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

Requirements for a minor in Art (32 quarter hour minimum)

I. Studio Concentration:
   - ART 2202C (4)
   - ART 2203C (4)
   - ART 2205C (4)
   - ARH 3000 (4)
   - ARH 4450 (4)

   Plus:
   - Two 4 quarter hour classes from 3000 level studio and repeat one of these areas on the 4000 level. (12)

II. Art History Concentration:
   - ART 2202C (4)
   - ART 2203C (4)
   - ARH 3000 (4)

   Plus:
   - Four 4 quarter hour classes from any of the following:
     - ARH 4100 (4)
     - ARH 4170 (4)
     - ARH 4200 (4)
     - ARH 4301 (4)
     - ARH 4350 (4)
     - ARH 4430 (4)
     - ARH 4450 (Required) (4)
     - ARH 4530 (4)

   Plus:
   - Four quarter hours selected from ART 4930 or ARH 4796; or one 4 quarter hour class on the 3000 art studio level. (4)

Visiting Artists and Artists-in-Residence

The Art department is widely known for the consistent level of excellence of its programs. Aside from the contributions of its permanent staff, and to insure the continuing expansion of learning opportunities available to students, the art department has brought to the campus internationally known artists such as: Scott Bartlett, Larry Bell, Friedl Dzubas, Allen Jones, Nicholas Krushenick, Daniel Lang, Paul Sarkisian, Lucas Samaras, Robert Irwin, James Rosenquist, Robert Rauschenberg, Phillip Perlestein.

Master of Fine Arts Degree (Art)

The major concentrations, or areas of emphasis available to graduate (M.F.A.) art students are: Drawing, Painting, Sculpture, Ceramics, Graphics (lithography and/or intaglio and/or silkscreen), Photography, Cinematography.

Procedure for Applying

The application for graduate study should be sent to University Admissions prior to deadlines published in the academic calendar on page 4-5. However, the application and all support materials (portfolio, etc.) should be submitted early enough so that they will reach the art department by the following dates: for Quarter I admissions by April 1; for Quarter II admissions by July 1; and for Quarter III admissions by October 1. At least one week should be allowed for internal processing of the application providing all transcripts have been received and the applicant's grade point average (GPA) for the final 60 semester or 90 quarter credit hours of undergraduate work is 3.0 or above. If the GPA is below 3.0 the GRE score must be available which may take up to six weeks from the date the exam is taken.

The applicant should submit a portfolio of art work directly to the Graduate Art Adviser in the College of Fine Arts for faculty review. The portfolio should consist of 35 mm slides, for convenience in shipping, handling and presentation. Applicants in drawing and printmaking, however, should send original works and applicants in photography should send original prints. Cinematography applicants should send duplicate prints.

The portfolio should provide evidence of maximum strength in the area of the applicant's primary interest, although work submitted may represent more than one discipline. Return postage in the amount necessary for the return of all materials should accompany the portfolio. (Please do not send cash, checks or money orders.)

Applicants to the Master of Fine Arts Degree program are also required to submit (in addition to the portfolio), three letters of recommendation and a letter of intent.

For information concerning University graduate studies, admissions and graduation policies see page 46. It is the applicant's responsibility to see that all required materials such as transcripts, GRE scores, portfolio and letters of recommendation are received in time to be processed by art department deadlines.

Requirements for the M.F.A. Degree:

A student may be accepted into the M.F.A program either provisionally or fully. Provisional enrollment is normally provided for one or two consecutive terms. When accepted fully as degree-seeking, the student will be given a calendar year in which to achieve "degree-candidacy." These steps are achieved by submission of work for faculty reviews held twice a year. All degree-seeking students are provided with two opportunities within the calendar year to achieve candidacy. If a degree-seeking student does not achieve candidacy on the second attempt, the student will then be terminated from the program.

Upon acceptance to candidacy, the student will select a committee of three faculty members, two of which must be studio faculty of the student's primary discipline.

The M.F.A. degree requires a minimum of 72 quarter hours. The bulk of a student's program is discretionary, and is planned with the advice of the graduate art adviser in its initial stages, and later with the advice of the student's graduate committee.

Specific program requirements include work in theory (ART 6936 Graduate Seminar: 2 hours credit, must be taken twice); participation in instruction (ART 6937 Graduate Instruction Methods: Variable credit to 5 hours); presentation of work (thesis exhibition for which credit is normally given); and thesis documentation (usually earned under ART 6971, Masters Thesis, but in certain circumstances under ART 6911, Directed Research: credit for documentation is variable).

Students are also required to participate in a thesis oral session in conjunction with the thesis exhibition. This is a forum for questions from faculty representatives and is open to other graduate students.

Graduate students are normally assigned studio space in the department and are expected to remain in residency during their enrollment. Exceptions must have the approval of the student's graduate committee and the graduate art adviser. Approval from both of these sources is also necessary for the acceptance of any Special Student status courses (up to 8 hours) taken prior to admission and for any transfer credit from another institution (limited to 9 hours). The graduate committee must additionally approve the written thesis, the thesis exhibition and the conduct of the orals in satisfaction of degree requirements.

The requirements for the M.A. degree in Art Education are listed under the College of Education.

DANCE (DAN)

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

Major concerts are given during each quarter as well as work-
shop performances. Major dance companies are brought to the campus giving students the opportunity of taking classes with the visiting artist.

Requirements for the B.A. Degree (63 quarter hours minimum)

Modern Concentration:
- DAA 2160 (3)
- DAA 2200 (3)
- DAA 2700 (3)
- DAA 3161 (4)
- DAA 3201 (3)
- DAA 3701 (3)
- DAN 3603 (3)
- DAN 3710 (3)
- DAN 3110 (3)
- DAA 4162 (15)
- DAA 4702 (3)
- DAA 4703 (3)
- DAN 4120 (3)
- DAN 4151 (3)
- DAN 4170 (3)

Ballet Concentration:
- DAA 2160 (3)
- DAA 2200 (3)
- DAA 2700 (3)
- DAA 3161 (4)
- DAA 3201 (8)
- DAA 3701 (3)
- DAN 3603 (3)
- DAN 3710 (3)
- DAA 3220 (6)
- DAA 4202 (15)
- DAN 3110 (3)
- DAN 4120 (3)
- DAN 4151 (3)
- DAN 4170 (3)

TPA 2223 Stage Lighting and Costume is required of all dance majors and may apply toward Area II of the General Distribution Requirements, or non-major electives, or the 9-hour Special College Requirement.

Junior dance majors are required to do a dance project and senior dance majors are required to choreograph and perform in a senior dance program.

Entrance to all technique courses is by jury examination. A student must audition each quarter to stay at his/her present level or to advance to a higher level. Until the student is accepted into Intermediate Modern or Intermediate Ballet he/she will be considered as a probationary dance major. Beginning courses may only be repeated three times.

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

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

For other non-major requirements see page 104 of Fine Arts College requirements and pages 35-37 for the University's General Distribution and graduation requirements.

Requirements for a minor in Dance (26 quarter hour minimum)

I. Minimum of 12 quarter hours upper level courses (3000 and 4000 level courses).

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

III. Prospective students must contact the Dance department to arrange for an audition prior to registration. Beginning courses may only be repeated three times.

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

Visiting Artists and Artists-In-Residence

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

- An impressive list of visiting artists includes:
  - Murray Louis Dance Co.
  - First Chamber Dance Co.
  - Claude Kipnis Mime Theatre
  - Louis Falco Dance Co.
  - Nikolais Dance Theatre
  - Kerela Kalamandalam Co.
  - Dance Theatre of Harlem
  - Merce Cunningham Dance Co.
  - Alvin Alley American Dance Theatre
  - Don Redlich Dance Co.
  - Polish Mime Ballet Theatre
  - Viola Farber Dance Co.
  - Paul Taylor Dance Co.
  - The Phakavali Dancers of Thailand
  - Royes Fernandez
  - Jacques D’Amboise
  - Lucas Hoving Dance Co.
  - New Caledonia Singers and Dancers
  - The Trocadero
  - Kazuko Hirabayashi

- TPA 2223 Stage Lighting and Costume is required of all dance majors and may apply toward Area II of the General Distribution Requirements, or non-major electives, or the 9-hour Special College Requirement.

