

ZOO 661. ADVANCED ANIMAL BEHAVIOR (4)
PR: ZOO 461 and Cl. Recent advances in comparative animal behavior (ethology). Lec.-Lab.

ZOO 699. MASTER'S THESIS (1-9)
PR: Cl. May be repeated to a maximum of 9 credits. (S/U only).

CHEMISTRY (CHM)

A survey of modern chemistry designed particularly for those with a poor preparation in algebra and/or chemistry as a preliminary to CHM 211. Lec. Qtr. I, III, IV.

CHM 211. GENERAL CHEMISTRY* (3)
CHM 211 students are expected to have performed well in the placement exam* or to have satisfactorily completed CHM 101. Fundamentals of chemistry; mass and energy relationships in chemical changes, equilibrium, chemical kinetics, atomic and molecular structure, descriptive chemistry of selected elements. Lec. and discussion. Qtr. I, II, III, IV.

CHM 212. GENERAL CHEMISTRY II (3)
PR: CHM 211 or equivalent. Continuation of General Chemistry. Lec. and discussion. Qtr. I, II, III, IV.

CHM 213. GENERAL CHEMISTRY III (3)
PR: CHM 212 or equivalent. Continuation of General Chemistry. Lec. and discussion. Qtr. I, II, III, IV.

*Placement examination for admission to CHM 101, 211 or 215 will be offered on the first day of registration before each quarter. Students should consult the Chemistry Office for time and place.

LOWER LEVEL COURSES

CHM 101. FOUNDATIONS OF UNIVERSITY CHEMISTRY* (5)
CHM 214. BASIC LABORATORY TECHNIQUES (4)
PR: CHM 212 or equivalent. Fundamental techniques of chemical research, including basic manipulations and equipment. One-quarter course for non-chemistry majors. Lec.-lab.

CHM 215. ACCELERATED GENERAL CHEMISTRY I* (5)
This course is designed for the beginning student who has a superior background in science and mathematics. The laboratory is project oriented. Entrance is by examination only. CHM 215-216 is equivalent to CHM 211-212-213 and 217-218-219. Lec.-lab and discussion. Qtr. I.

CHM 216. ACCELERATED GENERAL CHEMISTRY II (5)
PR: CHM 215. Continuation of Accelerated General Chemistry. Lec.-lab and discussion. Qtr. II.

CHM 217. GENERAL CHEMISTRY I LAB (1)
CR or PR: CHM 211. 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. Lecture and lab may be taken concurrently. Qtr. I, II, III, IV.

CHM 218. GENERAL CHEMISTRY LAB II (1)
PR: CHM 217. CR or PR: CHM 212. Laboratory portion of General Chemistry II. Continuation of chemistry laboratory. Lecture and lab may be taken concurrently. Qtr. I, II, III, IV.

CHM 219. GENERAL CHEMISTRY LAB III (1)
PR: CHM 218. CR or PR: CHM 213. Laboratory portion of General Chemistry III. Continuation of chemistry laboratory. Lecture and lab may be taken concurrently. Qtr. I, II, III, IV.

CHM 271. CURRENT ISSUES IN CHEMISTRY (4)
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 291. JUNIOR SEMINAR (1)
PR: CHM 213 or CHM 216. Interrelations of previous courses, the chemical literature, and examination of the nature of the industrial, government, and academic chemistry. Lecture and discussion. (S/U only.) Qtr. I, II, III, IV.

UPPER LEVEL COURSES

CHM 303. ELEMENTARY ORGANIC CHEMISTRY (4)
PR: CHM 213 or equivalent. Fundamental organic principles. One-quarter course for non-chemistry majors only. Lec.-lab.

CHM 311. INTERMEDIATE INORGANIC CHEMISTRY (5)
PR: CHM 213/219 or CHM 216. Fundamental principles of inorganic chemistry. Lec.-lab. Qtr. II, IV.

CHM 321. ELEMENTARY ANALYTICAL CHEMISTRY (5)

CHM 331-332. ORGANIC CHEMISTRY I (3:2)
PR: CHM 213/219 or CHM 216. Fundamental principles of organic chemistry and lab. Lecture and lab may or may not be taken concurrently. Qtr. I, II, III, IV.

CHM 333-334. ORGANIC CHEMISTRY II (3:2)
PR: CHM 331-332 or equivalent. Continuation of Organic Chemistry and lab. Lecture and lab may or may not be taken concurrently. Qtr. II, III, IV.

CHM 335-336. ORGANIC CHEMISTRY III (3:2)
PR: CHM 333-334 or equivalent. Continuation of Organic Chemistry and lab. Lecture and lab may or may not be taken concurrently. Qtr. I, III, IV.

CHM 341. ELEMENTARY PHYSICAL CHEMISTRY (3)
PR: CHM 213/219 or CHM 216, CHM 321, MTH 212, PHY 205-206. Introduction to equilibrium properties of macroscopic systems. Properties of solutions.

CHM 342. ELEMENTARY PHYSICAL CHEMISTRY II (3)
PR: CHM 341. Kinetic behavior of systems, macromolecular solutions, and colloidal dispersions, nuclear chemistry, and spectroscopy.

CHM 343. ELEMENTARY PHYSICAL CHEMISTRY LAB (2)
PR: Co-requisite with CHM 341 and/or CHM 342. A physical chemistry laboratory with emphasis on modern techniques and instruments. Lab.-lec.

CHM 351. INTRODUCTORY BIOCHEMISTRY (4)
PR: CHM 333. Introduction to the chemistry and intermediary metabolism of biologically important substances. Lec. Qtr. I, II, III, IV.

CHM 354. BASIC BIOCHEMISTRY LABORATORY (3)
PR: CHM 351. Practical work in determination and characterization of important biomolecules. Lec.-lab.

CHM 371. MODERN CHEMICAL SCIENCE (4)
An introduction to some of the major problems in chemistry, its relation to other sciences, and its relevance to contemporary culture. Designed for non-science majors. No credit for Chemistry majors. Qtr. I, IV.

CHM 411. ADVANCED INORGANIC CHEMISTRY (4)
PR: CHM 441 or CI. An advanced theoretical treatment of inorganic compounds. Lec. Qtr. I, III. (Formerly CHM 511.)

CHM 421. INSTRUMENTAL ANALYSIS (4)
PR: CHM 443 or CI. Theory and practice of instrumental methods. Clinical Chemistry applications may be elected in the laboratory. Lec.-lab. Qtr. II, III. (Formerly CHM 521.)

CHM 423. RADIOCHEMISTRY (4)
PR: CHM 321. Theory and applications of natural and induced radioactivity. Emphasis on the production, properties, measurement, and uses of radioactive tracers. Lec.-lab. Qtr. I, II. (Formerly CHM 523.)

CHM 425. FUNDAMENTALS OF CLINICAL CHEMISTRY (4)
PR: CHM 321, 351, and CI. Laboratory experience in some of the most important clinical determinations. CHM 525 must be taken concurrently. Lec.-lab. Qtr. I, III. (Formerly CHM 526.)

CHM 441. PHYSICAL CHEMISTRY I (4)
PR: CHM 321 and MTH 304. CR: PHY 205 or 305. Thermodynamics, the states of matter, solutions. Lec. Qtr. I, II.

CHM 442. PHYSICAL CHEMISTRY II (4)
PR: CHM 441. Introduction to quantum mechanics and molecular spectroscopy. Lec. Qtr. II, III.

CHM 443. PHYSICAL CHEMISTRY III (4)

CHM 445. METHODS OF CHEMICAL INVESTIGATION I (4)
PR: CHM 321, 335-336. CR: CHM 441. Theory and applications of instrumental methods in chemical research with emphasis on electrochemical techniques. Lec.-lab. Qtr. I, II.

CHM 446. METHODS OF CHEMICAL INVESTIGATION II (4)

CHM 447. METHODS OF CHEMICAL INVESTIGATION III (4)
PR: CHM 446. Continuation of CHM 446. Emphasis on studies of chemical systems using a variety of techniques. Lec.-lab. Qtr. III, IV.

CHM 471. HISTORICAL PERSPECTIVES IN CHEMISTRY (4)
PR: CHM 213; or senior standing, and CI. A study in depth of the historical and philosophical aspects of outstanding chemical discoveries and theories. Lec.-disc. Qtr. II.

*Placement examination for admission to CHM 101, 211 or 215 will be offered on the first day of registration before each quarter. Students should consult the Chemistry Office for time and place.
CHM 475. THE MICROWORLD OF MOLECULES, ATOMS AND ELECTRONS
The nature of the material world from the philosophic discussion of antiquity, through some speculations of the Middle Ages and the Renaissance to the quantitative thinking and measurements of modern science. No previous background in science or mathematics is necessary. No credit for Chemistry majors.

CHM 481. UNDERGRADUATE RESEARCH
PR: CI. (S/U only.) Qtr. I-IV.

CHM 483. SELECTED TOPICS IN CHEMISTRY
PR: CI. The course content will depend on the interest of faculty members and student demand.

CHM 485. CLINICAL CHEMISTRY PRACTICE
PR: CI. Laboratory practice in clinical chemistry laboratories in the Tampa Bay area. (S/U only.) Qtr. I-IV.

CHM 491. CHEMISTRY SEMINAR
PR: Senior standing. Discussions of selected significant chemical topics of recent interest. (S/U only.) Qtr. II, III.

FOR SENIORS AND GRADUATE STUDENTS

CHM 512. PRINCIPLES OF INORGANIC CHEMISTRY
PR: CHM 442 or CI. Chemical forces, reactivity, periodicity and literature in inorganic chemistry; basic core course. Lec. Qtr. I.

CHM 532. INTERMEDIATE ORGANIC CHEMISTRY
PR: CHM 335, 336 or equivalent. A study of stereochemistry, spectroscopy, theories of bonding, acid-base chemistry, and their application to the understanding of organic reactions. Lec.

CHM 541. CHEMICAL THERMODYNAMICS
PR: CHM 443 or CI. The applications of thermodynamic theory to the study of chemical systems with emphasis on the energetics of reactions and chemical equilibria. Lec.

CHM 542. APPLICATIONS IN PHYSICAL CHEMISTRY
PR: CHM 443. Applications of chemical theory to chemical systems with emphasis on chemical kinetics and molecular spectroscopy. Lec. Qtr. I.

CHM 554. TECHNIQUES IN BIOCHEMISTRY
PR: CHM 555 or 657. Biochemistry laboratory with emphasis on modern techniques for use in biochemistry research. Qtr. III.

CHM 555. BIOCHEMISTRY CORE COURSE
PR: Either CHM 335-6 and CHM 341 or 441 or graduate standing. A one-quarter survey course in biochemistry for graduate students in chemistry, biology, and other appropriate fields and for particularly well-qualified undergraduates. Lec. Qtr. III.

CHM 583. SELECTED TOPICS IN CHEMISTRY
PR: CI. 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.

FOR GRADUATE STUDENTS ONLY

CHM 611. STRUCTURAL INORGANIC CHEMISTRY
PR: CHM 511 or CI. Modern theories of bonding and structure of inorganic compounds, including coordination theory, stereochemistry, solution equilibria, kinetics, mechanisms of reactions, and use of physical and chemical methods. Lec. Qtr. II.

CHM 613. CHEMISTRY OF THE LESS FAMILIAR ELEMENTS
PR: CI. An integrated treatment of the conceptual and factual aspects of the traditionally less familiar elements, including noble-gas elements, unfamiliar non-metals, alkali and alkaline-earth metals and the transition elements. Lec. Qtr. III.

CHM 621. ADVANCED ANALYTICAL CHEMISTRY
PR: CI. A study of complete analytical process, including sample handling, separations, the analysis step, and statistical interpretation of data. Emphasis placed on separations and statistics. Lec. Qtr. II.

CHM 623. ELECTROCHEMISTRY

CHM 631. ADVANCED ORGANIC CHEMISTRY I.
NATURAL PRODUCTS
PR: CHM 532 or CI. A study of any of several of the following topics: terpenes, steroids, vitamins, alkaloids, porphyrins, purine, and antibiotics. Qtr. III.

CHM 632. ADVANCED ORGANIC CHEMISTRY II.
PHYSICAL-ORGANIC

CHM 633. ADVANCED ORGANIC CHEMISTRY III.
SYNTHESIS

CHM 634. ADVANCED ORGANIC CHEMISTRY IV.
PR: CHM 532. The emphasis will vary from year to year.

CHM 641. STATISTICAL THERMODYNAMICS
PR: CI. Application of statistical mechanics to thermodynamics, the relation of molecular structure to thermodynamic properties. Lec. Qtr. II.

CHM 643. QUANTUM CHEMISTRY I
PR: CI. Introduction to elementary quantum mechanism. Atomic structure and spectra. Lec. Qtr. III.

CHM 645. QUANTUM CHEMISTRY II

CHM 647. CHEMICAL KINETICS
PR: CI. Theory and methods for the study of reaction rates and the elucidation of reaction mechanisms. Lec. Qtr. II.

CHM 654. ADVANCED BIOCHEMISTRY I. ENZYMES
PR: CHM 659 or CI. A study of biochemical systems with emphasis on enzymes. Lec. Qtr. I.

CHM 655. ADVANCED BIOCHEMISTRY II. BIOORGANIC MECHANISMS
PR: CHM 659 or CI. A study of biochemical systems with emphasis on mechanisms of biological reaction. Lec. Qtr. III.

CHM 656. ADVANCED BIOCHEMISTRY III.
BIOPHYSICAL CHEMISTRY
PR: CHM 659 or CI. A study of biochemical systems with emphasis on physical methods of experimentation and interpretation. Lec.

CHM 657. GENERAL BIOCHEMISTRY I.
PR: CHM 555 or CI. First quarter of a rigorous three-quarter general biochemistry course for chemistry and biology graduate students whose primary interests are in this field. Lec. Qtr. I. (Formerly CHM 551.)

CHM 658. GENERAL BIOCHEMISTRY II
PR: CHM 657. Continuation of General Biochemistry I. Lec. Qtr. II. (Formerly CHM 552.)

CHM 659. GENERAL BIOCHEMISTRY III
PR: CHM 658. Continuation of General Biochemistry II. Lec. Qtr. III. (Formerly CHM 553.)

CHM 661. MARINE CHEMISTRY
PR: OGY 521 or CI. Chemical and physical properties of seawater, energy flow in a marine ecosystem, development of the concepts of biogeochemical cycles and master variables, thermodynamics of the carbon dioxide-seawater system, other related topics.

CHM 671. ADVANCED LABORATORY TECHNIQUES IN CHEMISTRY
PR: Admission to graduate program in Chemistry. Development of advanced competence in the use and application of the special techniques and skills of the practising professional chemist. May be repeated up to a cumulative maximum of 15 hours. (S/U only.)

CHM 681. Graduate Research
PR: Completion of M.S. qualifying examination requirements. Directed research involving close interaction with and supervision by faculty. May be repeated up to a cumulative total of 15 hours. (S/U only.)
COMMUNICOLOGY

COMMUNICOLOGY (CLY)
Speech Pathology-Audiology/Aural (Re)Habilitation


LOWER LEVEL COURSES

CLY 201. SURVEY OF COMMUNICATION DISORDERS (3)
A general survey course concerning the nature and prevention of disorders of communication.

UPPER LEVEL COURSES

CLY 301. INTRODUCTION TO SPEECH PATHOLOGY (6)
The scope of speech pathology as a profession and field of study. An introduction to speech and language disorders (articulation, stuttering, voice, aphasia, etc.): etiologies, major treatment approaches, and research findings.

CLY 302. INTRODUCTION TO AUDIOLOGY (6)
The scope of audiology as a profession and field of study. An introduction to the study of hearing impairments: classifications, etiologies, major treatment approaches, and research findings.

CLY 311. ANATOMY OF THE SPEECH AND HEARING MECHANISM (6)
The neurological and anatomical basis of communication disorders. Comparisons of normal and pathological organic structures and their functional dynamics. Separate sections concentrating on normal and abnormal aural physiology are scheduled for those students with a primary emphasis in audiology.

CLY 312. INTRODUCTION TO RESEARCH PROCEDURES IN COMMUNICOLOGY (6)
Perspectives on research in speech pathology and audiology. Introduction to multivariate design considerations as they apply to research speech and hearing laboratory and clinical settings. Analysis of basic hypothesis testing.