- Junior dance majors are required to do a dance project and senior dance majors are required to choreograph and perform in a senior dance program.

- Entrance to all technique courses is by jury examination. A student must audition each quarter to stay at his/her present level or to advance to a higher level. Until the student is accepted into Intermediate Modern or Intermediate Ballet he/she will be considered as a probationary dance major. Beginning courses may only be repeated three times.

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

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

- For other non-major requirements see page 104 of Fine Arts College requirements and pages 35-37 for the University's General Distribution and graduation requirements.

Requirements for a minor in Dance (26 quarter hour minimum)

I. Minimum of 12 quarter hours upper level courses (3000 and 4000 level courses).

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

III. Prospective students must contact the Dance department to arrange for an audition prior to registration. Beginning courses may only be repeated three times.

- TPA 2223 Stage Lighting and Costume is required of all dance majors and may apply toward Area II of the General Distribution Requirements, or non-major electives, or the 9-hour Special College Requirement.

- Junior dance majors are required to do a dance project and senior dance majors are required to choreograph and perform in a senior dance program.

- Entrance to all technique courses is by jury examination. A student must audition each quarter to stay at his/her present level or to advance to a higher level. Until the student is accepted into Intermediate Modern or Intermediate Ballet he/she will be considered as a probationary dance major. Beginning courses may only be repeated three times.

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

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

- For other non-major requirements see page 104 of Fine Arts College requirements and pages 35-37 for the University's General Distribution and graduation requirements.

- IV. The student must audition each quarter to stay at his/her present level or to advance to a higher level for all technique courses.

- Visiting Artists and Artists-In-Residence

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

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  - Polish Mime Ballet Theatre
  - Viola Farber Dance Co.
  - Paul Taylor Dance Co.
  - The Phakavali Dancers of Thailand
  - Royes Fernandez
  - Jacques D’Amboise
  - Lucas Hoving Dance Co.
  - New Caledonia Singers and Dancers
  - The Trocadero
  - Kazuko Hirabayashi

- TPA 2223 Stage Lighting and Costume is required of all dance majors and may apply toward Area II of the General Distribution Requirements, or non-major electives, or the 9-hour Special College Requirement.

- Junior dance majors are required to do a dance project and senior dance majors are required to choreograph and perform in a senior dance program.

- Entrance to all technique courses is by jury examination. A student must audition each quarter to stay at his/her present level or to advance to a higher level. Until the student is accepted into Intermediate Modern or Intermediate Ballet he/she will be considered as a probationary dance major. Beginning courses may only be repeated three times.

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

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

- For other non-major requirements see page 104 of Fine Arts College requirements and pages 35-37 for the University's General Distribution and graduation requirements.

Requirements for the B.A. Degree (96 quarter hour minimum)

All students seeking a degree in music are required to (1) complete successfully the secondary piano and music theory-literature 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, (4) present a record of satisfactory recital attendance during each of the quarters of study at the University. The specific requirements for satisfactory attendance is

MUSIC (MUS)

The Departmental B.A. Degree:

The music curriculum is designed for those students gifted in the performance and/or composition of music. Candidates for a major in music are required to pass an entrance examination (audition) in their respective performance area. Composition candidates are required to submit appropriate scores and/or tapes of their compositions for faculty appraisal. All new registrants are also required to take a placement or proficiency examination in music theory and literature. Students may obtain dates and times for these examinations from the music department office. Completion of those examinations is required before registration in music courses can be permitted.

Academic programs offered include:
- Bachelor of Arts degree with concentration in
  Performance (voice, piano and orchestral instruments)
  Composition.

Requirements for the B.A. Degree (96 quarter hour minimum)

All students seeking a degree in music are required to (1) complete successfully the secondary piano and music theory-literature 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, (4) present a record of satisfactory recital attendance during each of the quarters of study at the University. The specific requirements for satisfactory attendance is
set by the music faculty. These requirements are in addition to the actual course requirements listed below: A total of 96 hours is required as follows:

**Music Theory (30)**
- MUT 1111 (3)
- MUT 1112 (3)
- MUT 1113 (3)
- MUT 1241 (2)

**Music Literature (6)**
- MUL 2111 (2)
- MUL 2112 (2)

**Music History (9)**
- MUH 3211 (3)
- MUH 3212 (3)
- MUH 3213 (3)

**Applied Concentration:**
A total of 36 credit hours of applied music is required with a minimum of 9 hours to be completed at the senior level.

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

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

Voice majors who enroll in MUC 3501 are required to take TPA 2200 (to apply to General Distribution requirement, or College requirement, or elective credit).

For other non-major requirements see page 104 of the Fine Arts College requirements and pages 35-37 for the University's General Distribution and graduation requirements.

The requirements for the B.A. in Music Education are listed under the College of Education.

**Composition Concentration:**
Undergraduates concentrating in composition must complete a minimum of 36 credit hours from among the following sequence of courses including MUC 3403 and at least one quarter of MUC 4204, satisfying all necessary prerequisites for all courses:

- MUC 2202 (6)
- MUC 2301 (3)
- MUC 3203 (3)
- MUC 3401, 3402, 3403 (3,3,3)
- MUC 3441, 3442, 3443 (3,3,3)
- MUC 3601, 3602, 3603 (3,3,3)
- MUC 4204 (3)
- MUC 4405, 4406, 4407 (3,3,3)
- MUC 4501 (3)
- MUT 4311, 4312 (3,3)

In consultation with, and with the approval of the entire composition faculty, the senior requirement for composition concentration 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 a minor in Music**
(29 - 32 quarter hour minimum)

Students seeking a minor in music may choose from three concentrations: (1) History-Theory-Literature, (2) Applied Medium and (3) Composition. Each of the concentrations will include the same core curriculum consisting of 18-19 hours.

**I. Core Curriculum:**
- Music Theory (15)
- Introduction to Music Literature (4)
- Music History (3)

**II. Optional Concentrations:**
A. History - Theory - Literature: 11-12 hours
- Music History and/or Theory and/or Literature (8-9)
- Music Ensemble (3)

B. Applied Medium: 11-12 hours
- Performance Studio courses which may include up to 2 quarter hours of class-studio (8-9)
- Music Ensembles (3)
- Faculty jury recommendation for sophomore level studio study (minimum)
C. Composition: 13 hours
- Introduction to Electronic Music (3)
- Composition Studio courses which may include one course of orchestration (9)
- Music Ensemble (1)

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

**The Faculty:**

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

**Unique Learning Opportunities:**

The music department at the University of South Florida offers the student the opportunity to study with a distinguished faculty, work with the newest in creative equipment, and to be in the company of other superior music students for an extensive, exciting and exacting period of study.

SYCOM—The Systems Complex for the Studio and Performing Arts offers the student the opportunity to work with an unusually well developed electronic facility for creative research and compositional opportunity.

**Visiting Artists and Artists-In-Residence:**

The Department of Music utilizes guest composers, conductors, and performing musicians to enhance its offerings in terms of teaching faculty, forum appearances, and the conducting of musical programs, symposia, and clinics. Some prominent musicians who have appeared in the past are Howard Hanson, Norman Dello Joio, Randall Thompson, Virgil Thomson, David Ward-Steinman, Walter Trampler, Fred Hemi, Eleazar de Carvahlo, Thomas Nee, Lucas Foss, Maurice Andre, John Haynie, Jean Pierre Rampal, and Julius Baker.

**Student Organizations:**

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

**Financial Aid:**

The University has made available to highly qualified undergraduate students a number of music service awards. Usually these awards cover in-state tuition fees, and are distributed following open auditions held in January and February. The award is made for the following year for three of the four quarters. Available to graduate students who show special potential for creative contribution to the profession are the University Scholar Awards and graduate assistantships and fellowship. Additionally, loans, grants and work programs are available to qualified University of South Florida students. Financial aid is granted on need, academic promise and character.
Master of Music Degree

The major concentrations available to graduate (M.M.) music students are:
- performance
- composition
- theory
- choral conducting

Procedure for Applying

The applicant seeking acceptance into the Master of Music Degree program must meet the University's general admissions requirements and make formal application for general University guidelines established by the Graduate Music Committee. A work.

To prepare themselves for the beginning of a major concentration in the Music department (of the College of Fine Arts), students from other departments and colleges have the option to study and participate in the work of the department, Theatre.

General requirements for graduate work are given on page 46. Despite the fact that the programme chosen as well as the student's needs and interests. Recommended programs may be obtained from the department chairperson. Each program must be approved by the student's advisor in conformance with the guidelines established by the Graduate Music Committee. A minimum of 54 quarter hours is required.

The requirements for the M.A. degree in Music Education are listed under the College of Education. To earning a major in Theatre, the student following the Design and Technology Concentration must take a minimum of 74 quarter hours; the student following a Performance Concentration must take a minimum of 75 quarter hours. In addition to these, 16 or 17 credit hours of electives in the theatre department may be taken to broaden the general program or to pursue a particular interest in more depth.

For the student desiring a more extensive preparation in theatre, a 96-hour emphasis in either Design-Technology and/or Performance is offered.

To allow for an even greater professional theatrical preparation, a Bachelor of Fine Arts degree is being developed. If approved, it is anticipated that students may audition for the B.F.A. curriculum in September, 1979. This program, like the B.A., has two concentrations: performance and design/technology. Students will be expected to earn 111 credit hours in Theatre and related courses and overall 225 credits from the University. The B.F.A. should normally be accomplished in 15 quarters.

For other non-major requirements see page 104 of the Fine Arts College requirements and pages 35-37 for the University's General Distribution and graduation requirements.

Visiting Artists and Artists-in-Residence:

Despite the fact that the University is relatively young the theatre department has had in residence artists from many kinds of theatre and many countries including: London's West End, The Actor's Studio, Dublin's Abbey Theatre, Broadway, Washington's Arena Stage, The American Shakespeare Festival, The Welsh National Theatre, the BBC, the London Academy of Music and Dramatic Art, The Working Theatre, Coventry's Belgrade Theatre, Paris, Hollywood, East Berlin's Deutsches Theatre, Taiwan, the Socialist Republic of Armenia and Poland. A partial, alphabetized list would include Martin Esslin, Miriam Goldina, Boris Goldovsky, Henry Hewes, Mestrop Kesdekan, Arthur Littgow, Marcel Marceau, Paul Massie, Siobhan McKenna, Olga Petrovna, Ben Piazza, Sergei Ponomarov, Alan Schneider, and Doug Watson.

THEATRE (TAR)

The Departmental Major:

Through its curriculum and production program, the theatre department offers to seriously interested students the opportunity to prepare themselves for the beginning of a professional career in the Theatre or to continue their studies at the graduate level. In addition, students from other departments and colleges have the opportunity to study and participate in the work of the department, thereby allowing them to gain insight into the creative experience of Theatre.

After a thorough orientation to all facets of the art gained in the basic courses, the Theatre major may begin to concentrate in the areas either of Performance or of Design and Technology.

To earn a major in Theatre, the student following the Design and Technology Concentration must take a minimum of 74 quarter hours; the student following a Performance Concentration must take a minimum of 75 quarter hours. In addition to these, 16 or 17 credit hours of electives in the theatre department may be taken to broaden the general program or to pursue a particular interest in more depth.

For the student desiring a more extensive preparation in theatre, a 96-hour emphasis in either Design-Technology and/or Performance is offered.

Requirements for the M.M. Degree

(54 quarter hour minimum)

General requirements for graduate work are given on page 46. In addition, 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.

All candidates for the degree must take the following course work:
- Techniques of Research in Music (3)
- Critical Analysis of Music Repertory (4)
- 20th Century Music Literature (4)
- Programs will vary according to the program chosen as well as the student's needs and interests. Recommended programs may be obtained from the department chairperson. Each program must be approved by the student's advisor in conformance with the guidelines established by the Graduate Music Committee. A minimum of 54 quarter hours is required.

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

The requirements for the M.A. degree in Music Education are listed under the College of Education.

THEATRE (TAR)

The Departmental Major:

Through its curriculum and production program, the theatre department offers to seriously interested students the opportunity to prepare themselves for the beginning of a professional career in the Theatre or to continue their studies at the graduate level. In addition, students from other departments and colleges have the opportunity to study and participate in the work of the department, thereby allowing them to gain insight into the creative experience of Theatre.

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For other non-major requirements see page 104 of the Fine Arts College requirements and pages 35-37 for the University's General Distribution and graduation requirements.

Visiting Artists and Artists-in-Residence:

Despite the fact that the University is relatively young the theatre department has had in residence artists from many kinds of theatre and many countries including: London's West End, The Actor's Studio, Dublin's Abbey Theatre, Broadway, Washington's Arena Stage, The American Shakespeare Festival, The Welsh National Theatre, the BBC, the London Academy of Music and Dramatic Art, The Working Theatre, Coventry's Belgrade Theatre, Paris, Hollywood, East Berlin's Deutsches Theatre, Taiwan, the Socialist Republic of Armenia and Poland. A partial, alphabetized list would include Martin Esslin, Miriam Goldina, Boris Goldovsky, Henry Hewes, Mestrop Kesdekan, Arthur Littgow, Marcel Marceau, Paul Massie, Siobhan McKenna, Olga Petrovna, Ben Piazza, Sergei Ponomarov, Alan Schneider, and Doug Watson.

Requirements for the B.A. Degree:

Total 180 quarter hours; minimum 74-75 quarter hours of Theatre.

Major Core Requirements (41 quarter credits to be completed by all majors:)

- THE 2020 (2) TPA 2200 (3)
- Select two: TPP 2110 (3), TPA 2223 (3), TPP 2500 (3), TPA 2400 (3)
- THE 3110 (3) THE 4562 (3) TPA 3601 (3)
- THE 3111 (3) TPA 2225 (1) TPP 3111 (4)
- THE 4180 (5) TPA 3086 (4)
- Plus one advanced level Theatre Studies (4)
- Performance Concentration (34 credit hours):
  - TPP 4150 (4) TPA 4220 or TPP 3790L (3)
  - TPP 4151 (4) TPP 4920 (4) TPP 4310 (4)
  - TPP 4140 (4) TPA 3510 (3) TPP 4311 (4)
  - TPP 4152 (4)
- Additional requirements for special 96-hour emphasis:
  - Advance level: Theatre Studies course (4)
  - THE 4264 (2)
  - Additional course in Tech Design Concentration (4)
  - 11 hours as stipulated at the discretion of the performance faculty (11)
- Design and Technology Concentration (33 credit hours):
  - THE 4264 (2) TPA 4010 (4) TPA 4011 (4)
  - THE 4266 (3)
  - Performance course as specified by department (4)
  - Additional section of TPA 4010 from related area (4)
In area of emphasis—4 hours:
TPA 4211 (4), or TPA 4285 (4), or 4 hours from TPA 4230 (2), TPA 4231 (2), TPA 4281 (2) (4)

In related area—4 hours from:
TPA 4211 (4), or TPA 4285 (4), or 4 hours from TPA 4230 (2), TPA 4231 (2), TPA 4281 (2) (4)

Four credits from skills courses:
TPA 4081 (2), TPA 4240 (2), TPA 4052 (2), TPA 4071 (2), TPA 4281 (2) (4)

Additional requirements for special 96-hour emphasis:
Advanced level Theatre Studies course (4)
Area of concentration in design, puppetry, performance for special audiences or other programs that the faculty determines appropriate for the student (18)

Requirements for a minor in Theatre
(32 quarter hours minimum)
Three lab courses including TPA 2200, Stagecraft (9)
Other lab courses to choose from:
TPP 2110 (3)
TPA 2223 (3)
TPP 2500 (3)
TPA 2400 (3)
The remaining 23 hours are to be selected by the student based on personal interest. At least 20 hours must be upper level courses. The Theatre Adviser will be available to assist the student in developing a course of study that will meet the needs of the individual student.