CLY 313. APPLIED PHONOLOGY (6)
An examination of phoneme systems and distinctive features of their allophonic variants with particular emphasis upon those superfixes and suprasegmental modifiers necessary to the understanding and recording of early developmental and deviant speech patterns.

CLY 482. NATURE AND NEEDS OF THE HEARING IMPAIRED (6)
A study of the effects of auditory disorders upon the organization and expression of behavioral patterns as they relate to motivation, adjustment and personality.

CLY 483. SELECTED TOPICS (4)
PR: Cl. A reading program of topics in speech pathology and/or audiology conducted under the supervision of a faculty member. May be repeated three times.

CLY 498. INTRODUCTION TO SPEECH PATHOLOGY AND AUDIOLOGY PRACTICUM (1-12)
Observation and participation in speech pathology and audiology practicum in the University clinical laboratory.

FOR SENIORS AND GRADUATE STUDENTS

CLY 511. SPEECH PATHOLOGY INSTRUMENTATION (6)
PR: Cl. Calibration, usage and specific applications of specialized instruments available in dealing with speech and language disorders. Includes: recording, sonograph, audio-feedback, video equipment, behavior measuring devices.

CLY 512. AUDIOLOGY INSTRUMENTATION (6)
PR: Cl. Calibration, usage and specific applications of specialized instruments available in dealing with the identification and measurement of hearing disorders. Includes: sound level recorders, audiometers, and the electrophysiological measurement devices.

CLY 513. THE SCIENCE OF COMMUNICATION DISORDERS (6)
PR: CLY 301 or 302 or CI. The application of behavioral and learning principles to the study of the normal development of speech, language and hearing and to the management of disorders.

CLY 571. EVALUATION OF ORAL COMMUNICATION DISORDERS (6)
PR: Admission to the Program or CI. The administration, evaluation, and reporting of diagnostic tests and procedures used in the assessment of speech and language disorders.

CLY 572. AUDIOLOGY: HEARING SCIENCE (6)
PR: Admission to the Program or CI. Introduction to psychoacoustical phenomenon as it relates to the measurement of
hearing. Overview of principles and methods of identification audiometry with emphasis on neonatal, pre-school, and school age populations. Procedures for determining pure tone thresholds including the application of masking techniques. Fundamental concepts related to hearing aids and their benefits. Management of hearing impaired individuals including counseling.

**CLY 573. AUDIOLOGY: SPEECH AUDDIMETRY (6)**

PR: CLY 572 or CI. Advanced study of psychoacoustical phenomenon as it relates to the measurement of hearing. Instruction emphasizing principles and methods of determining hearing acuity through the use of speech stimuli. Management of clients from pertinent case histories through post-evaluation recommendations. Thorough consideration of hearing aids with special attention on techniques of selecting and fitting aids in a clinical setting.

**CLY 574. METHODS FOR ORAL COMMUNICATION DISORDERS (6)**

PR: CLY 571 or CI. An in-depth analysis of classic and contemporary methods employed in the management of communicatively impaired individuals. Experimental approaches are reviewed through current medical, psychological, speech, language and hearing journals.

**CLY 575. MANAGEMENT OF COMMUNICATION DISORDERS (4)**

PR: CI. The planning of programs for individuals with speech, language, and hearing impairments. Includes administration of programs in public schools, clinics, and private practice.

**CLY 576. COMMUNICATION DISORDERS: VOICE (4)**

PR: CI. A comprehensive study of the medical and physical aspects of voice disorders. Primary emphasis is on therapeutic management.

**CLY 577. COMMUNICATION DISORDERS: ARTICULATION (4)**

PR: CI. An examination of normal and deviant articulatory acquisition and behavior. Presentation of major theoretical orientations and the therapeutic principles based upon them.

**CLY 578. COMMUNICATION DISORDERS: STUTTERING (4)**

PR: CI. A comprehensive study of the diagnosis and modification of stuttering based on a two-factor model. Other major theories are considered and evaluated.

**CLY 579. TECHNIQUES OF AUDITORY TRAINING (4)**

PR: CI. An analysis of theories of auditory reception and amplification. A study of the methods and techniques employed in the development and habilitation of auditory skills for the hearing impaired.

**CLY 580. COMMUNICATION DISORDERS: LANGUAGE (4)**

PR: CI. Examination of research and clinical literature presenting major theoretical orientations pertaining to the etiology, evaluations, and treatment of those factors that hinder or interrupt normal language acquisition or function.

**CLY 581. SUPERVISED RESEARCH (1-12)**

PR: CI. Individualized programs of student research approved and supervised by a faculty member.

**CLY 583. SELECTED TOPICS (4)**

PR: CI. A reading program of topics in speech pathology and/or audiology conducted under the supervision of a faculty member. May be repeated three times.

**CLY 598. SPEECH PATHOLOGY AND AUDIOLOGY PRACTICUM (1-12)**

PR: CI. Participation in speech pathology and audiology practicum in the University clinical laboratory and selected field settings.

**FOR GRADUATE STUDENTS ONLY**

**CLY 620. CLEFT PALATE (4)**

PR: CI. An in-depth study of speech, language and hearing problems associated with cleft lip and cleft palate. Consideration is given to a multidisciplinary approach to therapy and rehabilitation.
CRIMINAL JUSTICE (CJP)


COOPERATIVE EDUCATION (COE)

COE 315. COOPERATIVE EDUCATION, 1ST TRAINING PERIOD
PR: 24 hours of academic credit, acceptance in Cooperative Education Program. (S/U only.)

COE 172. COOPERATIVE EDUCATION, 2ND TRAINING PERIOD
PR: COE 171. (S/U only.)

COE 271. COOPERATIVE EDUCATION, 3RD TRAINING PERIOD
PR: COE 172. (S/U only.)

COE 272. COOPERATIVE EDUCATION, 4TH TRAINING PERIOD
PR: COE 271. (S/U only.)

COE 371. COOPERATIVE EDUCATION, 5TH TRAINING PERIOD
PR: COE 272. (S/U only.)

COE 372. COOPERATIVE EDUCATION, 6TH TRAINING PERIOD
PR: COE 371. (S/U only.)

COE 471. COOPERATIVE EDUCATION, 7TH TRAINING PERIOD
PR: COE 372. (S/U only.)

COE 472. COOPERATIVE EDUCATION, 8TH TRAINING PERIOD
PR: COE 471. (S/U only.)

COE 571. COOPERATIVE EDUCATION, 9TH TRAINING PERIOD
PR: COE 472. (S/U only.)

COE 572. COOPERATIVE EDUCATION, 10TH TRAINING PERIOD
PR: COE 571. (S/U only.)

CRIMINAL JUSTICE (CJP)


LOWER LEVEL COURSES

CJP 200. MAN, CRIME, AND SOCIETY (4)
PR: None. Designed to give the undergraduate non-major a non-technical survey of the American criminal justice system. The nature of crime, law enforcement, the court system, and correctional practices and institutions will be covered. Not for major credit.

CJP 300. SURVEY OF CRIMINAL JUSTICE SYSTEM (5)
PR: PSY 201, SOC 201, or equivalent or CI. An introduction to the major institutions associated with criminal justice, their structure, personnel, objectives, resources, and operation. Course content also includes developing an understanding of criminal law, terminology and procedure. This course is designed to provide a broad overview of the activities, language, concepts and career opportunities of the entire Criminal Justice System. The course may include an exploratory project, encouraging the student to use his or her own initiative to explore, observe and interview in one or more local institutions of criminal justice. (Formerly CJP 201.)

CJP 301. NATURE OF CRIME (4)
PR: CJP 300. This course is designed to provide a basic understanding of the complex factors related to crime in America. Focus will be centered on reviewing the basic issues, scope, and costs stemming from criminal activities.

CJP 302. LEGAL FOUNDATIONS OF CRIMINAL JUSTICE (4)
PR: CJP 300, POL 201 or CI. Content of this course examines the effects upon the criminal justice system of the freedoms of habeas corpus, bills of attainders and ex post facto. Thereupon, the course follows the accused through the paths of criminal justice from arrest, to pretrial procedures, to the court and ultimately through corrections.

CJP 315. CHARACTERISTICS OF THE OFFENDER (4)
PR: Junior standing plus CJP 301 or CI. A four-course series focusing on those individuals being processed through the criminal justice system. Each course will examine the characteristics of a special offender group, its impact on the system, and the system's potential to change this class of offender behavior patterns. (May be taken with different subject matter up to 16 hours.)

CJP 410. THEORY AND PRACTICE OF LAW ENFORCEMENT (4)
PR: Junior standing plus CJP 302 or CI. Designed to provide an in-depth summary of current philosophies and techniques used in the field of law enforcement with special attention given to the roles of law enforcement officers. Attention will be given to the new experimental programs and techniques.

CJP 412. THE LAW ENFORCEMENT OFFICER AND THE COMMUNITY (4)
PR: Junior standing plus CJP 410, or CI. This course examines the area of human relations especially as it applies to police functions within the community. Topics of prejudice and discrimination are emphasized.

CJP 420. THEORY AND PRACTICE OF CORRECTIONS (4)
PR: Junior standing plus CJP 301 or CI. The scope of this course relates to the analysis of the different treatment philosophies and techniques currently in use in the field. Attention will be given to experimental and demonstration programs as well as to generally accepted and established methods.

CJP 421. JUVENILE CORRECTIONS (5)
PR: Junior standing plus CJP 420, or CI. Provides an indepth analysis of the different treatment philosophies and techniques used in the field of juvenile corrections today. Special attention is given to experimental and demonstration programs as well as to traditional and established methods. Students will be required to work in a juvenile corrections agency and to attend field trips.

CJP 422. THE PROBATION AND PAROLE PROCESS (5)
PR: Junior standing plus CJP 420, or CI. The concepts of probation and parole will be thoroughly explored and related to actual and potential treatment situations.

CJP 425. INDIVIDUAL AND GROUP PROCESSES IN CORRECTIONAL TREATMENT I (3)
PR: Senior standing, PSY 201, CJP 421. Designed to introduce the student to theories and methods underlying treatment modalities currently employed in corrections.

CJP 426. INDIVIDUAL AND GROUP PROCESSES IN CORRECTIONAL TREATMENT II (3)
PR: Senior standing plus CJP 425. The student will be introduced to practical applications within a correctional setting involving both individual and group situations.

CJP 480. RESEARCH METHODS IN CRIMINAL JUSTICE (4)
PR: Junior standing plus CJP 300, or CI. Designed to give the criminal justice major an introduction to research methodology and the evaluation of research. This course may not be taken
for credit if the student has already successfully completed SSI 301, Social Science Statistics, ECN 231, Business and Economic Statistics I, or MTH 345, Introductory Statistics I.

CJP 481. DIRECTED RESEARCH (1-5)
PR: CI. 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.

CJP 485. DIRECTED READINGS (1-5)
PR: CI. This course is specifically designed to enable advanced students the opportunity to do indepth independent work in the area of criminal justice. Each student will be under the close supervision of a faculty member of the program.

NOTE: CJP 481 & CJP 485. (a) Students wishing to enroll must make arrangements with a faculty member during the quarter prior to actually taking the course, (b) a minimum of four (4) CJP courses must have been completed satisfactorily prior to enrollment, (c) first consideration will be given to CJP majors, and (d) individual faculty members may add additional requirements at their discretion.

CJP 491. SEMINAR IN CRIMINAL JUSTICE (3)
PR: Senior standing and CI. The seminar (multi-course series-variable topics) will consider the various changes occurring in the field of criminal justice with added emphasis placed on the responsibilities of careers in the field. (May be taken with different subject matter up to 12 hours.)

CJP 499. INTERNSHIP FOR CRIMINAL JUSTICE MAJORS (3-12)
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. Each three-hour block of credit will require a minimum of ten hours of work per week within the host agency in addition to any written work or reading assignments. (S/U only.)

FOR GRADUATE STUDENTS ONLY

CJP 601. THEORIES OF DEVIANCE (4)
An introduction and comparison of major historical and contemporary theories as they relate to the explanation of criminal behavior. Attention will be given to developing, on the part of the student, a frame-of-reference by which he can organize and understand the empirical factors operating in the Criminal Justice System.

CJP 602. INTRODUCTION TO RESEARCH AND EVALUATION IN CRIMINAL JUSTICE (4)
An introduction to research, evaluation, statistics, data management and management information procedures. Emphasis will be given to the role of each of these topics as monitors and change agents in criminal justice, particularly in police management and corrections.

CJP 603. LAW AND CRIMINAL JUSTICE (4)
An exposition of historical and contemporary legal principles, procedures and issues as reflected in Constitutional provisions, statutes and case law.

CJP 610. COMMUNITY CORRECTIONAL ADMINISTRATION (3)
This course consists of an analysis of the complex issues and controversies related to the development and management of modern community-based corrections programs. May be repeated up to 9 hours.

CJP 611. CORRECTIONAL TREATMENT METHODS (3)
Designed to acquaint the beginning graduate student with general conditions, skills and techniques required in order to provide satisfactory treatment for both adult and juvenile offenders. Emphasis will be placed on familiarizing the student which those factors and conditions which facilitate treatment and the goals of treatment in a community correctional setting. In addition, several specific and widely used treatment approaches will be extensively covered and practiced during this course. May be repeated up to 9 hours.

CJP 612. CORRECTIONAL PLANNING (3)
This course will provide the student with an in-depth examination of urban correctional planning processes. Topics included will deal with the development of personnel, budgets, and facility plans and their implementation. May be repeated up to 9 hours.

CJP 613. SEMINAR IN COMMUNITY CORRECTIONS (3)
This course will provide a mechanism by which staff and students can focus on the latest events, issues, and problems confronting community corrections programming. May be repeated up to 6 hours.

CJP 620. POLICE ADMINISTRATION (3)
This course is designed to cover the major elements of urban police administration including personnel selection and promotion, program development, and management techniques. May be repeated up to 9 hours.

CJP 621. URBAN POLICE PROBLEMS (3)
This course addresses itself to the major problems confronting urban police departments. Areas of concentration will be racial tensions, police corruption, politicalization, etc. May be repeated up to 9 hours.

CJP 622. URBAN POLICE PLANNING (3)
This course will examine contemporary law enforcement planning and will focus on techniques and skills required to forecast future needs of police agencies in rapidly expanding metropolitan areas. May be repeated up to 9 hours.

CJP 623. SEMINAR IN URBAN LAW ENFORCEMENT (3)
Designed to provide an in-depth review of contemporary issues and problems as they relate to urban police administration. May be repeated up to 9 hours.

CJP 630. RESEARCH AND EVALUATION METHODS (3)
A detailed coverage of statistical research and evaluation techniques utilized for research and reporting practices in Criminal Justice. Data management, field experimentation and research methodology will be included as they apply. May be repeated up to 6 hours.

CJP 631. SYSTEMS ANALYSIS IN CRIMINAL JUSTICE (3)
Time will be spent on the design and analysis of both existing and student created systems, with emphasis on the role of system analysis as it applies to management information systems, computer based systems. In addition, attention will be directed to retrieval strategies, reducing work loads, simplification, formatting, form design and control, data organization costs. May be repeated up to 6 hours.

CJP 632. RESOURCE DEVELOPMENT AND ACQUISITION (3)
Required for Planning and Evaluation tract students, optional for others, this course will survey organizations which provide financial assistance to Criminal Justice agencies. In all cases, an analysis of criteria, limitations and availability will be made. Practical experience in proposal planning and submission will be provided.

CJP 681. GRADUATE PRACTICUM IN CRIMINAL JUSTICE* (1-4)
Practicum will consist of placement with a criminal justice agency selected by the student in consultation with his commit­tee. This placement will enable the student to gain high level field experience related to their chosen career field. A mini­mum of 24 graduate hours in Criminal Justice must be com­pleted prior to enrollment. (S/U only.)

CJP 691. CRIMINAL JUSTICE INTERNSHIP* (12)
The internship will place the student in a criminal justice position commensurate with his skills so that he may be able to blend theory with experience. Placement, which will be full­time for one year, will be worked out between the agency, the student, and the student's committee. All graduate academic course work must be completed prior to enrollment. (S/U only.)

*Practicum is required of all students who are not selected for or who choose not to participate in the alternative one-year internship. To be completed during the second year in the program.
CIP 693. PRO SEMINAR IN CRIMINAL JUSTICE (1)
One hour is required for all students. This variable topic listing is a forum primarily for the presentation and discussion of ethical and research ideas by faculty, guests, and students to aid students in linking theory and research, in understanding contemporary, problem oriented research, and in developing thesis subjects. Any issue of professional concern may be treated. May be repeated up to 5 hours.

CIP 699. THESIS (1-15)
1 hour required for all students. This course will provide the student an opportunity to perform an original piece of research under the direction of a faculty committee. A minimum of 22 hours of graduate work in Criminal Justice must be completed prior to enrollment. Mandatory in all sub-specialties. Repeatable. (S/U only.)

DANCE (DAN)

Chairperson: W. G. Hug; Professor: W. G. Hug; Assistant Professors: C. Robinson, R. Sias.

LOWER LEVEL COURSES

DAN 201. BEGINNING MODERN (3)
PR: Admission by audition. Study of basic principles of modern dance technique. Practical work in beginning exercises and movement phrases, utilizing changing rhythms and dynamics. May be repeated.

DAN 202. BEGINNING BALLET (3)
PR: Admission by audition. Basic positions and fundamental barre exercises. Stress on correct alignment of the body and the application of simple step combinations in centre work. The use of ballet vocabulary (French terms). Material is covered almost totally as practical work in class with a few outside projects. Concert and performance attendance required. May be repeated.

DAN 203. CHOREOGRAPHY I (3)
Study and execution of basic principles of improvising. Preparation of studies in theme and variations, breath phrases and metric phrases. May be repeated.

UPPER LEVEL COURSES

DAN 301. INTERMEDIATE MODERN (3)
PR: Admission by audition. Continuation of DAN 201. Further emphasis on style and phrasing. Work in projecting mood and quality by dancing and rehearsing in more advanced student choreography, leading to performance. Rehearsal hours to be arranged. May be repeated.

DAN 302. INTERMEDIATE BALLET (3)
PR: Admission by audition. Continuation of DAN 202. Intensification of barre exercises for the development of strength and form. Centre exercises to develop quickness of mind/body coordination. Most of the ballet steps are introduced. Application of phrasing and quality of movement. Adagio, pirouettes, and allegro are specifically stressed. Material covered as practical work in class with individual performances. Rehearsal hours to be arranged. May be repeated.

DAN 303. CHOREOGRAPHY II (3)
PR: DAN 203 or Cl. Preparation of studies in rhythm, dynamics, form and motivation, culminating in a solo. May be repeated.

DAN 304. JAZZ DANCE (2)
PR: DAN 301 or DAN 302 or Cl. A technique class with an emphasis on highly stylized, percussive movement on a strong rhythmic base. Required is the performance of a short dance sequence encompassing these skills. May be repeated.

DAN 311. REPERTORY (1)
The development and performance of solo and/or group dances. Open to all University students by audition. May be repeated.

DAN 312. POINTE TECHNIQUE (1)
PR: DAN 302. This course introduces fundamental exercises for the development of pointe technique. Material covered as practical work in class with a few outside projects, concerts, and performances. Rehearsal hours to be arranged. Must be repeated for a total of 6 hours by Ballet Majors. May be repeated.

DAN 313. WORLD HISTORY OF DANCE (3)
Study of the development of dance from its inception through the Middle Ages. Reading, lecture.

DAN 370. INTRODUCTION TO DANCE (3)
For non-dance majors, a study of the art of dance. Lecture and activities including Modern, Ballet, Jazz, Ethnic and Tap. DAN 370 may be used for University General Distribution Requirement by the non-major, and may be used to satisfy part of the 9 hour in-College Requirement for Fine Arts Majors in Art, Music and Theatre.

DAN 371. HATHA YOGA (2)
A course to experience and practice the basic asanas (bodily postures), pranayama (breath control), and deep relaxation of body and mind, Hatha Yoga prepares the student for dance movement. May be used for University General Distribution Requirement by the non-major, and may be used to satisfy part of the 9-hour in-College Requirement for Fine Arts Majors in Art, Music and Theatre.

DAN 401. ADVANCED MODERN (5)
PR: Admission by audition. Continuation of DAN 301 on an advanced level. Work in improvisation and individual invention creating an awareness of many possibilities of movement. Intensive work on the growth of personal performance style as a means of communication. Equal emphasis will be given to training the body in the development of technical excellence. Dancing in student choreography leading to performance. Rehearsal hours to be arranged. Must be repeated for a minimum of 20 hours by the Modern Major. May be repeated. (Formerly DAN 401 and DAN 461.)

DAN 402. ADVANCED BALLET (5)
PR: Admission by audition. Continuation of DAN 302. Perfecting the execution of barre work including body alignment, quality of movement, strength, form, quickness of mind and alertness. Intensification of centre work. More stress on aesthetic quality of movement and phrasing. Perfecting the execution of classical ballet technique and a continuing awareness of performing projection and audience communication for those with professional performing career in mind. Complete background and knowledge of the classical ballet techniques required. Students expected to be proficient in pointe work. Material covered as practical work in class with a few outside projects, concerts, and performances. Rehearsal hours to be arranged. Must be repeated for a minimum of 20 hours by the Ballet Major. May be repeated. (Formerly DAN 402 and DAN 462.)

DAN 403. CHOREOGRAPHY III (3)
PR: DAN 303 or Cl. Work directed toward duets and group dances. The students will submit choreographic ideas for instructor's approval, then proceed with rehearsals. The best dances will be performed and fully produced under supervision of student choreographers. Reading, lecture, laboratory. May be repeated.

DAN 413. HISTORY OF 20TH CENTURY BALLET (3)

DAN 453. DANCE SENIOR SEMINAR (3)
PR: Senior or CC. To aid majors to understand, appraise and perfect their own art and technique through critical and
aesthetic judgements of their colleagues.

DAN 463. CHOREOGRAPHY IV (3) PR: DAN 403. The student will prepare studies based on free form, minimal art, and chance methods. Reading, lecture, laboratory. May be repeated. (Formerly DAN 503.)

DAN 464. HISTORY OF MODERN DANCE (3) Study of the development of modern dance in the 20th Century in America; the different techniques, concepts in choreography and leading artists of our time. Reading, film, and lecture. (Formerly DAN 513.)

DAN 481. DIRECTED STUDY (1-6) PR: CC. May be repeated. Independent studies in the various areas of Dance. Course of study and credits must be assigned prior to registration.

DAN 483. SELECTED TOPICS IN DANCE (1-6) PR: CI and CC. The content of the course will be governed by student demand and instructor interest. May be repeated for credit for different topics only.

DAN 485. DIRECTED READING (3) PR: CI and CC. Readings in a topic of special interest to the student. Selection of topic and materials must be agreed upon and appropriate credit must be assigned prior to registration. A contract with all necessary signatures is required for registration. May be repeated for credit for different topics only.

DEVELOPMENTAL COURSES

DMA 001. BASIC CONCEPTS OF ALGEBRA (0) A programmed learning course in Algebra from a modern point of view for the convenience of persons without adequate knowledge of simple algebraic manipulations and for persons without adequate preparation for MTH 101.

DMA 002. ANALYTICAL TRIGONOMETRY (0) A programmed learning course in the study of the trigonometric functions as functions of real numbers and their application to triangles.

DRS 001. DEVELOPMENTAL STUDY SKILLS (0) Designed to help students develop efficient learning methods needed for college success. Includes instruction and practice, in effective study techniques, ranging from developing proper attitude toward studying, listening, and taking notes to preparation for and taking exams.

ECONOMICS (ECN)


LOWER LEVEL COURSES

ECN 100. CONTEMPORARY ECONOMIC PROBLEMS (5) Problem of scarcity, role of ethical values, economic processes, specific economic problems, alternative solutions, and evaluating economic performance.

ECN 201. ECONOMIC PRINCIPLES I: MICROECONOMICS (4) The fundamental economic concept of scarcity, alternative courses of action and the problem of choice. How an economy decides what to produce, how to produce and how to reward participants in the economy. Attention is focused on factors affecting consumer wants and on the behavior of price in different types of markets.

ECN 202. ECONOMIC PRINCIPLES II; MACROECONOMICS (4) An introduction to the modern theory of income determination with emphasis upon the application of monetary and fiscal policy oriented toward the accomplishment of the macroeconomic objectives of full employment, economic growth, and balance of payments stability.

ECN 231. BUSINESS AND ECONOMIC STATISTICS I (3) PR: MTH 211. College Algebra or equivalent. Description of sample data; calculation of probabilities; frequency functions of random variables; the binomial and normal distributions; sampling theory and estimation; tests of hypotheses; elements of Bayesian decision theory.

ECN 301. INTERMEDIATE PRICE THEORY (5) PR: ECN 201-202. Advanced analysis of supply and demand as related to competition and monopoly; application of economic theory to product pricing and resource pricing.

ECN 311. LABOR ECONOMICS (4) PR: CI. History of the trade union movement; economic analysis of trade union philosophies and practices; examination of basic influences affecting labor force, real wages and employment; collective bargaining and labor law.

ECN 313. COLLECTIVE BARGAINING (5) PR: ECN 311. The administration of labor-management arguments, mediation and arbitration of industrial disputes and governmental role in collective bargaining.

ECN 323. INTERMEDIATE INCOME AND MONETARY ANALYSIS (5) PR: ECN 201-202. An advanced exposition of the neoclassical analysis explaining the determination of income, employment, prices, and the interest rate. Emphasis is placed upon the interaction of aggregate demand, as determined by consumption, investment, money, and the government budget, and aggregate supply.

ECN 331. BUSINESS AND ECONOMIC STATISTICS II (5) PR: MTH 211. College Algebra or equivalent and ECN 231. Theory and use of statistical inference for decision and prediction. Point and interval estimation; criteria for choosing estimators and decision rules; hypotheses tests and prob values; analysis of variance; correlation and regression.

ECN 341. ECONOMICS OF TRANSPORTATION (4) Functions of transportation agencies, rate structure of transportation companies, problems of state and federal regulations and coordination of transportation facilities.

ECN 343. ECONOMICS OF PUBLIC UTILITIES (4) PR: ECN 201-202. The economic characteristics of natural monopolies and the economic problems of regulation and public ownership.


ECN 361. INTRODUCTION TO MATHEMATICAL ECONOMICS (4) PR: MTH 212, ECN 201-202 and ECN 331 or CI. Economic processes expressed as equations and economic systems as mathematical models. Investigation of their static and dynamic properties by mathematical analysis and computer simulation.
ECN 371. AMERICAN ECONOMIC HISTORY (4)
The growth and evolution of American economic institutions from Colonial times to the present.

ECN 373. ECONOMICS OF THE URBAN ENVIRONMENT (5)

ECN 401. HISTORY OF ECONOMIC THOUGHT (5)
PR: ECN 201-202. The development of the economic schools (Scholasticism, Mercantilism, Physiocratic, Classicism, Utopian Socialism, Anarchism, Marxism, Historicism, Marginalism, Neo-Classicism, Institutionalism, and Keynesianism) in connection with their philosophical and political convictions in relation to their times.

ECN 405. COMPARATIVE ECONOMIC SYSTEMS (4)
Analysis of the major types of economies in industrially developed countries: competitive capitalism (e.g.; West Germany), regulated capitalism (e.g.: France), "command" communism (e.g.; the Soviet Union and "worker-controlled" communism (e.g.; Yugoslavia). Each is subject to economic evaluation with particular reference to their ability to meet changing consumer demands and technological innovations.

ECN 411. LABOR RELATIONS AND PUBLIC POLICY (4)
PR: ECN 311. Problems resulting from legislative and judicial interpretation of the rights, duties and responsibilities of labor unions and employers; public policy in labor-management negotiations; survey of legislation designed to protect workers.

ECN 423. PUBLIC FINANCE (5)
PR: ECN 301, 323. An examination of the public sector and its contribution to economic welfare. Government expenditures and revenues are examined in relation to their impact on resource allocation, income distribution, stabilization, and economic growth.

ECN 425. MONETARY THEORY (5)
PR: ECN 301, 323. An examination of the impact of the financial sector upon real economic magnitudes. The course approaches its subject matter through the theory of portfolio and capital adjustments with emphasis upon the contributions of Pigou, Fisher, Keynes, Patinkin, Friedman, and Tobin.

ECN 431. SELECTED TOPICS IN QUANTITATIVE ECONOMICS (4)
PR: MTH 212, ECN 331 or CI. Analysis of relevant problems of social policy by application of economic criteria and econometric method. Survey of contemporary research.

ECN 437. BUSINESS-GOVERNMENT RELATIONSHIPS (4)
Analysis of the three public policy approaches; competitive, regulatory, and ownership; evaluation of each in terms of ability to bring about economically desirable price-cost relationships, reductions in cost, invention and innovation and an optimal allocation of resources.

ECN 451. INTERNATIONAL COMMERCIAL POLICIES (4)
PR: ECN 351. An advanced analysis of balance of payments equilibrating mechanisms and of international commercial policy.

ECN 461. THEORY OF ECONOMIC DEVELOPMENT (4)
PR: ECN 323 or CI. Problems, policies, and dynamics of economic growth in emerging nations. The benefits and relevance of the theory of economic development is examined within the context of the social and political milieu of today's underdeveloped areas.

ECN 471. THEORY OF ECONOMIC DYNAMICS (4)
PR: ECN 323. An examination of macroeconomic processes as they occur through time. The determination and characteristics of long run growth paths based upon both Keynesian and Neoclassical models are discussed and business cycles are then treated as short run deviations from these growth paths. Empirical studies, forecasting, and policy issues are also considered.

ECN 489. SEMINAR IN SELECTED ECONOMIC TOPICS (3-5)
PR: Senior standing and CI. Topics to be selected by the instructor or instructors on pertinent economic issues.

FOR SENIORS AND GRADUATE STUDENTS

ECN 501. MICROECONOMICS (3)
An accelerated introduction to the price system as a mechanism for allocating scarce resources. Models are developed to explain the workings of both product and resource markets. This course is intended for students with no previous courses in economics and no credit towards degrees will be received in the graduate programs of the College of Business.

ECN 502. MACROECONOMICS (3)
PR: 501. An accelerated introduction to the understanding of the post-Keynesian system through the development of a theoretical supply and demand model and the application of this model to the fiscal and monetary possibilities inherent within it. This course is intended for students with no previous study in economics and no credit towards degrees will be received in the graduate programs of the College of Business.

ECN 503. STATISTICS FOR BUSINESS (3)
PR: ECN 231 and College Algebra. Statistical inference and decision theory applied to problems of business management.

ECN 507. ECONOMIC EDUCATION I (3)
Basic economic processes affecting price determination, income distribution, national income and employment, growth, price levels, and balance of payments. This course is essentially designed for inservice teaching personnel.

ECN 508. ECONOMIC EDUCATION II (3)
Basic economic processes affecting price determination, income distribution, national income and employment, growth, price levels, and balance of payments. This course is essentially designed for inservice teaching personnel.

ECN 509. ECONOMICS EDUCATION III (3)
This course will be concerned with current economic problems. Emphasis will be placed on an analysis of those topical problems which secondary social science teachers would find particularly important to include in their courses. This course is essentially designed for inservice teaching personnel.

ECN 519. INDUSTRIAL ORGANIZATION I—STRUCTURE (4)
ECN 201 and 202, or equivalent. Extent, level, trends and dimensions of economic concentration; competitive conduct of large enterprises; casual factors underlying changes in industrial structure: technology, managerial economics and diseconomies, invention and innovation, and mergers.

ECN 520. INDUSTRIAL ORGANIZATION II—CONDUCT AND BEHAVIOR (4)
PR: ECN 301 and ECN 519. Non-price competition, predatory practices, government intervention; oligopolistic pricing: differences from competitive pricing, standards of, constraints upon, effects on income distribution, production and governmental policy.

ECN 531. ECONOMIC PROGRAMMING AND CONTROL (5)

ECN 561. ECONOMETRICS (5)
PR: ECN 301, 323, 331, or CI. Theory and use of multiple regression to explain, forecast and influence economic behavior. Applications to demand, cost and production functions. Model specification. Ordinary least squares and instrumental variables methods. Analysis of errors. BMD and TSP computer programs. Design and conduct of individual empirical research projects.
FOR GRADUATE STUDENTS ONLY

ECN 601. RESEARCH METHODOLOGY (3)

ECN 602. HISTORY OF ECONOMIC THOUGHT (5)
PR: ECN 605 and ECN 607. An intense analysis of the main currents of modern economic thought during the last one hundred years.