Students desiring admittance into the Acting Sequence and/or the Design Sequence must audition and/or portfolio review.
All Theatre courses (with the exception of the above mentioned lab courses) require permission of the instructor.

Requirements for the B.F.A. degree in Theatre:
Concentrations in Performance and Design/Technology (pending approval). (Total 225 credit hours, 111 of which will be in Theatre and related courses and 45 hours of which will be Free Electives with up to 16 credits in Theatre applicable):
Admission to B.F.A. program is by audition or portfolio presentation.
Participation in one summer quarter theatre program is required.

Awarding of the B.F.A. degree is based upon completion of course work and a creative project.

B.F.A. requirements for the Stage Design/Technology concentration with emphases in Scenic, Lighting or Costume:
Major Core Requirements (41 quarter hours, to be completed by all majors), see B.A. degree program, page 35, for description.
Plus 34 hours in the Major Emphasis:
Design/Technology Emphasis #1
Scenic (34 hours minimum):
THE 4264 (2)
THE 4266 (3)
TPA 4010 (Scenic Design) (4)
TPA 4011 (Scenic Design) (4)
TPA 4010 (choice of: Costume or Lighting) (4)
TPA 4211 (4)
TPP 4150 (4)
TPA 4012 (Project Design Honors: Scenic) (4)
THE 3925 (1)
Plus 4 hours from:
TPA 4230 (2)
TPA 4231 (2)
TPA 4281 (2)
TPA 4285 (4)

Design/Technology Emphasis #2
Lighting (34 hours minimum):
THE 4264 (2)
THE 4266 (3)
TPA 4010 (Lighting Design) (4)
TPA 4011 (Lighting Design) (4)
TPA 4010 (choice of Scenic or Costume) (4)
TPA 4285 (4)
TPP 4150 (4)
TPA 4012 (Project Design Honors: Lighting) (4)
THE 3925 (1)
Plus 4 hours from:
TPA 4211 (4)
TPA 4230 (2)
TPA 4231 (2)
TPA 4281 (2)

Design/Technology Emphasis #3
Costume (34 hours minimum):
THE 4264 (2)
THE 4266 (3)
TPA 4010 (Costume Design) (4)
TPA 4011 (Costume Design) (4)
TPA 4010 (choice of Scenic or Lighting) (4)
TPA 4230 (2)
TPA 4231 (2)
TPP 4150 (4)
TPA 4012 (Project Design Honors: Costume) (4)
THE 3925 (1)
Plus 4 hours from:
TPA 4211 (4)
TPA 4285 (4)
Plus 36 additional hours from the following:
12 hours in Creative Project and Execution
THE 4905 or 5909 (Research: Creative Project) (2)
THE 4905 or 5909 (Design: Creative Project) (3)
THE 4905 or 5909 (Execute: Creative Project) (3)
TPA 4010 (Completes Design I in all three areas) (4)
12 hours in Design and Technical Skills (choice of):
TPA 4281 (2)
TPA 4052 (2)
TPA 4240 (2)
TPA 4081 (2)
TPA 4011 Design II (4) (Secondary emphasis for design student) (4)
TPA 4071 (2)
TPA 4211 (2)
TPA 4230 (2)
TPA 4231 (2)
TPA 4285 (4)
THE 4905 (4)
12 hours in Course Production work: choice of credit ensembles in College of Fine Arts

TPP 4230L (4)
TPP 3235; TPP 3236 (4,4)
TPA 3810; TPA 3820; TPA 3840 (4,4,4)
TPP 4250; TPP 3510; TPP 3790L (4,3,3)
DAN 3710 (1)
MUO 3501 (1)
THE 3925 (repeatable for 6 hours) (1)

Total: 111 credit hours

B.F.A. requirements for the Performance concentration:

Major Core Requirements (41 quarter hours, to be completed by all majors). See B.A. degree program, page 35, for description.

Plus the following required hours (34 quarter hours minimum):

TPP 4150; TPP 4151; TPP 4140; TPP 4152 (16)
TPP 4220 or TPP 4920 (4)
TPP 3510 (3)

Plus 36 hours as follows:


18 hours of additional electives to be decided in conference with student's advisory committee.

Any theatre student enrolling in lab courses (TPA 2200, TPA 2223, TPA 2400, TPP 2110, and TPP 2500) will be expected to spend 40 hours per quarter as assigned lab requirement. Upper division courses in studio and performance carry Advanced Course Production Involvement (ACPI) requirement. Any student enrolling in these courses will be expected to fulfill this obligation up to 6 times. Credit may be earned for each ACPI by enrolling in THE 3925 (1 hour), which may be repeated up to 12 times.

USF Dance Group
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 upgrading 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 Pre- Clinical and Clinical 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 of 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 Associate Dean for Admissions, Medical Center, College of Medicine, Department of Admissions, Box 3, 12901 North 30th Street, University of South Florida, Tampa, Florida 33612.

**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 ROTC).

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

- **One Year—English**
- **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**

Applicants desiring admission to the July, 1980, freshman medical class will be required, as of July, 1980, to have one course in GENETICS and one in STATISTICS.

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, Medical Center, College of Medicine, Box 10, 12901 North 30th Street, University of South Florida, Tampa, Florida 33612.
Students in the College of Natural Sciences are trained in the tools of logical analysis and the modes of experimentation in the continuing attempt to better understand the nature of man and his relationship to the universe. In all its functions the College is dedicated to fostering a spirit of inquiry and intellectual growth.

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

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

BACCALAUREATE LEVEL DEGREE PROGRAMS

Admission to the College

To be admitted to the College of Natural Sciences a student must make written application and satisfy the admission criteria of the college. Upon admission, the student will be assigned a faculty 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 admission criteria, departments, majors, programs, counseling, and other services of the college may 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 on page 35, the requirements for graduation in any undergraduate degree in the college are as follows:

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

Certain courses offered in the college are designed for the non-science major or the non-departmental major. These courses are designated "For non-majors," "No credit for (department) major," "No credit for science majors," or some similar phrase. For these courses the following rules apply:

For non-majors —For majors in the college, the course will count as credit towards graduation only as a free elective.

No credit for (department) major"—the course will not count toward graduation for a science major in the specified department, but will count towards graduation as a free elective for all non-specified departments.

"No credit for science majors"—the course will not count toward graduation for any major in the college.

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

(a) No more than 12 hours are taken in courses in any one department.

(b) The courses are taken with letter grade (A,B,C,D,F,I).

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

4. Subsequent to admission to the college, a student must complete at least 45 credit hours of letter graded courses in the college, of which at least 16 hours must be applicable to a major. Up to 2 credits of elective physical education, and up to 12 credits in military science courses MIS 1010C, 3410C, 4421C may count as free electives towards graduation.

Credits transferred from other schools will not be included in the grade point average computed for graduation. For graduation with honors, see page 38.

The college or department in the college may have specific requirements in addition to those listed in this catalog. College rules or requirements are on file in the dean's office, and departmental rules or requirements are on file in each departmental office. The student is responsible for meeting all graduation requirements.

Grading Systems

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 ENC 1102, ENC 1135, ENC 1168, 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.

Programs Leading to the Baccalaureate Degree

The College offers the Bachelor or Arts degree with majors in 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 in Chemistry (CHS), Clinical Chemistry (CHC), Medical Technology (MET), and Physics (PHS). For specific requirements, consult appropriate departmental sections of this Catalog.