ECN 603. MANAGERIAL STATISTICS (3)

ECN 604. APPLIED FORECASTING (3)

ECN 605. MICRO-ECONOMICS (3)
PR: ECN 201-202 or ECN 501-502. An intensive study of microeconomics examining the behavior of consumers, and producers. Topics covered include the general concept of scarcity and conceptual models in the areas of demand, production, cost, and the firm and market organization. Advanced readings in theoretical and applied microeconomics will be emphasized.

ECN 607. AGGREGATE ECONOMICS (3)
PR: ECN 201-202 or ECN 501-502. An analysis of the macro-economic interrelationships determining the level of income, employment, prices, and interest rates over time and the impact of governmental policy activities upon these variables. The course emphasizes forecasting the movement of these variable in the interest of improving the planning process as carried out by the individual business firm.

ECN 608. APPLIED ECONOMIC ANALYSIS (3)
PR: ECN 605, 607. Application of micro and macro economic analysis to problems of policy and procedure in business and government.

ECN 610. MANPOWER ECONOMICS SEMINAR (5)
PR: ECN 201-202, 501-502, or CI. This course is designed to provide the student with a background in labor force statistics, labor institutions, and problems of employment and unemployment. This background then allows for further study of the causes and remedies for unemployment and underemployment.

ECN 623. PUBLIC FINANCE (5)
PR: ECN 201-202, or 501-502 or equivalent. An examination of the role of the public sector and its contribution to economic welfare. Tax and expenditure policies are examined in relation to their effects on resource allocation, income distribution, stability and economic growth.

ECN 625. MONETARY THEORY (5)
PR: ECN 605, 607. Advanced discussion of the impact of the financial sector upon real economic magnitudes. The course emphasizes theoretical and empirical contributions found in the current literature as an extension of earlier work done in the field on monetary theory.

ECN 683. SELECTED TOPICS IN ECONOMICS (1-6)
PR: Graduate standing and CC. The course content will depend on student demand and instructor's interest.

ECN 699. THESIS (6-9)
PR: CC.

COLLEGE OF EDUCATION


Art Education (EDA)

UPPER LEVEL COURSES

EDA 308. EXPERIENTIAL BASIS IN ART EDUCATION (4)
PR: Admission to College of Education. Designed to help the individual student discover and develop meanings and values in art and education with emphasis on communicative skills, both verbal and visual. Focus will be on communicative skills, both verbal and visual. Focus will be on the individual and potential alternatives in the teaching of art. (Formerly EDA 377).

EDA 310. ART TEACHING STRATEGY AND MEDIA WORKSHOP I (5)
PR: Admission to College of Education and EDA 308. A combination of theory, philosophy and practice in both public and private learning centers to provide the student with a variety of teaching concepts and media exploration in art education and to further enable the student to understand stages of young people, three to eighteen. (Formerly EDA 379).

EDA 408. SEMINAR IN ART EDUCATION ADMINISTRATION (2)
PR: Admission to College of Education and EDA 308. The concepts and areas of skill essential to successful practice in...
art education management. To include understanding of how art programs are funded, art facility planning, art curriculum development, art exhibition techniques, public relations promotion and supply and equipment requirements.

EDA 410. URBAN ENVIRONMENT ARTS WORKSHOP (5)
PR: Admission to College of Education and EDA 308. Media and the learning process as a means of self-expression will be explored. Emphasis placed on crafts in a contemporary society with skills in metals, weaving, fibers, and ceramics and their application in a public school curriculum.

EDA 412. ART TEACHING STRATEGIES AND MEDIA WORKSHOP II (5)
PR: Admission to College of Education and EDA 308. The study of processes and media involved in the expression of individual ideas through crafts. Emphasis placed on crafts in a contemporary society with skills in metals, weaving, fibers, and ceramics and their application in a public school curriculum.

EDA 421. ART MEDIA FOR CHILDREN (5)
PR: EDE 421 or EDA 308. An in-depth study of arts and craft media for children. Emphasis will be placed on innovative use of new materials. (Formerly EDA 521.)

EDA 455. EXPERIMENTAL FILMMAKING FOR CHILDREN (5)
PR: EDA 308 or EDE 421 or EDE 435 (suggested: COM 550). A study of basic experimental film techniques and laboratory experiences with children in the public schools, community centers and non-school arts programs. (Formerly EDA 531.)

FOR GRADUATE STUDENTS ONLY
EDA 660. HISTORICAL AND PHILOSOPHICAL FOUNDATION OF ART EDUCATION (4)
Past and contemporary philosophies and practices in art education.

EDA 661. ADMINISTRATION AND SUPERVISION OF ART EDUCATION (4)
Principles of administration and supervision of art programs in the school.

EDA 682. RESEARCH SEMINAR IN ART PROGRAM (4)
PR: EDA 660 or CI. Literature and research in art education. Various approaches to problem solving and evaluation with emphasis on individual research.

EDA 698. FIELD WORK IN ART EDUCATION (2-6)
For students with degree-seeking status. Supervised participation in activities related to art education in community centers, non-school arts programs, planned workshop and research.

Curriculum (EDC)

LOWER LEVEL COURSES
EDC 101. INTRODUCTION TO TEACHING (4)
PR: Freshman only or CI. The people with whom teachers work, the types of tasks they perform and the challenges they can anticipate. Observation of teaching at several grade levels. (S/U only.)

UPPER LEVEL COURSES
EDC 401. CURRICULUM AND INSTRUCTION (5)
PR: EDG 305 and 307, and admission to a teacher education program. Structure and purposes of curriculum organization with special emphasis on the quality of curriculum. Students enrolled in EDC 401 are required to spend six hours a week in public schools as pre-interns in addition to regular class hours.

EDC 480. DIRECTED STUDY (1-4)
PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class.

EDC 481. INDIVIDUAL RESEARCH (1-4)
PR: Senior standing and consent of program coordinator.

EDC 485. DIRECTED READINGS (1-4)
May be repeated for a total of 4 quarter hours.

EDC 498. SENIOR SEMINAR IN EDUCATION (3)
PR: Senior standing. Synthesis of teacher candidate's courses in his complete college program. Required concurrently with student teaching.

EDC 477. SUPERVISED TEACHING (1-12)
One full quarter of student teaching in a public or private school. Student teacher takes Senior Seminar in Education concurrently. In special programs where the intern experience is distributed over two or more quarters, students will be registered for credit which accumulates to 12 quarter hours. (S/U only.)

FOR SENIORS AND GRADUATE STUDENTS
EDC 501. CURRICULUM AND INSTRUCTION: ELEMENTARY OR SECONDARY (5)
Curriculum scope, sequence and interrelationships, with a critical evaluation of current trends.

EDC 510. HEALTH PROBLEMS IN CHILDREN (4)
Health problems prevalent in the culturally disadvantaged child and the teacher's role in referral or educational adaptation in classroom activities.

EDC 592. CREATIVE PROBLEM SOLVING FOR THE CHILD (4)
Exploration of the concept of creativity, its factors, measurement, and application to education. Opportunities are given to work with children in a laboratory setting and to prepare materials to be used with small groups of children.

EDC 557. CURRICULUM PLANNING AND DEVELOPMENT IN SECONDARY ENGLISH (4)
PR: Certification in English or Mass Communications. Examination of new curricular policies and procedures relating to the teaching of English in the secondary school.

EDC 559. CURRICULUM EVALUATION IN SECONDARY ENGLISH (4)
PR: Certification in English or Mass Communications. Examination of new evaluation policies and procedures relating to curricula in English in the secondary school.

EDC 585. EDUCATION WORKSHOP (1-5)
Professional in-service workshop in various areas of education. May be repeated when subjects differ. Not normally used in degree programs. (S/U only.)

FOR GRADUATE STUDENTS ONLY
EDC 601. THEORETICAL ISSUES IN CURRICULUM AND INSTRUCTION (4)
PR: 8 quarter hours at the graduate level in the Foundations areas. Open only to degree-seeking graduate students. Advanced study of basic concepts and their practical application. Persistent issues and problems and development of rationale for their examination.

EDC 661. PRINCIPLES OF EDUCATIONAL SUPERVISION (5)
PR: Courses in general curriculum. Instructional leadership with emphasis on organization for curriculum improvement and in-service growth for professional school personnel.

EDC 671. PRINCIPLES OF EDUCATIONAL ADMINISTRATION (5)
Educational administration as a profession. Consideration is given to organization control, and support of the educational system.

EDC 673. SCHOOL LAW (4)
Basic essentials of school law, a review of court decisions affecting American education, with emphasis upon the study of Florida State Statutes as they pertain to the question of Florida public schools.
EDC 675. SCHOOL FINANCE (4)
PR: Principles of Educational Administration of Cl. A study of the support of public education programs through local, state, and federal sources; principles guiding the distribution of funds for equal educational opportunity; methods of budget preparation and administration; and projecting future funding requirements.

EDC 677. PLANNING EDUCATIONAL FACILITIES (4)
PR: Cl. Study of problems in the planning, construction, and utilization of educational facilities. Visit and/or evaluation of selected school plants.

EDC 681. DIRECTED STUDY (1-4)
Extensions of competency in teaching field. (S/U only.)

EDC 683. SELECTED TOPICS IN EDUCATION (1-5)
PR: Graduate Standing and Cl. Each topic is a course under the supervision of a faculty member. The title and content will vary according to the topic.

EDC 685. SCHOOL CURRICULUM IMPROVEMENT (4)
Workshop for the improvement of the curriculum of an elementary or secondary school. Open only to teachers in service. Complete faculty participation required.

EDC 689. SUBJECT SPECIALIZATION PLANNING SECONDARY (4)
Individually planned course in a secondary school subject area for in-service teachers.

EDC 691. INTERNSHIP (1-9)
PR: Cl. Open to graduate degree candidates only. Supervised teaching at the secondary or junior college level as appropriate. (S/U only.)

EDC 695. ADMINISTRATION PRACTICUM (4-10)
PR: Completion of a significant amount of the student's program. Field experiences in school systems for the purpose of identifying and analyzing educational problems. Application of concepts developed in the student's program to the solution of these problems.

EDC 699. THESIS (1-9)

EDC 781. GRADUATE RESEARCH (1-5)
PR: CC. Directed study related to educational research, including participation in regular seminars. May be repeated for credit to a maximum of 15 hours.

EDC 783. SELECTED TOPICS (1-5)
PR: CC. Selected topics in advanced Education. May be repeated for credit to a maximum of 15 hours.

EDC 791. GRADUATE SEMINAR (1-5)
PR: CC. Seminar in advanced Education. May be repeated for credit to a maximum of 15 hours.

EDC 799. DISSERTATION (1-5)
PR: CC. May be repeated for credit to a maximum of 15 hours.

Elementary Education (EDE)

LOWER LEVEL COURSES

EDE 201. INTRODUCTION TO EARLY CHILDHOOD EDUCATION (4)
An overview of early childhood education with emphasis on its historical development, current theories, and practices.

UPPER LEVEL COURSES

EDE 409 through EDE 440 open only to upper-level majors in Early Childhood, Elementary, or Exceptional Child Education.

EDE 409. READING FOR THE CHILD (5)
PR: Admission to College of Education and EDF 305. Readiness, word recognition (phonics, structural, and contextual analysis) word meanings, basic study skills, comprehension abilities and reading interests in-school work required.

EDE 411. LANGUAGE ARTS FOR THE CHILD (4)
PR: Admission to College of Education. Speaking, writing, reading and listening experiences of children and ways these skills are developed for individual creative expression.

EDE 413. LITERATURE FOR THE CHILD (4)
PR: Admission to College of Education. History and development of children's literature. Study of bibliographic sources, criteria and techniques for selection and use.

EDE 415. ARITHMETIC FOR THE CHILD (5)
PR: Admission to College of Education and MTH 331, 332, 333, or equivalent. Methods of teaching elementary school mathematics.

EDE 417. SCIENCE FOR THE CHILD (5)
PR: Admission to College of Education and completion of General Distribution Requirement biological or physical science sequence. Techniques and materials for teaching science in the elementary school.

EDE 419. SOCIAL STUDIES FOR THE CHILD (5)
PR: Admission to College of Education and completion of General Distribution Social Science sequence. Significant concepts in the subjects concerned with human relationships. Emphasis upon teaching pupils to solve rather than be engulfed by social problems.

EDE 421. ART FOR THE CHILD (4)
PR: Admission to College of Education. Art and the intellectual, creative, emotional, and esthetic growth of children.

EDE 423. MUSIC FOR THE CHILD: SKILLS (2)
PR: Admission to College of Education. Voice production, music reading, creative composition and some instrumental experience. School song materials used to support this work.

EDE 424. MUSIC FOR THE CHILD: METHODS (4)
PR: Admission to College of Education & EDE 423. Musical Literature and teaching aids for children including singing, rhythmic, creative, instrumental and listening experiences and their presentation.

EDE 425. HEALTH, PHYSICAL EDUCATION FOR THE CHILD (4)
PR: Admission to College of Education. Motivating factors for play; knowledge and skill in basic rhythmic activities; games and stunts; health instruction for the child.

EDE 426. CREATIVE EXPERIENCES IN EARLY CHILDHOOD EDUCATION (4)
PR: Admission to College of Education. The development of the child's creative expression through art, music, dance, play, and drama; included are the materials content, and teaching techniques.

EDE 429. PROGRAMS IN EARLY CHILDHOOD EDUCATION (5)
PR: Admission to College of Education. A study of school programs for children ages 3-8. Analysis and evaluation of these programs in the light of the most effective current classroom practices. Observation and participation included. (Formerly EDE 529.)

EDE 435. LANGUAGE AND LEARNING IN EARLY CHILDHOOD (4)
PR: Admission to College of Education. The study of the acquisition of language in young children and the development of basic communications skills in the Language Arts Curriculum, infancy through age 8 years. (Formerly EDE 531.)

EDE 440. TEACHING METHODS IN THE ELEMENTARY SCHOOL (4)
PR: Admission to the College of Education. Suggested co-requisite: EDC 401. Process of teaching elementary school subjects. To be taken quarter prior to internship. Six hours per week as pre-intern in public schools required. (S/U only.)

EDE 445. DIAGNOSIS AND TREATMENT OF LEARNING DISABILITIES IN SCHOOL MATHEMATICS (4)
PR: EDE 415 or equivalent. Presentation and analysis of teaching methods and models appropriate for use with children experiencing learning disabilities in mathematics; supervised conduct of a case study. (Formerly EDE 515.)

FOR SENIORS AND GRADUATE STUDENTS

EDE 519. SOCIAL GROWTH IN CHILDHOOD (4)
PR: Admission to College of Education. A study of the principal factors which influence the social development of young
children with particular emphasis upon those cultural influences which affect both child development and the educational pro-
grams for the young child.

EDE 527. DEVELOPMENTAL PROCESSES IN EARLY
CHILDHOOD (4)
PR: Admission to College of Education. The normal processes of
development among children ages 3-8, the relation between
these characteristics and the curriculum: child study through
observation required.

EDE 539. WORKSHOP IN EARLY CHILDHOOD
EDUCATION (4)
PR: Admission to College of Education. Individual problems and
innovations related to methods and materials of instruc-
tion in the early childhood grades.

EDE 551. TEACHING METHODS IN THE MIDDLE
SCHOOL—ENGLISH LANGUAGE ARTS (4)
PR: Cl. Analysis of nature and communication needs of
students in grades 5-8 with emphasis on laboratory methods
of teaching language.

FOR GRADUATE STUDENTS ONLY
EDE 603. SEMINAR IN CURRICULUM RESEARCH (1-5)
PR: EDF 607. Critical evaluation of current research and
curriculum literature, design and analysis of individual
research topics leading to satisfaction of research require-
ments.

EDE 609. TRENDS IN READING IN THE ELEMENTARY
SCHOOL (4)
PR: EDE 409 or equivalent. Extensive study of recent trends in
materials, approaches, and procedures in teaching reading
in the elementary school.