PRE-MEDICAL SCIENCES

The University of South Florida is a rapidly developing center for allied health education. The nearby Tampa Veteran's Administration Hospital, Florida Mental Health Institute, and University Community Hospital are within walking distance of the campus, and offer students excellent opportunities for observation, research, and practicum experience. A wide variety of undergraduate programs are available, ranging from the pre-professional curricula to the bachelor degree programs in Clinical Chemistry, Health Education, Medical Technology, Nursing, and Social Work. The University of South Florida also offers graduate concentrations in Medical Anthropology (M.A.), Urban Anthropology (M.A.), Clinical Psychology (Ph.D), Gerontology (M.A.), Medicine (M.D.), Medical Sciences (Ph.D), Rehabilitation Counseling (M.A.), Speech Pathology (M.S), Speech Audiology (M.A.), and Aural (Re) Habilitation (M.A.). These programs are offered through five different colleges on campus: Education, Medicine, Natural Sciences, Nursing, and Social and Behavioral Sciences.

The College of Natural Sciences offers non-degree programs in pre-medical sciences, pre-veterinary medicine, pre-pharmacy, and pre-physical therapy. The Pre-medical Sciences Program is designed for students seeking entrance into professional schools of medicine, osteopathy, dentistry, optometry, or podiatry. Students in these programs are assigned to a pre-professional adviser who will provide guidance relative to course selection, admission procedures, and entrance examinations. The Pre-Professional Advising Office maintains a library of appropriate books and catalogs of professional schools, and provides pre-professional students with quarterly records of their academic progress. The Pre-Medical Sciences Committee also prepares evaluations of students in the program seeking admission to professional schools. Students may remain in the Pre-Medical Sciences Program until admitted to a professional school or until an alternative program or major has been designated, even if the time required extends beyond the baccalaureate degree.

Pre-Medical Sciences Program

The Pre-Medical Sciences non-degree Program prepares students for admission to a professional school and therefore should be completed by the junior year, the usual time of application. In addition, pre-professional students should major in a discipline of personal preference, whether it be in the sciences or non-sciences, and fulfill all remaining requirements for graduation in the senior year.

The following pre-professional core should be completed for application to almost all professional schools of medicine, osteopathy, dentistry, optometry, and podiatry:

One year of Biology:

- BSC 2010C (4)
- BSC 2010IC (4)
- BSC 2011C (4)
- BSC 2012 (4)

Two years of Chemistry:

- CHM 2045 (3)
- CHM 2045L (1)
- CHM 2046 (3)
- CHM 2046L (1)
- CHM 2047 (3)
- CHM 2047L (1)

- CHM 3210 (3)
- CHM 3210L (2)
- CHM 3211 (3)

One year of Physics:

- PHY 2050 (4)
- PHY 2050L (1)
- PHY 2051 (4)
- PHY 2051L (1)
- PHY 2052 (4)
- PHY 2052L (1)

One year of Mathematics:

- MAC 2242 (4)
- MAC 2243 (4)
- MAC 2244 (4)

In addition to these requirements it is generally expected that pre-professional students will complete three quarters of English. CLEP credit generally is not acceptable to professional schools. Pre-medical students must include the following courses to meet additional admission requirements of medical schools in Florida:

- PCB 3063 (4)
- STA 3023 (5)
- BCH 3033 (4), or CHM 3120C (5), or CHM 3400 (4)

Pre-dental students must take the following additional course to meet admission requirements of regional dental schools:

- BCH 3120C (5)

Pre-optometry students should also include the following courses for eligibility for most optometry schools:

- MCB 3010C (5), STA 3023 (5)

Some professional schools require or recommend additional courses. The following science courses are frequently specified:

- Biology: MCB 3010C (5), PCB 4024C (5), PCB 4184C (4)
- PCB 3063 (4), PCB 4253C (5), ZOO 3713C (6)
- PCB 4023C (5), PCB 4743 (5)

- Chemistry: BCH 3033 (4), CHM 3401 (3), CHM 3120C (5), CHM 3400 (3)

Beyond science course requirements and recommendations, it
is essential that students pursue courses developing a sense of understanding of cultural and humane values, and basic social problems. The quality of academic performance in preparation for professional school should be of the highest level. A few well-prepared students with exceptional qualifications may be admitted to some professional schools as early as the completion of the junior year of pre-professional work.

Pre-Veterinary Medicine Program

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

Biology:
- BSC 2010C (4)
- BSC 2011C (4)
- BSC 2012 (4)
- PCB 3063 (4)
- MCB 3010C (5)

Chemistry:
- CHM 2045 (3)
- CHM 2045L (1)
- CHM 2046 (3) or {CHM 2055C (5)
- CHM 2046L (1) {CHM 2056C (5)
- CHM 2047 (3)
- CHM 2047L (1)
- CHM 3210 (3) CHM 3211L (2)
- CHM 3210L (2) CHM 3120C (5)
- CHM 3211 (3) BCH 3033 (4)

Physics, minimum of 10 hours:
- PHY 2050 (4) {PHY 3040 (3
- PHY 2050L (1) {PHY 3040L (3
- PHY 2051 (4) {PHY 3041 (3
- PHY 2051L (1) {PHY 3041L (3
- PHY 2052 (4) PHY 3042 (3
- PHY 2052L (1) PHY 3042L (1

In addition, students must include 9 hours of English, including one course in composition (CLEP is not acceptable); 9 hours of social science: 12 hours of humanities; and a minimum of 10 hours of Animal Science courses, which should be completed at the University of Florida no later than the summer prior to application.

Pre-Pharmacy Program

A two-year curriculum is offered to prepare students for entrance into physical therapy programs at Florida International University and the University of Florida.

Pre-physical therapy students must include the following courses:

One year of Biology:
- BSC 2010C (4)
- BSC 2011C (4)
- BSC 2012 (4)

One year of Chemistry:
- CHM 2045 (3)
- CHM 2045L (1)
- CHM 2046 (3) or {CHM 2055C (5)
- CHM 2046L (1) {CHM 2056C (5)
- CHM 2047 (3)
- CHM 2047L (1)

A minimum of 10 hours of Physics:
- PHY 2050 (4) {PHY 3040 (3
- PHY 2050L (1) {PHY 3040L (3
- PHY 2051 (4) {PHY 3041 (3
- PHY 2051L (1) {PHY 3041L (1
- PHY 2052 (4) PHY 3042 (3
- PHY 2052L (1) PHY 3042L (1

In addition to the above sequences pre-physical therapy students must include: a minimum of 8 hours of mathematics, including college algebra or more advanced mathematics; ZOO 3713C, Comparative Vertebrate Anatomy; and two courses in psychology.

B.A. Degree for Medical and Dental Students

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

1. Transfer of a minimum of 45 hours in science courses from an approved medical or dental school.
2. Fulfillment of the following minimum requirements in attendance at the University of South Florida:
   A. 135 hours with at least a “C” average (2.000).
   B. Completion of a minimum of 36 hours in the department of major concentration and a minimum of 24 hours in supporting courses in the College of Natural Sciences outside the department of major concentration. The 36 hours in the department of major concentration must be in courses applicable to a major in that department. The 24 hours in supporting courses must also be taken in courses applicable to a major in that department and must include a minimum of three courses at the 3000 level or above. At least a “C” must be earned in each course in both major concentration and supporting courses, except for courses graded S/U only.
3. Credit in the following courses:
   - Biology:
     - BSC 2010C (4)
     - BSC 2011C (4)
     - BSC 2012 (4)
   - Chemistry:
     - CHM 2045 (3)
     - CHM 2045L (1)
     - CHM 2046 (3) or {CHM 2055C (5)
     - CHM 2046L (1) {CHM 2056C (5)
     - CHM 2047 (3)
     - CHM 2047L (1)
     - CHM 3210 (3) CHM 3211L (2)
     - CHM 3210L (2) CHM 3212 (3)
     - CHM 3211 (3) CHM 3212L (2)
   - One year of Physics:
     - PHY 2050 (4) PHY 3040 (3)
     - PHY 2050L (1) PHY 3040L (3)
     - PHY 2051 (4) PHY 3041 (3)
     - PHY 2051L (1) PHY 3041L (3)
     - PHY 2052 (4) PHY 3042 (3)
     - PHY 2052L (1) PHY 3042L (1)

In addition to the above sequences a minimum of 8 hours of mathematics including calculus, 10 hours of English, and 5 hours of economics must be taken.

Pre-pharmacy students should take the Pharmacy College Admission Test in November of the sophomore year and apply to pharmacy schools at that time.

Pre-Physical Therapy Program

A two-year curriculum is offered to prepare students for entrance into physical therapy programs at Florida International University and the University of Florida.

Pre-physical therapy students must include the following courses:

One year of Biology:
- BSC 2010C (4)
- BSC 2011C (4)
- BSC 2012 (4)

One year of Chemistry:
- CHM 2045 (3)
- CHM 2045L (1)
- CHM 2046 (3) or {CHM 2055C (5)
- CHM 2046L (1) {CHM 2056C (5)
- CHM 2047 (3)
- CHM 2047L (1)

A minimum of 10 hours of Physics:
- PHY 2050 (4) {PHY 3040 (3
- PHY 2050L (1) {PHY 3040L (3
- PHY 2051 (4) {PHY 3041 (3
- PHY 2051L (1) {PHY 3041L (1
- PHY 2052 (4) PHY 3042 (3
- PHY 2052L (1) PHY 3042L (1

In addition to the above sequences pre-physical therapy students must include a minimum of 8 hours of mathematics, including college algebra or more advanced mathematics; ZOO 3713C, Comparative Vertebrate Anatomy; and two courses in psychology.
Physics:

- PHY 2050 (4) → PHY 3040 (3)
- PHY 2050L (1) → PHY 3040L (1)
- PHY 2051 (4) → PHY 3041 (3)
- PHY 2051L (1) → PHY 3041L (1)
- PHY 2052 (4) → PHY 3042 (3)
- PHY 2052L (1) → PHY 3042L (1)

4. A minimum of 30 credits from the following courses:

**Biology:**
- PCB 3063 (4) → PCB 4253C (5) → MCB 3010C (5)
- PCB 4023C (5) → ZOO 3713C (6) → PCB 4184C (4)
- PCB 4024C (5) → PCB 4743C (5)

**Chemistry:**
- BCH 3033 (4) → CHM 3401 (3) → CHM 3120C (5)
- CHM 3400 (3)

**Mathematics:**
- STA 3023 (5) → MAC 1104 (4)
- MAC 2242 (4) → MAC 1114 (3)
- MAC 2243 (4) → MAC 3411 (5)
- MAC 2244 (4) → MAC 3412 (4)
- MAC 3413 (4)

5. Completion of 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 earned in the College of Natural Sciences.

7. The last 45 credit hours prior to transfer to a medical or dental school in residence at the University of South Florida.

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

**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 46 and for the Ph.D. degree on page 51. 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 chairperson, 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 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.

**Post-baccalaureate Pre-Medical Sciences Program**

A special two-year non-degree program is administered by the Pre-medical Sciences Committee of the College of Natural Sciences for students who hold a baccalaureate degree and are seeking to improve their academic record for application to professional schools. The program is particularly for previously rejected applicants who need to improve their grade point average and demonstrate their ability to perform well in the sciences. Students in the program will have the advantage of priority registration in the College of Natural Sciences, and upon completion of the program will be evaluated by the Pre-Medical Sciences Committee in a letter sent to the professional schools where students are applying.

In order to be admitted to the program, students must have a baccalaureate degree and be interviewed by the Pre-Medical Sciences Committee. Students must demonstrate to the Committee potential for success through this program by their recent improvement in academic record, performance in science courses, previous test scores, and motivation for the profession. Students who do not have a baccalaureate degree from the University of South Florida must provide two letters of recommendation.

Once admitted to the program students must complete a minimum of 15 hours per quarter (excluding summers) of courses approved by the Pre-Medical Sciences Committee with a minimum grade point average of 3.3 each quarter. An approved schedule would typically include at least three rigorous science courses. Courses will generally be at the undergraduate level, selected from those listed in the pre-medical sciences program or other advanced sciences. Students should expect to complete at least one year in the program prior to re-application to professional schools, but additional quarters or a second year may be necessary for some students. Students lacking adequate familiarity with the profession will be expected to obtain adequate exposure while enrolled in the program.

**Mathematics (MTH)** — This program leads to the Ph.D. in Pure and Applied Mathematics.

**Oceanography (OCE)** — This cooperative program with Florida State University leads to the Ph.D. in Oceanography.

**College Regulations Governing Graduate Study**

The following regulations are in addition to the University regulations governing graduate study found on pages 49 and 50.

**Admission.** The College of Natural Sciences requires a minimum of a "B" average in the last two years of undergraduate work and a minimum of 1000 (1100 for marine science applicants) on the Graduate Record Examination for admission to any of its graduate programs.

Applicants with a "B" average in the last two years of undergraduate work or a minimum of 1000 on the Graduate Record Examination may be considered for provisional admission subject to departmental recommendation.

Applicants who do not meet either of the above conditions must meet the 10% exception criteria described on page 46 and must have the recommendation of the department offering the degree to be considered for provisional admission.

**Enrollment Levels.** A student who enrolls in eight or more credit hours leading to a graduate degree is classified as a full-time student.

Once a major professor has been assigned and/or a student occupies or utilizes significant space or facilities for research or analogous scholarly activity directly pertinent to the generation of his/her thesis, he/she shall enroll for not less than three hours of research and/or thesis and/or dissertation each quarter other than the summer quarter, except that no student shall be required for the purposes of this rule to enroll for more than eight hours total.
Additional requirements may be imposed in any department in the college. A student must be registered for an appropriate load (in no case fewer than three hours) in the college for the quarter in which all degree requirements are satisfactorily completed.

Registration in Research, Thesis, and/or Dissertation Courses. Registration in courses entitled Directed Research: Master's, or Dissertation: Doctoral must be with the approval of the major professor and the concurrence of the departmental graduate studies coordinator and must be commensurate with each student's research plan. A student who enrolls in courses entitled Thesis: Master's but does not submit a thesis or who enrolls in Dissertation: Doctoral but does not submit a dissertation will not be certified for graduation.

Master's Program. A graduate student working on a master's degree in a program in the College of Natural Sciences which requires a thesis must register in course 6971 when engaged in research, data collection, or writing activities relevant to the master's thesis. Advisers should assign the number of credits in this course appropriate to the demands made on faculty, staff, and university facilities, but in no event will the total number of earned dissertation credits be less than nine.

Ph.D. Program. Following admission to candidacy, a graduate student in a Ph.D. program in the College of Natural Sciences must enroll in course 7980 when engaged in research, data collection, or writing activities relevant to doctoral dissertation. Advisers should assign the number of credits in this course appropriate to the demands made on faculty, staff, and university facilities, but in no event will the total number of earned dissertation credits be less than 24. Students not admitted to candidacy are not eligible to enroll in 7980.

All Graduate Students. Students in a graduate program in the College of Natural Sciences must be either active or on a leave of absence granted by the department. Students on active status must register for a minimum of one hour of graduate level course work each quarter.

During any quarter that a student is utilizing research space, other university facilities, faculty/staff time, or completing any requirements for the degree including thesis (dissertation) defense or approval, the student must register for a minimum of three graduate credit hours.

A maximum of 15 credit hours (nine for physics graduate students) of combined thesis, research, and seminar courses may apply towards a degree.

Additional Regulations. Additional regulations concerning graduate study may be found in the departmental sections of this Catalog or are on file in the Office of the Dean. The student is responsible for meeting all requirements of his/her degree program.

TEACHER EDUCATION PROGRAMS

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

B.A. Degree Program for Secondary School Teachers:

The College of Natural Sciences in cooperation with the College of Education offers degree programs in Mathematics (MAE), in Botany (BOE), in chemistry (CHE), in Physics (PHE), in Zoology (ZOE), and in Science (SCE). Because requirements exist in both colleges, a student will have an 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 respective headings in Chemistry, Mathematics, and Physics. The student may complete the requirements of Chemistry, Mathematics, and Physics in this section of the 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 122. This major is particularly appropriate for Science Education majors (SCE).

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

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 46. 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 catalog 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 biology, chemistry, geology, mathematics, or physics.

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 catalog entitled “Junior College Teaching Program.”