EDE 611. TRENDS IN LANGUAGE ARTS
INSTRUCTION (4)
PR: EDE 411 and 413. Advanced materials and processes of
instruction in elementary school language arts programs.

EDE 613. CREATIVE ARTS INSTRUCTION (4)
Creative processes in the teaching of visual arts, music, dance,
and drama to elementary school pupils.

EDE 615. TRENDS IN MATHEMATICS INSTRUCTION (4)
PR: EDE 415 or equivalent. Philosophy, content and process
of qualitative instruction in modern mathematics in elementary
school programs.

EDE 617. TRENDS IN SCIENCE INSTRUCTION (4)
PR: EDE 417. Topics in the biological and physical sciences
appropriate for teaching in excellent elementary school
programs. Analysis of modern curriculum materials used in
presenting science as a process of inquiry.

EDE 619. TRENDS IN SOCIAL STUDIES
INSTRUCTION (4)
PR: EDE 419. Crucial concepts drawn from the social sciences.
Analysis of the problems approach. Students will select an area
of independent study on an advanced level.

EDE 621. ART FOR THE ELEMENTARY SCHOOL
TEACHER (4)
Exploration of various materials and techniques in relationship
to current theories about art and the intellectual, creative,
emotional and esthetic growth of children.

EDE 629. ADVANCED PROGRAMS IN EARLY
CHILDHOOD EDUCATION (4)
PR: EDE 429, EDF 605 or Cl. A study of innovative curricu-
lum designs in Early Childhood Education, with emphasis
given to related research.

EDE 631. CHILDREN'S LITERATURE IN THE
ELEMENTARY CLASSROOM (4)
PR: EDE 413. Cl. A study of significant concepts, emerging
trends and classroom techniques for implementation and
utilization of children's literature in all areas of the curricu-

EDE 639. HOME-SCHOOL-COMMUNITY INTERACTION IN
EARLY CHILDHOOD EDUCATION (4)
PR: EDE 429, EDF 605 or Cl. An intensive study of the roles
of parents, teacher aides, and community agencies involved in
the education of the young child.

EDE 641. PROBLEMS IN SUPERVISION (4)
PR: EDF 607 or equivalent and EDC 661. Problems in super-
vising for curriculum improvement within the elementary
school.

EDE 645. ADVANCED DIAGNOSIS AND TREATMENT OF
LEARNING DISABILITIES IN SCHOOL
MATHEMATICS (4)
PR: EDE 415 or equivalent. Study of the symptoms etiologies
and consequences of children's learning disabilities in mathe-
matics; study and guided application of theoretical models used
in diagnosis and treatment; supervised conduct of a case study.
(Formerly EDE 515.)

EDE 646. ADVANCED PRACTICUM IN DIAGNOSIS AND
TREATMENT OF CHILDREN'S LEARNING
DISABILITIES IN MATHEMATICS (1-8)
PR: EDE 645. Supervised conduct of a case study with a child
experiencing learning difficulties in mathematics. Procedures
used and reporting practice employed developed in EDE 645
reviewed and extended. (Formerly EDE 516.)

EDE 651. THEORIES AND PATTERNS OF ADVANCED
LANGUAGE ARTS INSTRUCTION (4)
PR: EDE 611 or equivalent. This course is organized to present
new research findings and theories relating to language pat-
terns and contemporary programs designed for teaching the
language arts.

EDE 652. APPLICATIONS OF THEORIES TO THE
DEVELOPMENT OF LANGUAGE ARTS
PROGRAMS (4)
PR: EDE 611 or equivalent, EDE 651. This course is designed
to apply research findings and theories for developing and
organizing instructional improvement of the language arts.

EDE 687. SUBJECT SPECIALIZATION PLANNING:
ELEMENTARY (4)
Individually planned course in an elementary school subject
area for in-service teachers.

English Education (EDT)

UPPER LEVEL COURSES

EDT 431. CURRENT TEACHING OF ENGLISH
LANGUAGE AND MEDIA (4)
PR: Cl. Acceptance into College of Education. Methods of
teaching language and media. Includes current findings on
teaching usage, dialect, grammar, and semantics, as well as
approaches to media in English. (Formerly EDT 531.)

EDT 447. TEACHING METHODS IN THE SECONDARY
SCHOOL—ENGLISH (4)
PR: EDC 401 or concurrent registration in EDC 401. Tech-
niques and materials of instruction in English Education. In
addition it includes reading instruction in the subject area.

EDT 463. TEACHING METHODS IN THE SECONDARY
SCHOOL—JOURNALISM (4)
PR: EDC 401 or concurrent registration in EDC 401. Tech-
niques and materials of instruction in journalism.

FOR SENIORS AND GRADUATE STUDENTS
EDT 583. SELECTED TOPICS IN THE TEACHING
OF ENGLISH (4)
PR: Certification in English and/or Mass Communications
and approval of graduate adviser. Investigation of topics which
are of special interest to the student and are related to the
teaching of English in the secondary school. Topics will be
selected by the student in accordance with his particular goals
and will be approved by the student's graduate advisor.

FOR GRADUATE STUDENTS ONLY
EDT 631. CURRENT TRENDS IN SECONDARY ENGLISH
EDUCATION (4)
Curricular patterns and instructional practices in secondary
English.
EDT 651. NEW PERSPECTIVES ON THE TEACHING OF LITERATURE IN SECONDARY SCHOOLS (4)
PR: Certification in English or Mass Communications. Survey of recent investigation into adolescents' perception of and responses to literature and implications for organization and presentation of literature curricula.

EDT 661. NEW PERSPECTIVES ON THE TEACHING OF MEDIA IN SECONDARY ENGLISH (4)
PR: Certification in English of Mass Communications. An examination of new methods and materials designed specifically for media based activities in the secondary English classroom.

Exceptional Child Education (EDS)

UPPER LEVEL COURSES
EDS 311. EXCEPTIONAL CHILDREN IN THE SCHOOLS (4)
PR: EDF 305 or CI. Characteristics and needs of the Culturally Disadvantaged. Emotionally Disturbed & Socially Maladjusted, Gifted, Hearing Impaired, Mentally Retarded, Physically Handicapped, Speech Impaired, & Visually Limited.

EDS 322. INTRODUCTION TO MENTAL RETARDATION (4)
PR: EDF 305, EDS 311, or CI. Classification, diagnosis, characteristics, and treatment of the mentally retarded.

EDS 329. UNDERGRADUATE SUPERVISED PRACTICUM IN MENTAL RETARDATION (6)
Supervised Practicum experiences in the educational, social and vocational planning of mentally retarded individuals.

EDS 350. INTRODUCTION TO GIFTED CHILDREN (4)
PR: Junior class standing. Diagnosis, characteristics, and educational provision of the gifted and talented.

EDS 359. FIELD WORK WITH GIFTED CHILDREN (1-6)
Organized, supervised experiences with gifted children. Specific experiences may be either a combination of observation and assistance with gifted children or individualized projects.

EDS 389. UNDERGRADUATE SUPERVISED PRACTICUM IN SPECIFIC LEARNING DISABILITIES (6)
PR: EDS 311, EDS 481, and CI. Supervised practicum experiences in classes for children with specific learning disabilities.

EDS 411. EDUCATIONAL ASSESSMENT OF EXCEPTIONAL CHILDREN (4)
PR: EDF 305, EDS 311, and Special Educational Major. Introduction to and familiarization with formal and informal techniques used to measure and evaluate all exceptional children. The interpretation of information so derived for utilization in educational programming and individualization of instruction.

EDS 423. PROCEDURES AND MATERIALS FOR ELEMENTARY AGE EDUCABLE MENTALLY RETARDED CHILDREN (4)
PR: EDS 329 and CI. Special class organization, curriculum development, procedures and materials for elementary age educable mentally retarded children. (Formerly EDS 423 I.)

EDS 424. EDUCATIONAL PROCEDURES FOR THE TRAINABLE MENTALLY RETARDED (4)
PR: EDS 322 or CI. Special class organization, curriculum adjustments, methods and techniques of teaching the trainable retarded.

EDS 425. PROCEDURES AND MATERIALS FOR SECONDARY AGE EDUCABLE MENTALLY RETARDED YOUTH AND ADULTS (4)
PR: EDS 329 and CI. Special class organization, curriculum development, procedures and materials for secondary age educable mentally retarded youth and adults. (Formerly EDS 423 II.)

EDS 431. CLASSROOM MANAGEMENT OF CHILDREN AND YOUTH WITH BEHAVIOR DISORDERS (4)
PR: EDF 305, EDS 311, or CI. Survey of emotional and social disorders in children and youth manifested as behavior problems in the classroom; intervention techniques; implications for management techniques in educational programs.

EDS 432. EDUCATIONAL PROGRAMMING FOR CHILDREN AND YOUTH WITH BEHAVIOR DISORDERS (5)
PR: EDF 305, EDS 311, EDS 411, EDS 431. Acceptance in Program for Emotionally Disturbed, concurrent enrollment in EDS 439. Methods and techniques for teaching children and youth with behavior disorders; individualization of instruction; planning and implementation of educational programs; precision teaching and behavior modification techniques as applied to the education of children and youth with behavior disorders.

EDS 439. UNDERGRADUATE SUPERVISED PRACTICUM IN BEHAVIOR DISORDERS (1-10)
PR: Acceptance in undergraduate program for Emotionally Disturbed. Supervised undergraduate practicum experiences with children and youth with behavior disorders. A one hour per week Seminar is required concurrent with practicum.

EDS 451. EDUCATION PROCEDURES FOR THE GIFTED (4)
PR: Junior class standing, EDS 350. Curriculum adjustment, methods, and techniques appropriate for the education of gifted children. Supervised experiences exploring creative techniques and the development of innovative teaching techniques will be provided.

EDS 481. THEORIES IN SPECIFIC LEARNING DISABILITIES (4)
PR: Senior standing and CI. Characteristics, needs and abilities of children with specific learning disabilities. Emphasis in theories, issues, trends, and philosophy of problems for such children. (Formerly EDS 581.)

EDS 482. SKILLS IN DIAGNOSIS AND INSTRUCTION WITH CHILDREN WITH SPECIFIC LEARNING DISABILITIES (4)
PR: EDS 481 and CI. Instructional diagnosis and individualizing instruction for children with specific learning disabilities. Formerly EDS 582.)

FOR SENIORS AND GRADUATE STUDENTS
EDS 511. THE SLOW LEARNER IN THE SCHOOL (4)
Characteristics, needs and educational planning for the slow learning child. Appropriate for special class teachers and regular class teachers.

EDS 529. GRADUATE SUPERVISED PRACTICUM IN MENTAL RETARDATION (1-14)
Supervised, graduate practicum encompassing teaching and supervising experiences in public school classes for the mentally retarded.

EDS 531. BEHAVIOR DISORDERS IN THE SCHOOLS (4)
PR: EDF 305 or EDF 377 or PSY 201 or CI. Survey of emotional and social disorders in children and the implications for educational programs. Students may not receive credit for both EDS 531 and PSY 613. Behavioral Disorders of Children.

EDS 541. THE CULTURALLY DISADVANTAGED AND THE SCHOOLS (4)
Characteristics and needs of the culturally disadvantaged and their implications for educational programming.

EDS 550. NATURE AND NEEDS OF THE GIFTED (4)
Characteristics and educational needs of gifted children and youth.

EDS 551. EDUCATIONAL PROCEDURES FOR THE GIFTED (4)
PR: EDS 550 or CI. Curriculum adjustments, methods and techniques, classroom organization necessary for teaching the gifted.

EDS 559. SUPERVISED PRACTICUM FOR THE GIFTED (1-14)
Planned supervised participation in activities related to specific areas of the gifted.

EDS 560. THE VISUALLY HANDICAPPED IN THE CLASSROOM (4)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDS 610</td>
<td>SEMINAR IN SPECIAL EDUCATION</td>
</tr>
<tr>
<td>EDS 611</td>
<td>PSYCHO-EDUCATIONAL APPRAISAL OF EX: EXCEPTIONAL CHILDREN</td>
</tr>
<tr>
<td>EDS 612</td>
<td>SUPERVISION OF EXCEPTIONAL CHILD PROGRAMS</td>
</tr>
<tr>
<td>EDS 613</td>
<td>ADMINISTRATION OF EXCEPTIONAL CHILD PROGRAMS</td>
</tr>
<tr>
<td>EDS 620</td>
<td>BIOLOGICAL ASPECTS OF MENTAL RETARDATION</td>
</tr>
<tr>
<td>EDS 621</td>
<td>SOCIOLOGICAL AND EDUCATIONAL ASPECTS OF MENTAL RETARDATION</td>
</tr>
<tr>
<td>EDS 622</td>
<td>ADVANCED EDUCATIONAL PROCEDURES FOR THE MENTALLY RETARDED</td>
</tr>
<tr>
<td>EDS 623</td>
<td>CURRENT TRENDS AND ISSUES IN THE EDUCATION OF THE MENTALLY RETARDED</td>
</tr>
<tr>
<td>EDS 631</td>
<td>EDUCATIONAL IMPLICATIONS OF THE PSYCHOPATHOLOGIES OF EXCEPTIONAL CHILDREN</td>
</tr>
<tr>
<td>EDS 632</td>
<td>EDUCATIONAL PROGRAMMING FOR EMOTIONALLY DISTURBED CHILDREN 1</td>
</tr>
<tr>
<td>EDS 633</td>
<td>EDUCATIONAL PROGRAMMING FOR EMOTIONALLY DISTURBED CHILDREN 2</td>
</tr>
<tr>
<td>EDS 634</td>
<td>FIELD WORK IN EMOTIONALLY DISTURBED</td>
</tr>
<tr>
<td>EDS 635</td>
<td>SEMINAR IN EDUCATION OF THE GIFTED: RECENT RESEARCH</td>
</tr>
<tr>
<td>EDS 636</td>
<td>SEMINAR IN EDUCATION OF THE GIFTED: FIELD WORK WITH POTENTIALLY HANDICAPPED</td>
</tr>
<tr>
<td>EDS 637</td>
<td>PSYCHOPATHOLOGIES OF EXCEPTIONAL CHILDREN</td>
</tr>
<tr>
<td>EDS 638</td>
<td>EDUCATIONAL IMPLICATIONS OF PSYCHO-SOCIAL ASPECTS OF EXCEPTIONAL CHILDREN</td>
</tr>
</tbody>
</table>

**FOR GRADUATE STUDENTS ONLY**

**EDS 610. SEMINAR IN SPECIAL EDUCATION**
A critical survey of the literature related to the psychological, sociological, and education problems of exceptional children.

**EDS 611. PSYCHO-EDUCATIONAL APPRAISAL OF EX: EXCEPTIONAL CHILDREN**
Educational planning for exceptional children based on diagnostic information. Includes both lecture and practicum experiences in evaluative and instructional techniques for exceptional children.

**EDS 612. SUPERVISION OF EXCEPTIONAL CHILD PROGRAMS**
Principles of supervision and their application to exceptional child education.

**EDS 613. ADMINISTRATION OF EXCEPTIONAL CHILD PROGRAMS**
Procedure which local, state, and national administrators may use to implement services for exceptional children.

**EDS 620. BIOLOGICAL ASPECTS OF MENTAL RETARDATION**
The contribution of biological factors towards the causation of mental deficiency; implications for casedefinding, care, and education.

**EDS 621. SOCIOLOGICAL AND EDUCATIONAL ASPECTS OF MENTAL RETARDATION**
Evaluation of relevant literature.

**EDS 622. ADVANCED EDUCATIONAL PROCEDURES FOR THE MENTALLY RETARDED**
Experience in teaching the retarded, identification of a problem prior to registration, or CI. Specific curriculum and methodological problems in teaching the retarded.

**EDS 623. CURRENT TRENDS AND ISSUES IN THE EDUCATION OF THE MENTALLY RETARDED**
Survey of current trends and issues related to the education of the mentally retarded.

**EDS 631. EDUCATIONAL IMPLICATIONS OF THE PSYCHOPATHOLOGIES OF EXCEPTIONAL CHILDREN**
In-depth study of childhood psychopathology covering autism, schizophrenia and psychotic behavior. Guided exploration of exemplary services, treatment and methodology.

**EDS 632. EDUCATIONAL PROGRAMMING FOR EMOTIONALLY DISTURBED CHILDREN 1**
Personality dynamics and research findings as related to the interpretation of disturbed behavior; techniques for the management of individual, small group, and classroom behavior.

**EDS 633. EDUCATIONAL PROGRAMMING FOR EMOTIONALLY DISTURBED CHILDREN 2**
Personality dynamics and learning theory as related to the facilitation of learning and communication; techniques for teaching both individuals and groups with emphasis on improved interpersonal relations, academic learning, and communication skills.

**EDS 634. FIELD WORK IN EMOTIONALLY DISTURBED**
Supervised graduate practicum experiences with emotionally disturbed children. A one hour per week Seminar is required concurrent with practicum.

**EDS 635. GUIDANCE AND COUNSELING OF EXCEPTIONAL CHILDREN AND THEIR PARENTS**
Investigation of the guidance needs of exceptional children and parents. Through child study techniques, opportunities will be provided for the development of skills in guiding parents of exceptional children in providing assistance/support in their total development and use of potential.

**EDS 636. FIELD WORK WITH POTENTIALLY HANDICAPPED (CULTURALLY DISADVANTAGED)**
Teaching and participation in activities related to teaching disadvantaged young children (N-3).

**EDS 637. PSYCHOPATHOLOGIES OF EXCEPTIONAL CHILDREN**
Critical survey of the literature related to the psychological and educational problems of gifted children.

**EDS 638. SEMINAR IN EDUCATION OF THE GIFTED: PROGRAMS**
A survey of existing programs for the gifted and evaluation of relevant literature. Individual students will plan and present a model program for the gifted.

**EDS 639. CURRENT TRENDS AND ISSUES RELATED TO EDUCATING SPECIFIC LEARNING DISABILITIES CHILDREN**
Trends and issues related to educating children with specific learning disabilities.

**EDS 640. ADVANCED ASSESSMENT AND PROCEDURES FOR SPECIFIC LEARNING DISABLED YOUNGSTERS**
Concepts related to the assessment and teaching of specific learning disabled children.

**EDS 700. PHILOSOPHY AND PROCESS IN THE PREPARATION OF SPECIALISTS IN SPECIAL EDUCATION**
Admission to the Program for Ed.S. and Ph.D. in Education. In depth exploration of the philosophy and theory in special education. A theoretical basis for the preparation of specialists in the field of exceptional child education.

**EDS 710. SEMINARS IN SPECIAL EDUCATION**
Preliminary Admission to The Graduate Program and CI. Seminar Topics will vary to include neurophysiological mechanisms, current trends, issues, and curriculum development in Special Education. May be repeated for a maximum of 10 hours.

**EDS 712. RESEARCH STUDIES AND THEIR IMPLICATIONS IN THE EDUCATION OF EXCEPTIONAL CHILDREN**
Course will involve a study of current research in exceptional child education. The transition from theory into practice will be made through the examination and discussion of implications to the field of special education that can be drawn from the research.

**EDS 714. EDUCATIONAL IMPLICATIONS OF PSYCHO-SOCIAL ASPECTS OF EXCEPTIONAL CHILDREN**
This course will be concerned with the identification of the psycho-social needs and characteristics of exceptional children. Opportunity will also be given to the analysis of the educational implications of these needs and characteristics. May be repeated for a maximum of 8 hours.

**EDS 719. FIELDWORK WITH EXCEPTIONAL CHILDREN**
Practical field experience in curriculum development, classroom teaching, supervision and/or administrative areas in special education. May be repeated for a maximum of 8 hours.
EDS 783. SELECTED TOPICS AND GRADUATE RESEARCH STUDIES IN SPECIAL EDUCATION (1-12)
PR: EDS 712 or Cl. Identification and specification of a research problem in special education. Opportunity will be provided for the student to gather and process data, culminating in a written report and/or oral presentation to fellow student researchers. May be repeated for a maximum of 12 hours.

EDS 785. SPECIALIZED STUDY IN: MENTAL RETARDATION, EMOTIONALLY DISTURBED, SPECIFIC LEARNING DISABILITIES, AND GIFTED EDUCATION (1-12)
PR: Cl. Exploration and demonstration of knowledge in an area of interest to the student in special education. The specialized study may also include areas for which the student needs to demonstrate a higher level of competency. May be repeated for a maximum of 12 hours.

EDS 799. DISSERTATION. (1-16)
PR: Cl. The supervised writing of a doctoral dissertation. May be repeated for a maximum of 16 hours.

Foreign Language Education (EDX)

UPPER LEVEL COURSES
EDX 449. TEACHING METHODS IN THE SECONDARY SCHOOL—FOREIGN LANGUAGE (4)
PR: EDC 401 or concurrent registration in EDC 401. Techniques and materials of instruction in foreign languages. To be taken in the quarter prior to internship.

EDX 465. TEACHING METHODS IN THE SECONDARY SCHOOL—LATIN (4)
PR: EDC 401 or concurrent registration in EDC 401. Techniques and materials of instruction in Latin.

FOR GRADUATE STUDENTS ONLY
EDX 649. CURRENT TRENDS IN SECONDARY FOREIGN LANGUAGE EDUCATION (4)
PR: Consultation with instructor, plus foreign language fluency. Curricular patterns and instructional practices in the teaching of secondary foreign languages.

Foundations (EDF)

UPPER LEVEL COURSES
EDF 303. INTRODUCTION TO MEASUREMENT AND EVALUATION (4)
PR: Upper level standing. Elementary concepts basic to a general understanding of measurement and evaluation processes.

EDF 305. HUMAN DEVELOPMENT AND LEARNING (4)
PR: SSI 201, 203 or General Psychology; and admission to College of Education or CC. Application of respondent and operant learning principles to classroom learning, teaching models for different instructional goals, analysis of teacher behavior, micro-teaching. Credit cannot be earned for both EDF 305 and EDF 377.

EDF 307. SOCIAL FOUNDATIONS OF EDUCATION (4)
PR: Admission to College of Education. Social, economic and political context within which schools function and the values which provide direction for our schools; the culture as a motivating influence in instruction. Should not be taken concurrently with EDF 305.

EDF 309. PHILOSOPHY OF EDUCATION (4)
PR: Upper level standing. A critical analysis of selected philosophies of education in terms of their beliefs about the nature of man and society and their related assumptions about the nature of reality, knowledge and value.

EDF 311. COMPARATIVE EDUCATION (4)
PR: Upper level standing. A comparison of contemporary educational systems of selected countries with that of the United States.

EDF 313. VALUES CLARIFICATION FOR TEACHERS (4)
PR: Junior standing recommended. Techniques for teachers in identifying and analyzing values and value orientations of individuals and groups of students in the school.

EDF 377. EDUCATIONAL PSYCHOLOGY (4)
PR: Upper Level standing. The application of behavioral principles to human behavior in educational institutions, home and community settings. Credit cannot be earned for both EDF 305 and EDF 377. (For non-education majors only.)

EDF 379. BEHAVIOR MODIFICATION TECHNIQUES (4)
PR: EDF 305. Special techniques in behavior modification for children with learning difficulties.

EDF 444. WOMEN AND THE EDUCATIONAL PROCESS (4)
PR: Junior standing recommended. Covers both the role women played in education in the U. S. and the way schools have helped to shape the role women play in American society. Topics include development of sex-role stereotypes through classroom interactions and curriculum materials, the status of women in public and higher education and laws affecting it, and the role of the schools in forming educational and career aspirations of girls and women. Emphasis will be placed on ways parents and teachers may counteract the sex-typing which schools, as they are currently structured, perpetuate. (Also offered as WSP 444.)

FOR SENIORS AND GRADUATE STUDENTS
EDF 502. ADOLESCENCE (4)
A study of the educational, intellectual, personality, physical, social and vocational factors in adolescence.

EDF 575. AMERICAN DEMOCRACY AND PUBLIC EDUCATION (4)
Independence of the public school and democracy in the United States and the responsibility of the school in fostering and strengthening basic democratic principles.

EDF 585. PROGRAMMED INSTRUCTION AND TEACHING MACHINES (4)
Principles for programming in the several academic subjects.

FOR GRADUATE STUDENTS ONLY
EDF 605. FOUNDATIONS OF MEASUREMENT (4)
Fundamental descriptive statistics, basic measurement concepts, role of measurement in education, construction of teacher-made tests and interpretation of standardized tests.

EDF 607. FOUNDATIONS OF EDUCATIONAL RESEARCH (4)
PR: EDF 605. Major types of educational research, with emphasis upon understanding the experimental method.

EDF 611. PSYCHOLOGICAL FOUNDATIONS OF EDUCATION (4)
Selected topics in psychology of human development and learning.

EDF 612. CHILD DEVELOPMENT (4)
PR: EDF 611 or Cl. Educational, emotional, hereditary, intellectual, social and physical factors influencing child growth and development.

EDF 613. PRINCIPLES OF LEARNING (5)
A consideration of several theories of learning and related research studies in regard to classroom application.

EDF 615. BIOLOGICAL BASES FOR LEARNING AND BEHAVIOR (5)
PR: One course in Educational Psychology. A study of human biological development and its influence upon learning and behavior.

EDF 617. MEASUREMENT OF INDIVIDUAL INTELLIGENCE (5)
PR: EDF 305 or 605 or equivalent and a course in educational measurement of statistics. Administration and interpretation of individual measures of intelligence. Students may not receive credit for both EDF 617 and PSY 617. Individual Intelligence Testing.

EDF 621. SOCIO-ECONOMIC FOUNDATIONS OF AMERICAN EDUCATION (4)
Significant socio-economic factors as they relate to major problems facing American education.
EDF 623. HISTORICAL FOUNDATIONS OF AMERICAN EDUCATION
(4)
Historical and comparative problems in American education which are relevant to contemporary issues.

EDF 625. PHILOSOPHICAL FOUNDATIONS OF AMERICAN EDUCATION
(4)
Major philosophies of education which are relevant to an understanding of contemporary educational issues.

EDF 627. PROSEMINAR IN COMPARATIVE EDUCATION
(4)
Contemporary policies and practices in education in selected countries of the world. Methodology in Comparative Education. Consideration will be given to needs and interests of individual students.

EDF 631. THEORIES OF PERSONALITY FOR SCHOOL PERSONNEL
(4)
A comparative and integrated study of personality development according to major psychological theories. Application of the theoretical constructs to education and guidance.

EDF 635. BEHAVIOR THEORY AND CLASSROOM LEARNING
(4)
PR: EDF 613 or CI. Theoretical and practical application of behavior modification. Will cover: Introduction into experimental methods, e.g., independent, dependent variables; and internal validity; principles of positive reinforcement; shaping and successive approximations; application of reinforcement (parameters); operant behavior under extinction; operant methods in behavior and development; readings in behavior modification—critical analysis; field work.

EDG 617. SELECTED TOPICS
(2-4)
PR: EDG 601 and EDF 631. Counterpart of EOG 629 for prospective secondary school counselors. Group interaction and values of stereotyping. Emphasis will be placed on how the law and formal and informal affirmative action activities can be employed to correct sexism in schools.

EDG 675. FIELD EXPERIENCE
(1-5)
PR: CI. Demonstrate skills in the practice of the student's specialty. Specific objectives will be defined according to the needs of the individual student.

Guidance (EDG) UPPER LEVEL COURSES

EDG 401. INTRODUCTION TO GUIDANCE
(5)
PR: Upper level standing. An introduction to the role and function of guidance, school psychology, social work and other pupil personnel services from kindergarten through junior college.

EDG 402. INTRODUCTION TO STUDENT PERSONNEL WORK IN HIGHER EDUCATION
(5)
PR: CI. Study of student personnel services in institutions of higher education. Identification of the needs of students and of the ways to respond to meet these needs. Survey of service units on a campus, in terms of structure, organization, funding, and evaluation of each unit.

EDG 404. PROBLEMS IN RESIDENCE HALL MANAGEMENT
(2)
PR: CI. In-depth study of problems related to residence hall living.

FOR SENIORS AND GRADUATE STUDENTS

EDG 503. GUIDANCE IN VOCATIONAL EDUCATION
(4)
PR: CI. Application of guidance theories and skills to the work of vocational educators. The guidance role of teachers and their relationships with counselors in providing guidance services.

EDG 529. COMPARATIVE GUIDANCE
(4)
PR: CI. Study of guidance theories and practices in selected foreign countries as compared with the American guidance model. Evaluation of foreign guidance through critical analysis of primary sources. For example: guidance philosophy and practice in countries of the Soviet Bloc. (Formerly EDF 629)

FOR GRADUATE STUDENTS ONLY

EDG 601. PRINCIPLES OF GUIDANCE
(5)
PR: CI. Required first course in specialization sequence for all guidance majors. Guidance as a profession; philosophic framework of the guidance program, its scope and place in the total educational context.

EDG 603. THE INFORMATIONAL SERVICE IN GUIDANCE
(4)
PR: EDG 601. Occupational structure in the United States; sources and uses of educational, occupational, social and personal information; collecting, classifying and communicating such information.

EDG 609. THE APPRAISAL PROCEDURES IN GUIDANCE
(5)
PR: EDG 605, EDG 601. A study of test and non-test techniques of appraisal with emphasis on the use of standardized test data in guidance programs and the use of the individual case study approach.

EDG 613. ORGANIZATION AND ADMINISTRATION OF GUIDANCE SERVICES IN ELEMENTARY SCHOOLS
(3)
PR: EDG 601. Organization of a guidance program in the elementary school, its relation to instruction and administration. Guidance roles and relationships of members of the school staff.

EDG 615. ORGANIZATION AND ADMINISTRATION OF GUIDANCE SERVICES IN SECONDARY SCHOOLS
(3)
PR: EDG 601. Organization of a guidance program and its place in the total educational program; responsibilities of various staff members and their relationships to each other.

EDG 617. GROUP PROCEDURES IN GUIDANCE IN ELEMENTARY SCHOOLS
(3)
PR: EDG 601 and EDG 621. Counterpart of EDG 619 for prospective secondary school counselors. Use of groups in the counseling and guidance of children and in working with parents and teachers.

EDG 619. GROUP PROCEDURES IN GUIDANCE IN SECONDARY SCHOOLS
(3)
PR: EDG 601 and EDG 623. Group interaction and values of group activity for guidance purposes. Methods and techniques for working with groups.

EDG 621. THE COUNSELING SERVICE IN GUIDANCE IN ELEMENTARY SCHOOLS
(5)

EDG 623. COUNSELING THEORIES AND PRACTICES
(5)
PR: EDG 601 and EDG 631, CI. Nature of the counseling process with emphasis on some theoretical approaches and practical techniques.

EDG 625. PRACTICUM IN ELEMENTARY GUIDANCE COUNSELING AND CONSULTING
(6)
This course is the counterpart of EDG 627 for prospective secondary school counselors; enrollment by permission of program chairman only. Counseling with children in groups as well as individually; consultations with parents, teachers, administrators, and fellow professionals regarding the children being counseled. (S/U only.)

EDG 627. PRACTICUM IN SECONDARY SCHOOL GUIDANCE COUNSELING
(6)
Final course in guidance program; enrollment by permission of program chairman only. Supervised practice in working with individuals in counseling relationship. (S/U only.)

EDG 633. SEMINAR IN GUIDANCE
(1-3)
PR or CR: EDG 601, CI. Significant issues in the field of guidance; topics for discussion will vary according to needs.
and interests of students. (S/U only.) May be repeated for credit for a maximum of 6 hours.

**EDG 681. INDIVIDUAL STUDY** (1-5)
PR: CI. Independent study, research and experiences relating to guidance and pupil personnel services under the supervision of a member of the Guidance Program faculty. (May be repeated for maximum total of 5 hours.)

**Health Education (HEN)**

**LOWER LEVEL COURSES**

**HEN 201. CONTEMPORARY HEALTH SCIENCE** (4)
PR: None. A comprehensive approach to health concerns and problems in contemporary society, including methods of assessing individual health needs. (S/U only.)

**UPPER LEVEL COURSES**

**HEN 310. PROCESSES AND PROGRAMS IN HEALTH EDUCATION** (5)
PR: Admission to Health Education Program, or CI. Survey of programs in Health Education in the schools and community. Processes in programs and curriculum development will also be emphasized. (S/U only.)