CURRICULA

■ BIOLOGY (BIO/BOT/MIC/ZOO)

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

Four specific Bachelor of Arts degrees (Biology, Botany, Mi-
crobiology, and Zoology) are available for students interested in the biological sciences. They are all preparatory for careers in teaching, agriculture, medicine, dentistry, marine biology, biotechnology, or for post-graduate study in any of the various life sciences. The Department attempts to schedule sequences of 5000 level courses which allow seniors in the Biology program to concentrate in such areas as: Ecology, Cell & Molecular Biology, Physiology, and Marine Biology. Students should study the requirements listed below and then make maximum use of the 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 or 36 cr.)

- BSC 2010C (4)  PCB 3063 (4)  PCB 4024C (5)
- BSC 2011C (4)  PCB 4023C (5)  PCB 4043C (4)
- BSC 2012 (4)

Physiology (choice of course for all programs as indicated):

- BOT 4503 (3)
- MCB 4030L (3) and MCB 4404 (3)
- PCB 4734C (5)

B. Individual Degree Requirements

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

25 credit hours in Biology department courses in consultation with adviser (maximum of 5 hours in BSC 4910).

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

- BOT 3010 (5)
- BOT 3713C (5)
- BOT 4223C (5) or BOT 4353C (5)
- BOT 4503
- BOT 4933 (1)

Biology Department Electives (Maximum 5 hours in BSC 4910) (9)

MICROBIOLOGY MAJOR (MIC) (26-27 cr. hrs.)

- APB 4053C (5) or MCB 5206 (4) or PCB 5235C (4)
- MCB 3010C (5)  MCB 4030L (0)
- MCB 4115 (4)  MCB 4404 (0)
- MCB 4163L (3)  MCB 4934 (1)
- MCB 5050C (4)

and one of the following:

- APB 5575C (5)  BOT 5405C (5)  ZOO 5225C (5)
- BOT 4434C (5)

NOTE: Every microbiology major should obtain a recommended course sequence from a member of the microbiology faculty in order to avoid possible schedule problems.

ZOOLOGY MAJOR (ZOO) (15 cr. hrs.)

- PCB 4253C (5)  ZOO 3203C (5)  PCB 4743C (0)

and any one lab course in vertebrate biology (5)

II. Supporting Courses in the Natural Sciences (Required for all B.A. degrees, 42 or 44 cr.)

- CHM 2045 (3)
- CHM 2045L (1)
- CHM 2046 (3) or [CHM 2055C (5)]
- CHM 2046L (1) [CHM 2056C (5)]
- CHM 2047 (3)
- CHM 2047L (1)
- CHM 3210 (3)  PHY 2050 (4)
- CHM 3210L (2)  PHY 2050L (1)
- CHM 3211 (3)  PHY 2051 (4)
- CHM 3211L (2)  PHY 2051L (1)

Mathematics (12)

Three courses in mathematics chosen from the following to attain 12 credits:

- MAC 2242 (4)  MAC 3412 (4)  MAS 3114 (4)
- MAC 2244 (4)  MAC 3414 (4)  STA 3023 (5)
- MAC 3411 (5)  MAS 3103 (4)

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

Each student is required to satisfy the General Distribution requirements of the College of Natural Sciences (see page 113). The selection of courses within the requirement is to be done in conference with Biology Department advisors.

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 113.)

V. Free Electives (including General Distribution waivers) can be taken over and above major requirements and major electives to complete a 180 hour program.

Teacher Education Programs:

For information concerning the degree programs for secondary school teachers and junior college teachers, see pages 78, 85, and 89 of this Catalog.

Marine Biology

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

Appropriate courses include:

- BOT 5185C (Marine Botany)
- BOT 5405C (Physiology)
- ZOO 3203C (Introductory Invertebrate Zoology)
- ZOO 5225C (Echinoderm Biology)
- ZOO 5455C (Ichthyology)
- ZOO 5555C (Marine Animal Ecology)
- ZOO 5815C (Zoogeography)

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

Requirements for the M.A. Degree:

General requirements for graduate work are given on page 46. Major programs are offered in Botany, Microbiology and Zoology. The M.A. degree requires completion of structured coursework, a research thesis or a review paper, and passing a comprehensive examination.

The departmental graduate coordinator functions as the student’s advisor until the student makes arrangements for a faculty member to serve as major adviser. The selection of a major adviser includes acceptance of the student by the faculty member. The major adviser and two additional faculty constitute the student’s supervisory committee which must be established within three quarters after matriculation. Failure to do so will be cause for dismissal. The supervisory committee must be approved by the departmental chairperson and the college dean.

For students enrolled in the thesis program, a 45 credit hour minimum is required at the 5000-6000 level; 24 must be at the 6000 level or above; 30 of the 45 credit hours must be in formally structured courses of which 22 must be biology; 12 of the 22 credit hours must be at the 6000 level or above. All students in the thesis program must complete the graduate seminar (BSC 6935). A maximum of 15 hours of combined thesis, research, and seminar may apply toward degree.

For students enrolled in the non-thesis program, a 45 credit hour minimum is required at the 5000-6000 level; 40 credits must be in formally structured courses. 24 credits must be at the 6000 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 department-
tal 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 51.
A doctoral 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), and behavior.
The departmental graduate coordinator functions as the student's adviser until the student makes arrangements for a faculty member to serve as major adviser. The selection of a major adviser includes acceptance of the student by the faculty member and must be done within three quarters after matriculation. Applicants are strongly urged to contact faculty conducting research in the student's area of interest. The major adviser and four additional faculty constitute the student's supervisory committee. The supervisory committee must be approved by the departmental chairman and the college dean.

It is expected that students will have had undergraduate training comparable to that of a USF undergraduate in biology.
Thirty credit hours are required in structured graduate-level courses, as well as any additional courses necessary to the needs of the student's program as determined by the supervisory committee. A maximum of 12 hours may be waived with the approval of the supervisory committee if the student has earned this amount of graduate credit at another recognized university. Individuals who receive the M.A. degree from the Department of Biology at the University of South Florida may waive 15 credits with the approval of the supervisory committee.

Doctoral students must pass a qualifying examination. The written preliminary portion covering the major areas of biology must be taken within three quarters after matriculation. Any language or other technical skills required by the supervisory committee must be completed before the advanced portion of the examination is taken.
The student is eligible for admission to candidacy after completion of course requirements and passing the qualifying examination upon recommendation of the supervisory committee and approval of the Dean of the College and the Director of Graduate Studies.
A public seminar presenting the dissertation is required. A final oral examination administered and evaluated by the supervisory committee emphasizes the dissertation and the student's general field of research.

Graduate Application Deadlines:
Applications must be completed by March 10th for Quarter I 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 Department of Chemistry offers three degrees at the baccalaureate level, Bachelor of Arts degree in Chemistry, Bachelor of Science degree in Chemistry, and Bachelor of Science degree in Clinical Chemistry, and two degrees, Master of Science and Doctor of Philosophy, each with specialization in the areas of analytical chemistry, biochemistry, inorganic chemistry, organic chemistry, and physical chemistry, at the graduate level. The chemistry faculty is comprised of 27 full-time senior faculty members, all of whom hold the Ph.D. degree. A comparable number of teaching assistants, generally graduate students enrolled in the Ph.D. program, serve as instructors in the laboratories. The combination of a large and strong faculty with a wide variety of courses and electives provides students with programs of study which can be tailored to fit individual needs while maintaining a sound background in all general aspects of chemistry.

The Bachelor of Science degree in Chemistry (CHS) is a rigorous program which supplies the foundation in chemistry required for both the student who begins a chemical vocation immediately upon graduation as well as the one who pursues advanced study in chemistry or related areas. In accord with this goal the curriculum for the B.S. degree meets the requirements for degree certification by the American Chemical Society.
The Bachelor of Arts degree (CHM) provides a course of study designed for the student who does not intend to become a professional chemist but whose career goals require a thorough understanding of chemistry. Inherent in this program is a high degree of flexibility which permits tailoring a course of study to the student's own educational objectives. As such it offers considerable advantages to pre-professional students planning careers in medicine and the other health-related fields and an excellent preparation for primary and secondary school teachers of chemistry or physical science. The B.A. student whose goals change in the direction of graduate work in chemistry should supplement this curriculum by addition and/or substitution of a selection of advanced courses from the B.S. program.