**HEN 311. STRUCTURE AND FUNCTION OF THE HUMAN BODY** (4)
PR: Admission to Health Education Program, or CI. A study of the normal structure and function of the human body. Focus is on the relationship of structure, function, and health status. (S/U only.)

**HEN 321. HEALTH EDUCATION AND RELATED HEALTH SCIENCE CONTENT: CHILDREN** (4)
PR: Admission to the program or CI. Programs, curriculum, health services, and health education related to health needs and interests of children. (S/U only.)

**HEN 322. SEMINAR AND INTERNSHIP—CHILD HEALTH EDUCATION AND PROGRAMS** (5)
PR: Admission to program. Supervised field experiences in school (k-3), pre-school, and community health agencies. Scheduled seminars will be conducted on campus and in the field. (S/U only.)

**HEN 331. HEALTH EDUCATION AND RELATED HEALTH SCIENCE CONTENT: PUBESCENCE** (4)
PR: Admission to the program or CI. Programs, curriculum, health services and health education related to health needs and interest of pubescence. (S/U only.)

**HEN 332. SEMINAR AND INTERNSHIP IN HEALTH EDUCATION PROGRAMS—PUBESCENCE** (5)
PR: Admission to the program or CI. Supervised teaching in health education (middle school or junior high school). Selected field experiences in community health programs. (S/U only.)

**HEN 333. SOCIETY: CHILD AND PUBESCENT HEALTH** (2)
PR: Admission to the program of CI. Seminar for students, supervisors and professionals from health related disciplines. (S/U only.)

**HEN 411. HEALTH EDUCATION AND RELATED HEALTH SCIENCE CONTENT: ADOLESCENTS AND YOUNG ADULTS** (4)
PR: Admission to the program or CI. A study of health needs, programs, services and health content areas of adolescents and young adults. (S/U only.)

**HEN 412. SEMINAR AND INTERNSHIP: HEALTH EDUCATION AND PROGRAMS—ADOLESCENTS AND YOUNG ADULTS** (5)
PR: Admission to the program or CI. Supervised teaching in senior high schools and selected field experiences in community health programs. (S/U only.)

**HEN 421. HEALTH EDUCATION AND RELATED HEALTH SCIENCE CONTENT: ADULTS** (4)
PR: Admission to the program or CI. A study of health needs, services and health education programs focusing on adults, including the aging. (S/U only.)

**HEN 422. SEMINAR AND FIELD EXPERIENCE: ADULT HEALTH** (5)
PR: Admission to the program. Supervised field experiences in adult health programs in schools and the community. (S/U only.)

**HEN 423. SOCIETY AND HEALTH: ADULTS** (2)
PR: Admission to the program or CI. A seminar for students, physicians, social workers, health educators from public and private agencies, nutritionists, health care personnel, etc., for the exchange of program information and new developments in health information and research. (S/U only.)

**HEN 431. CURRENT PROBLEMS IN HEALTH** (4)
PR: Admission to the program or CI. An investigation of current health problems, programs and research methods. (S/U only.)

**HEN 432. SEMINAR AND FIELD EXPERIENCE: CURRENT HEALTH PROBLEMS** (5)
PR: Admission to the program. Supervised field experience in selected health programs. (S/U only.)

**Humanities Education (EDY)**

**UPPER LEVEL COURSES**

**EDY 433. CURRENT TRENDS IN THE TEACHING OF HUMANITIES** (4)
Curricular patterns, materials, and instructional practices in the teaching of humanities. (Formerly EDY 533)

**Junior College (EDH)**

**FOR GRADUATE STUDENTS ONLY**

**EDH 651. THE JUNIOR COLLEGE IN AMERICAN HIGHER EDUCATION** (4)
History of higher education, philosophical and cultural bases for definition of its role, and contemporary issues, such as control, financing, and curricular patterns. The place and problems of the community junior college will be central concerns of this course.

**EDH 653. SEMINAR IN COLLEGE TEACHING** (5)
Implications of learning theory and student characteristics for teaching at the college level. Types of teaching procedures, innovation, evaluation, student freedom and responsibility for learning.

**Library-Audiovisual Education (EDL)**

**UPPER LEVEL COURSES**

**EDL 400. THE LIBRARY, EDUCATIONAL TECHNOLOGY AND SOCIETY** (3)
PR: CI, or entrance into program. The place of the library in comparison with other educational institutions in society. Impact of educational technology on change in educational practices and the building of an instructional materials center (or school media center) concept.

**EDL 410. INTRODUCTION TO EDUCATIONAL TECHNOLOGY** (3)
PR: EDL 412 or CI. The importance of educational technology for the media specialist. History, concepts, and relevance for the implementation of behavioral objectives.

**EDL 411. SCHOOL LIBRARY ADMINISTRATION AND SERVICE** (5)
PR: Admission to College of Education. Development, philosophy, objectives, standards and current trends in school libraries. Introduction to library operations, programs and services in the school and the community.

**EDL 412. SCHOOL MEDIA CENTER ADMINISTRATION** (5)
PR: EDL 400 or CI. Media quarters (materials center), facilities and equipment. Identification of staff services and examination of practices and methods for providing such services.
EDL 413. GENERAL REFERENCE SOURCES (4)
Examination of the types and functions of basic reference materials with emphasis on encyclopedias, dictionaries, yearbooks, manuals, and basic bibliographical tools; emphasis will be placed on materials of reference value in school media centers. (Formerly EDL 513.)

EDL 414. SELECTION OF MATERIALS FOR ELEMENTARY SCHOOL CHILDREN (4)
Emphasis on the selection of materials to be used in grades 1-6 by school media personnel and other resource teachers. Stress on selection for curricular needs and other special learning needs of the child. (Formerly EDL 514.)

EDL 415. CATALOGING OF NON-BOOK MATERIALS FOR THE SCHOOL MEDIA CENTER (2)
PR: CI. Practice in the cataloging of all non-book materials used in media centers. Survey of systems for pre-cataloging and their acquisition procedures.

EDL 418. INTRODUCTION TO AV EQUIPMENT AND PRODUCTION (5)
PR: Upper level standing in the College of Education or CI. Knowledge of essential hardware for classroom teaching; including running and maintenance. Simple production of teaching materials. Organization and use of materials and equipment in teaching situations. No credit given to Library Science/Audiovisual majors.

EDL 419. AUDIOVISUAL MATERIALS OF INSTRUCTION (4)
PR: Admission to College of Education. Selection, utilization and care of audio-visual materials and equipment.

EDL 423. PREPARATION AND PRODUCTION OF INSTRUCTIONAL MATERIALS (4)
Basic techniques for the preparation of a variety of instructional materials for use in the classroom. (Formerly EDL 523.)

EDL 424. STORYTELLING FOR ELEMENTARY SCHOOL CHILDREN (4)
Techniques and materials for the beginner in storytelling for elementary school children. For the teacher as well as for the school media professional. (Formerly EDL 524.)

EDL 440. METHODS OF TEACHING IN THE SCHOOL MEDIA CENTER (4)
PR: Must be taken concomitantly with EDL 480 or CI. Methods unique to working with pupils within the school media suite. Facilitating cooperation with teachers.

EDL 455. BASIC CATALOGING AND INTRODUCTION TO TECHNICAL SERVICES FOR SCHOOL MEDIA CENTERS (5)
Designed to give the student basic knowledge of major technical services activities in school media centers with emphasis on principles of cataloging and classification. (Formerly EDL 515.)

EDL 459. INTRODUCTION TO MEDIA FOR YOUNG ADULTS (5)
Examination and evaluation of both print and non-print media for young adults as used in secondary school libraries. Basic principles of selection and utilization. Identification and use of bibliographic sources essential in the selection process. (Formerly EDL 519.)

EDL 480. INTERNSHIP IN A SCHOOL LIBRARY (4)
Practice in school libraries.

FOR SENIORS AND GRADUATE STUDENTS
EDL 500. FOUNDATIONS OF LIBRARIANSHIP (4)
Overview of and introduction to the study of library service; history; organization; specialized literature; outstanding leaders; current trends, issues, and problems. Place of the library in society with its contributions to that society. (Formerly EDL 600.)

EDL 508. TELEVISION IN THE SCHOOL (4)
Utilization of open and closed circuit broadcasting in the instructional process.

EDL 520. MEDIA AND EDUCATIONAL FACILITIES (3)
Designing teaching stations and media centers for effective media utilization. Practice in helping classroom teachers modify existing classrooms in the use of newer media.

EDL 525. INSTRUCTIONAL GRAPHICS (4)
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.

EDL 526. PREPARING SINGLE CONCEPT FILMS (4)
PR: CI. Techniques and procedures in the preparation of educational films. Ascertainment of concepts, script writing, graphics, lighting, filming, editing.

FOR GRADUATE STUDENTS ONLY
EDL 601. SELECTION OF LIBRARY MATERIALS (4)
Bibliographical sources, evaluative criteria for books and principles of book selection for libraries.

EDL 602. HISTORY OF LIBRARIES (4)
Development of libraries as found from the earliest records to the great libraries of modern times and the library as a social institution.

EDL 604. CONTEMPORARY PUBLISHING AND PRINTING (4)
PR: EDL 601. A survey of book publishing as it is carried on today, primarily in the United States. Emphasis on structure of the industry, economic conditions, technological developments, social functions of book publishing and distribution. Complementary relations between libraries and publishing.

EDL 605. HISTORY OF CHILDREN'S LITERATURE (5)
Historical bibliographical survey of imaginative and informational literature for children.

EDL 606. BASIC INFORMATION SOURCES AND SERVICES (4)
An in-depth examination of the basic sources of information in the general library; discussion of bibliographical control of all communication media, with emphasis on those tools which are of most value to general reference services; and the provision of various types of reference services. (Formerly EDL 513.)

EDL 607. THE CURRICULUM AND INSTRUCTIONAL TECHNOLOGY (5)
Effective utilization of instructional materials as they relate to specific areas of the curriculum in elementary and high school programs.

EDL 608. RESEARCH METHODS IN LIBRARIANSHIP (4)
Overview of present status of research in library and information science; introduction to research methods and their application to librarianship; designed to prepare students to plan, conduct, and evaluate research relating to the acquisition, classification, cataloging, retrieval, and dissemination of information. Open to both majors and non-majors in library-audiovisual education.

EDL 609. SUPERVISED FIELD WORK (4)
PR: Completion of General Program Requirements and CI.

EDL 610. BOOKS AND RELATED MATERIALS OF LATIN AMERICAN COUNTRIES SUITABLE FOR CHILDREN AND YOUNG PEOPLE (4)
Bibliographic sources, aids and tools for the selection and utilization of Latin American books and related materials suitable for children and young people. Examination of representative materials in terms of the basic principles and criteria of selection for libraries.

EDL 611. ADVANCED INFORMATION SOURCES AND SERVICES (4)
PR: EDL 606. Reference materials in the humanities, social sciences, science, and technology.

EDL 612. THE ORGANIZATION AND ADMINISTRATION OF THE SCHOOL MEDIA CENTER (5)
PR: General Program Requirements or CI. Media quarters, facilities and equipment. Basic principles of organization and administration of media programs in elementary and secondary schools.

EDL 613. MATERIALS FOR CHILDREN (4)
Examination of materials for all institutions in which children are served: school media centers, public libraries, kindergartens,
EDL 614. TECHNICAL SERVICES IN LIBRARIES (5)

Principles of general library practice in technical services operations. Emphasis on descriptive cataloging and use of unabridged Dewey Decimal Classification. (Formerly EDL 514.)

EDL 615. CLASSIFICATION AND CATALOGING OF NON-BOOK MATERIALS (3)


EDL 616. ADVANCED CATALOGING (4)

PR: EDL 614 or consent of the instructor. An examination of changing policies and procedures in the administration of acquisitions, cataloging, binding, photographic reproduction and related area. Analysis of research in the field.

EDL 617. BOOKS AND RELATED MATERIALS FOR YOUNG ADULTS (5)

Young adult materials for use in secondary school libraries, young adult sections of public libraries and other institutions serving youth. Equal emphasis upon 1) selection principles and bibliographic sources as well as upon 2) utilization in terms of service to the young adult. (Formerly EDL 519.)

EDL 618. PREPARING INSTRUCTIONAL MEDIA (4)

Fundamentals of preparing and using audiovisual as they relate to the communication process. (Formerly EDL 523.)

EDL 619. DOCUMENTS AND SERIALS (4)

The nature of documents and serials, their reference and research value; techniques of acquisition, cataloging, organization, conservation and reference use.

EDL 620. FOUNDATIONS OF EDUCATIONAL TECHNOLOGY (4)

Traces historical development and the application of educational technology to school media services.

EDL 621. AUDIOVISUAL ADMINISTRATION (5)

PR: EDL 618 and EDL 607 or CI. Audiovisual administrative practices in school systems and junior colleges.

EDL 622. AUDIOVISUAL UTILIZATION (4)

Examination (and utilization) of non-print media. Characteristics of media equipment and paradigms of use.

EDL 623. ADVANCED PREPARATION AND PRODUCTION OF INSTRUCTIONAL MATERIALS (4)

By permission of instructor. Designed for the media specialist. Advanced techniques for the preparation of audiovisual materials of instruction.

EDL 624. ADVANCED STORYTELLING (4)

PR: CI or EDL 613. Building storytelling programs for school and public libraries or other educational institutions. Analysis of historical aspects, material suitable for use and audience reaction. (Formerly EDL 524.)

EDL 625. READING GUIDANCE PROGRAMS IN LIBRARIES AND CLASSROOMS (4)

Working with factors and forces influencing reading habits of children and youth; programs for teaching investigative and library skills; materials and methods for guidance of reading, listening, and viewing.

EDL 629. LOCAL PRODUCTION OF RADIO AND CLOSED CIRCUIT TELEVISION (4)

Utilization and broadcasting techniques for educators. Stress will be placed on local school production, micro-teaching, and studio broadcasting.

EDL 630. INFORMATION SOURCES AND SERVICES IN THE HUMANITIES (4)

PR: EDL 606 and EDL 611 or consent of the instructor. Detailed consideration of the bibliographical and reference materials in the humanities with training and practice in their use for solving problems arising in the reference service.

EDL 631. INFORMATION SOURCES AND SERVICES IN THE SOCIAL SCIENCES (4)

PR: EDL 606 and EDL 611 or consent of the instructor. Characteristics of the social science disciplines and structure, concepts, methods of investigation. Understanding of social science reference tools as means of bibliographic control and as vehicles of research.

EDL 632. INFORMATION SOURCES AND SERVICES IN SCIENCE AND TECHNOLOGY (4)

PR: EDL 606 and EDL 611 or consent of the instructor. Study of representative reference sources in pure and applied sciences with equal attention given to typical problems encountered in scientific and technological reference service.

EDL 640. SEMINAR IN PUBLIC LIBRARIES (5)

PR: General Program Requirements or Cl. Identification of problems and critical examination of methods in administrative areas of technical, student, and teaching staff services, fiscal and legal responsibilities, staff organization and supervision in public libraries.

EDL 650. SEMINAR IN ACADEMIC LIBRARIES (3)

PR: General Program Requirements or Cl. Identification of problems and critical examination of methods in administrative areas of technical, student, and teaching staff services, fiscal and legal responsibilities, staff organization and supervision in academic libraries.

EDL 660. SEMINAR IN SPECIAL LIBRARIES (3)

PR: General Program Requirements or Cl. Identification of problems and critical examination of methods in administrative areas of technical and special service clientele; fiscal and legal responsibilities, staff organization and services in special libraries.

EDM 370. BAND MATERIALS PRACTICUM (1)

PR: CI. A study of band materials, in a laboratory setting, appropriate to elementary and secondary school music programs. Course content will change each quarter. May be repeated for a total of 6 hours credit.

EDM 380. CHORAL MATERIALS PRACTICUM (1)

PR: CI. A study of choral materials, in a laboratory setting, appropriate to elementary and secondary school music programs. Course content will change each quarter. May be repeated for a total of 6 hours credit.

EDM 390. ORCHESTRAL MATERIALS PRACTICUM (1)

PR: CI. A study of orchestra materials, in a laboratory setting, appropriate to elementary and secondary school music programs. Course content will change each quarter. May be repeated for a total of 3 hours credit.

*EDM 431. INSTRUMENTAL MUSIC IN THE ELEMENTARY SCHOOL (5)

*EDM 432. INSTRUMENTAL MUSIC IN THE JUNIOR HIGH SCHOOL (5)

*EDM 433. INSTRUMENTAL MUSIC IN THE SENIOR HIGH SCHOOL (5)

*EDM 435. VOCAL MUSIC IN THE ELEMENTARY SCHOOL (5)

*EDM 437. VOCAL MUSIC IN THE JUNIOR HIGH SCHOOL (5)

*EDM 439. VOCAL MUSIC IN THE SENIOR HIGH SCHOOL (5)

*Each class meets as a performing group. Score reading, conducting, organizational procedures, historical relationships, and methods at the appropriate grade levels. Teaching techniques concerning the presentation of elements of theory, general music, and literature.
FOR GRADUATE STUDENTS ONLY

EDM 601. TECHNIQUES OF RESEARCH IN MUSIC
EDUCATION (4)
Professional bibliography and individual research projects.

EDM 603. MUSIC SUPERVISION AND
ADMINISTRATION (3)
The music curriculum in relation to the total school program; staff and budgetary needs.

EDM 614. VOCAL MATERIALS AND CONDUCTING (4)
A study of materials appropriate for use in vocal groups. Emphasis is given to vocal materials appropriate for use in secondary schools.

EDM 617. INSTRUMENTAL MATERIALS AND
CONDUCTING (4)
A study of materials appropriate for use in instrumental groups. Emphasis is given to instrumental materials appropriate for use in secondary schools.

EDM 633. CURRENT TRENDS IN SCHOOL
INSTRUMENTAL MUSIC (3)
New materials, equipment, techniques of teaching and recent historical trends in instrumental music.

EDM 635. CURRENT TRENDS IN SCHOOL VOCAL
MUSIC (3)
New materials, equipment, techniques of teaching and recent historical trends in vocal music.

Natural Science—Mathematics
Education (EDN)

UPPER LEVEL COURSES

EDN 425. NEW TRENDS IN TEACHING THE PHYSICAL
SCIENCES (4)
Physical Science Study Committee Physics, Chemical Education Materials Study and other new approaches to the teaching of the physical sciences. Recommended for teachers of Physics, Chemistry and Earth Sciences.

EDN 427. NEW TRENDS IN TEACHING BIOLOGY (4)
Recent developments in curriculum materials and in strategies for teaching biological sciences, grades 7-12. Recommended for pre-service teachers of secondary school biology.

EDN 441. TEACHING MATHEMATICS IN MIDDLE
GRADES (4)
PR: 24 quarter hours of mathematics or CC. Instructional procedures and materials for teaching mathematics in the middle grades.

EDN 443. TEACHING SCIENCE IN THE MIDDLE
GRADES (4)
PR: EDN 459 or EDE 417 plus 20 hours of Science or Cl. Techniques and materials of instruction for teaching science in the middle grades.

EDN 451. TEACHING METHODS IN THE SECONDARY
SCHOOL—MATHEMATICS (4)
PR: EDC 401 or concurrent registration in EDC 401 and admission to teacher education program in mathematics. Techniques and materials of instruction in mathematics.

EDN 452. INTERPRETING MATHEMATICAL
SYMBOLISMS (2)
PR: EDR 407, EDN 451 or concurrent registration in EDN 451. Methods of teaching interpretation of symbolism. (Formerly EDN 551.)

EDN 459. TEACHING METHODS IN THE SECONDARY
SCHOOL—SCIENCES (4)
PR: EDC 401 or concurrent registration in EDC 401. Techniques and materials of instruction in secondary schools sciences.

EDN 460. COMMUNICATION SKILLS IN THE SCIENCE
CLASSROOM (2)
PR: EDR 407, EDN 459 or concurrent registration in EDN 459. Reading and communication skills important in understanding scientific literature and communicating findings to others. (Formerly EDN 559.)

FOR SENIORS AND GRADUATE STUDENTS

EDN 515. THE UTILIZATION OF LABORATORY
TECHNIQUES IN THE TEACHING OF
MATHEMATICS (4)
PR: 18 quarter hours of mathematics or Cl. In this course students will make an examination of a variety of sample laboratory lessons along with methods for creating and evaluating such lessons.

EDN 583. SELECTED TOPICS IN SCIENCE
EDUCATION (1-5)
May be repeated when topics are not duplicated.

FOR GRADUATE STUDENTS ONLY

EDN 616. TEACHING OF PRE-SECONDARY SCHOOL
MATHEMATICS I (5)
PR: 18 quarter hours of mathematics or Cl. Development of strategies and materials for teaching mathematical concepts and skills appropriate to pre-secondary school years.

EDN 617. TEACHING OF PRE-SECONDARY SCHOOL
MATHEMATICS II (5)
PR: EDN 616. Continuation of EDN 616.

EDN 618. TEACHING OF PRE-SECONDARY SCHOOL
MATHEMATICS III (5)
PR: EDN 617. Continuation of EDN 616-617.

EDN 621. TEACHING OF HIGH SCHOOL ALGEBRA (4)
PR: B.A. in mathematics or certification in secondary mathematics. Philosophy, content, new trends, and methods of teaching beginning, intermediate, and advanced high school algebra.

EDN 622. TEACHING OF HIGH SCHOOL GEOMETRY (4)
PR: B.A. in mathematics or certification in secondary mathematics. Philosophy, content, new trends, and methods of teaching high school geometry.

EDN 637. CURRENT TRENDS IN SECONDARY
MATHEMATICS EDUCATION (4)
Curricular patterns and instructional practices in secondary mathematics.

EDN 639. CURRENT TRENDS IN SECONDARY SCIENCE
EDUCATION (4)
PR: EDN 425 or 427. Curricular patterns and instructional practices in secondary science.

EDN 641. CASE STUDIES IN SCIENCE (4)
Case studies from the Natural Sciences with implications for science teaching.

EDN 651. TEACHING SECONDARY SCHOOL
BIOLOGY (4)
PR: Cl. Effective use and production of instructional materials in the biological sciences. Interrelation of philosophy, materials and classroom practices.

EDN 653. TEACHING SECONDARY SCHOOL PHYSICAL
& EARTH SCIENCES (4)
PR: Cl. Effective use and production of instructional materials in the physical and earth sciences. Interrelation of philosophy, materials, and classroom practices.

Physical Education for Teachers (EDP)

LOWER LEVEL COURSES

†EDP 255. FIRST AID (3)
Meets the American Red Cross certification requirements in standard and advanced first aid.

UPPER LEVEL COURSES

†EDP 311. SEMINAR AND FIELD EXPERIENCE IN
PHYSICAL EDUCATION (5)
Approximately two hours per day are spent teaching in an elementary school which provides a variety of experiences designed to lead students to an understanding of children and how they learn in the elementary school.

†Enrollment in these courses requires admission to the Physical Education Program.
The development and integration of the neuromuscular and the associated sensory systems as they affect motor and perceptual-motor performance. The physiology of muscular contraction, the accompanying immediate changes in the cardiorespiratory systems, and the permanent physiological changes resulting from exercise.

A personal evaluation of various factors related to the effective teaching of physical education. An individual profile that can be used for counseling purposes will be the final product of this course.

Elementary school physical education teaching experiences are provided for students. Seminars emphasize planning and teaching methodology. Health and recreation as they relate to elementary school children are studied.

The structure and function of the nervous, skeletal, and muscular systems of the human body as they contribute to deviation from normal deviations in either structure or function in these systems and the role of exercise in rehabilitation.

Physical education teaching experience is provided at various grade levels. Seminars are concerned with organization, evaluation, and extra-class activities. Individual teaching is analyzed and programmed. (S/U only.)

The mechanical laws of physics as they relate to movement within and of the human body and the projection of objects in throwing, hitting, and kicking. Efficiency of human movement through sound body mechanics.

Includes analysis and methodology of teaching swimming skills, conducting class activities, and the organization and conducting of aquatic programs in the school and the community.

Students spend approximately two hours a day at either the junior or senior high school level working in team teaching situations. Emphasis is placed on understanding the secondary level student and how teaching behavior can affect the learner.

A three course sequence which stresses the biomechanical analysis, motoric learning, the teaching techniques of dance, and the skills and strategies common to a number of individual and team sports.

Student reverse teaching levels from EDP 411 so that they will have experience at both junior and senior high school levels. Team teaching prevails, however, a transition is made to teaching larger numbers of students. Seminars emphasize individualized techniques. (S/U only.)

Students have an option of teaching at the elementary, junior or senior high school level as well as teaching mentally retarded students. Students will teach for a full day for a period of from one to three weeks. (S/U only.)

The application of principles from exercise physiology, kinesiology, and psychology to competitive athletics. (Formerly EDP 558.)

PR: CI. Principles and techniques of conditioning athletes for competition; prevention and care of injuries in physical education and athletic activities.

Methods of organizing and coaching a competitive swimming team.

Theory and practice of the fundamental techniques, organizational problems and strategy involved in coaching football.

Theory and practice of the fundamental techniques, organizational problems and strategy involved in coaching wrestling.

Theory and practice of the fundamental techniques, organizational problems and strategy involved in coaching soccer.

Introduction to recreational outlets in the community and the administrative problems confronting recreational playground leaders and directors of community recreational programs.

Theory and practice of the fundamental techniques, organizational problems and strategy involved in coaching track.

Theory and practice of the fundamental techniques, organizational problems and strategy in coaching basketball.

Theory and practice of the fundamental techniques, organizational problems and strategy involved in coaching baseball.

Selected readings of current trends in physical education; discussion of philosophies of teaching; and individual appraisal of knowledge, values, attitudes, and professional competencies.

Integration of basic kinesiological foundations applied to teaching physical education. Specific topics include: physical growth and neuro-muscular development, role of neuro-muscular mechanisms in motor performance, physical principles of human movement and the effects of exercise on the muscular and cardio-respiratory systems.

Will provide in-depth study in specific areas related to neurological, physiological, and mechanical principles of human movement.

Involves the psychological and sociological implications of movement to historical and contemporary man. Emphasis on psycho-motor learning, movement behavior, physical self-concept, role of movement in society and values and attitudes held toward movement.

Will provide in-depth study in specific areas related to sociological and psychological principles of human movement.

Application of learning theory and education innovations, study of structure of subject matter and styles of teaching and investigation of the nature of the learner as these relate to teaching physical education. Fieldwork may be a requirement of this course.

*Enrollment in these courses requires admission to the Physical Education Program.
EDP 631. SPECIALIZED STUDY IN CURRICULUM AND INSTRUCTIONAL PROCESS IN PHYSICAL EDUCATION: (SUBJECT) (1-5)
Will provide in-depth study in specific areas related to the teaching-learning process of physical education.

EDP 640-641. PHYSICAL EDUCATION FOR THE HANDICAPPED I & II (5,5)
This sequential course is concerned with the motor performance and physical fitness of neurologically handicapped individuals and the unique problems of motor skill learning found in children and youth with visual, auditory, speech, or orthopedic handicaps. Study includes field experiences which apply knowledge related to psycho-educational characteristics; planning, conducting, and evaluating individualized programs of special physical education; and review of relevant literature.

EDP 650. RESEARCH IN PHYSICAL EDUCATION (4)
Emphasis will be directed toward planning, conducting, and interpreting research in physical education. The function of research in improving programs as well as the technical aspects of research designs appropriate to physical education are included for study.

EDP 651. RESEARCH PROJECT IN PHYSICAL EDUCATION (1-6)
In-depth research study of selected topics concerning human movement. Topics will vary according to needs and interests of students. May be repeated for credit.

EDP 699. RESEARCH THESIS (1-9)

Measurement—Research—Evaluation (EDQ)

FOR GRADUATE STUDENTS ONLY

EDQ 601. ADVANCED MEASUREMENT—COGNITIVE AREA (4)
PR: EDF 605. Measurement, assessment theory and procedures appropriate to the "Cognitive Domain," i.e., intellectual abilities, aptitudes, achievements, skills.

EDQ 603. ADVANCED MEASUREMENT—AFFECTIVE AREA (4)
Measurement, assessment theory and procedures appropriate to the affective domain, i.e., feelings, attitudes, interests, personal characteristics.

EDQ 605. STATISTICAL ANALYSIS FOR EDUCATIONAL RESEARCH I (4)
Application of statistical techniques to the study of education problems: Tests of significance and confidence intervals, analysis of variance (one-way factorial), correlation and linear regression.

EDQ 607. STATISTICAL ANALYSIS FOR EDUCATIONAL RESEARCH II (4)
PR: EDQ 605. Application of statistical techniques to the study of educational problems: Multiple correlation and regression, Introductory Factor Analysis and selected non-parametric techniques.

EDQ 608. STATISTICAL ANALYSIS FOR EDUCATIONAL RESEARCH III (4)
PR: EDQ 607. Application of statistical techniques to the study of educational problems: Trend analysis, analysis of variance models and expectation of mean squares; analysis of covariance; method of least squares; Bayesian statistics (introduction).

EDQ 609. DESIGN OF EXPERIMENT-PRODUCT RESEARCH IN EDUCATION (4)
PR: EDQ 608. Basic Experimental research design theory and models appropriate for education.

EDQ 611. DESIGN OF DESCRIPTIVE-PROCESS RESEARCH (4)
PR: EDQ 608. Theory and procedures for conducting descriptive research in education.

EDQ 613. APPLICATION OF COMPUTER LANGUAGE AND PROCEDURES IN EDUCATION (2)
Development of understanding and technical skill in relation to computer and data processing approaches to solution of educational research, and administrative problems. Training in use of Fortran as a programming language.

EDQ 620. RESEARCH-BASED PLANNING EVALUATION AND DEVELOPMENT IN EDUCATION (4)
Introduction to systematic planning and development procedures including needs assessment, proposal development, evaluation design and process engineering. Emphasis placed on analysis of evaluation models and theory.

EDQ 621. A BASIS FOR PLANNING AND DEVELOPMENT IN EDUCATION (4)

EDQ 701. CRITICAL ISSUES IN EDUCATIONAL MEASUREMENT AND EVALUATION (4)
A consideration of major issues relevant to the theory and application of measurement and evaluation. Topics include: culture-faire testing, accountability, normative vs. criterion measures and socio-political issues.

Reading Education (EDR)

UPPER LEVEL COURSES

EDR 407. READING IN SECONDARY CONTENT AREAS (2)
PR: Cl and content area PR or CR. Provides basic instruction in phonics, work recognition, readability, interest, corrective procedures, reading behavior, comprehension, etc. Offered only in conjunction with special content reading courses. (Formerly EDR 507.)

EDR 408. READING IN MIDDLE SCHOOLS (4)
This course is for new teachers planning to, or currently teaching in a middle school. Students will study reading as it relates to their particular subject matter area. (Formerly EDR 508.)

EDR 409. CURRENT TRENDS IN READING IN THE SECONDARY SCHOOL (4)
Survey of secondary, college, and adult reading practices, problems, and research. Work with students at commensurate level required. (Formerly EDR 509.)

EDR 430. CORRECTIVE READING FOR THE CHILD (4)
PR: EDE 409 or equivalent. Procedures for meeting individual differences through classroom organization, differentiated instruction and selective use of materials. (Formerly EDR 530.)

FOR GRADUATE STUDENTS ONLY

EDR 630. CORRECTIVE READING FOR CLASSROOM TEACHERS (4)
PR: EDE 409 and EDR 430. Use of diagnostic and prescriptive procedures with individual and group reading instruction. (Formerly EDR 530.)

EDR 631. DIAGNOSIS OF READING DISABILITIES (4)
PR: EDE 609, EDF 605. Causes of reading disability; techniques and materials in diagnosis of reading problems, including telebinocular and audiometer screening. Diagnoses of reading disabilities are required.

EDR 632. TECHNIQUES OF REMEDIAL READING (4)
PR: EDE 609, EDF 605, EDR 409, and EDR 631. Materials and methods in remediation of moderate to severe reading disability cases. Supervised individual tutoring and in-depth evaluation and use of materials.

EDR 633. PRACTICUM IN READING (4)
PR: EDE 609, EDF 605, EDR 409, EDR 631, EDR 632 and Cl. Remediation of severe reading disability cases, tutoring of individuals and small groups, interview techniques, preparation of case reports.