The Bachelor of Science degree in Clinical Chemistry (CHC) offered by the Department of Chemistry, one of only a few such programs in the country, is specifically designed to train personnel for this new and growing field of the medical profession; however, the strong scientific background and specific technical expertise provided by this program also afford the student an excellent preparation for graduate study in clinical chemistry, biochemistry, or medicine. Interested students should see the Coordinator of the Clinical Chemistry Program in the Department of Chemistry for further information.
In graduate work, the excellent physical facilities and very low student-teacher ratio combine to afford unique opportunities for advanced study in chemistry. In addition to the five traditional fields, analytical chemistry, biochemistry, inorganic, organic, and physical chemistry, research opportunities are also available in some interdisciplinary and specialized areas as bio-organic and bio-inorganic chemistry, clinical chemistry, environmental chemistry, lasers and photochemistry, marine chemistry, photoelectron spectroscopy (ESCA), and pharmaceutical chemistry.

**Requirements for the Baccalaureate Degrees**

**I. Chemistry Courses**

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<thead>
<tr>
<th>B.A. CHEMISTRY (CHM) (54 cr. hrs.)</th>
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<tbody>
<tr>
<td>CHM 2045 (3)</td>
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<td>CHM 2045L (1)</td>
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<td>CHM 2046 (3)</td>
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<tr>
<td>CHM 2047 (3)</td>
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<td>CHM 2047L (1)</td>
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<tr>
<td>CHM 3120C (5)</td>
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<tr>
<td>CHM 3210L (2)</td>
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<tr>
<td>CHM 3211L (3)</td>
</tr>
<tr>
<td>CHM 3212 (3)</td>
</tr>
<tr>
<td>Chemistry electives (3000 level or above; may include not more than one hour of CHM 4970) (8)</td>
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<thead>
<tr>
<th>B.S. CHEMISTRY (CHS) (65 cr. hrs.)</th>
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<tbody>
<tr>
<td>BCH 3033 (4)</td>
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<tr>
<td>CHM 2045 (3)</td>
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<td>CHM 2045L (1)</td>
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<td>CHM 2047 (3)</td>
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<td>CHM 2047L (1)</td>
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</table>
### B.S. CLINICAL CHEMISTRY (CHC) (66 cr. hrs.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BCH 3033</td>
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</tr>
<tr>
<td>BCH 3033L</td>
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<tr>
<td>CHM 2045</td>
<td>(3)</td>
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<td>CHM 2046</td>
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<td>CHM 2046L</td>
<td>(1)</td>
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<td>CHM 2047</td>
<td>(3)</td>
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<tr>
<td>CHM 3120C</td>
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<td>CHM 3121</td>
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<tr>
<td>CHM 3122</td>
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<tr>
<td>CHM 3122L</td>
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**Supporting Courses in the Natural Sciences**

<table>
<thead>
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<tbody>
<tr>
<td>MAC 2243</td>
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</tr>
<tr>
<td>MAC 2244</td>
<td>(4)</td>
</tr>
<tr>
<td>PHY 2050</td>
<td>(4)</td>
</tr>
<tr>
<td>Electives</td>
<td>(must be acceptable for credit towards a Natural Science College discipline major)</td>
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</table>

<table>
<thead>
<tr>
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<td>BSC 2010C</td>
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<td>BSC 2011C</td>
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<td>BSC 2012</td>
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<td>MAC 3281</td>
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<td>MAC 3282</td>
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<td>MAC 3283</td>
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<tr>
<td>MCB 3010C</td>
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<tr>
<td>PCB 3700</td>
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<td>PHY 2051</td>
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<td>PHY 2052</td>
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**B.S. CHEMISTRY (CHS) (29-32 cr. hrs.)**

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<tr>
<td>MAC 3282</td>
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<tr>
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<tr>
<td>PHY 3040</td>
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<td>PHY 3040L</td>
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<tr>
<td>PHY 3041</td>
<td>(1)</td>
</tr>
<tr>
<td>PHY 3041L</td>
<td>(1)</td>
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</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 113).

**V. Free Electives†**

- B.A. CHEMISTRY (CHM); 43 cr. hrs.
- B.S. CHEMISTRY (CHS); 34-37 cr. hrs.
- B.S. CLINICAL CHEMISTRY (CHC); 6-12 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 3400 (B.A. degree) or CHM 4410 (B.S. degree) can be commenced at that time.

**Teacher Education Programs:**

For information concerning the degree programs for secondary school teachers and junior college teachers, see pages 78, 85, and 89 of this Catalog.

**Requirements for the M.S. Degree:**

General requirements for graduate work are given on page 46.

All entering graduate students who have no advanced work beyond a B.A. or B.S. will be required to take the core courses in each of 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:

- BCH 5065
- CHM 5425
- CHM 5621
- CHM 6150
- CHM 5225

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

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 examinations in three of the five areas: Analytical, Biochemistry, Inorganic, Organic, and Physical Chemistry. Each examination will be administered by the faculty of that area. 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 the examinations provided that 3 have been passed by the time five quarters have elapsed since enrollment as a graduate student. The exams are offered four times each year, once between each quarter (except in the summer when the exams will be offered the first week of QTR IV). Note that this requirement is to be completed before the beginning of the sixth quarter.

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 the research. Final approval of the examination and of the thesis will require approval of the entire committee.

**Requirements for the Ph.D. Degree:**

General requirements for graduate work are given on page 51.

While there are no specific course requirements for the Ph.D. degree in chemistry, each student must take at least 16 hours of

† Students taking CHM 2055C-2056C must add 2 more hours of free electives.
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 must also "high-pass" two of these examinations (one of which is in the major area). In other words, the Ph.D. candidate must demonstrate a very real grasp of the principles in the major area and one other area (probably related to the 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 four have been passed, including two "high-passed," by the time five quarters have elapsed from enrollment as a graduate student. The exams are offered four times each year, once between each quarter (except in the summer when the exams will be offered the first week of Quarter IV.) Again, it is to be noted that this requirement, as for the M.S. degree, must be completed before the beginning of the sixth quarter. The Qualifying Examinations shall be given 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. Qualifying examinations should be attempted by students as soon as possible. These examinations are intended to test for broad and basic knowledge in each area at the Bachelor of Science level.

Language Examinations

Before a student is eligible to qualify for candidacy for the Ph.D. degree, a reading knowledge of the chemical literature in any two of the languages—German, Russian, and French (or any other language approved as appropriate by the supervisory committee)—must be demonstrated; or a reading knowledge in one of these languages and proficiency in a skill or specialization outside the discipline of chemistry must be demonstrated. 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 or 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) indepth 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 shall 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 of Candidacy

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

Final Thesis Defense

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

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

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

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, applied geophysics, geology of carbonate rocks and phosphate deposits. All of the these are closely related to local problems of the environment.

Requirements for the B.A. Degree:

I. Geology Courses (51 cr. hrs.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLY 2016</td>
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</tr>
<tr>
<td>GLY 2017</td>
<td>(4)</td>
</tr>
<tr>
<td>GLY 2100</td>
<td>(4)</td>
</tr>
<tr>
<td>GLY 2120</td>
<td>(4)</td>
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<tr>
<td>GLY 2121</td>
<td>(4)</td>
</tr>
<tr>
<td>GLY 3400</td>
<td>(4)</td>
</tr>
<tr>
<td>GLY 3610</td>
<td>(5)</td>
</tr>
<tr>
<td>GLY 3620</td>
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<td>GLY 4220</td>
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<tr>
<td>GLY 4550</td>
<td>(4)</td>
</tr>
<tr>
<td>GLY structured electives (12)</td>
<td>(12)</td>
</tr>
</tbody>
</table>

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

II. Supporting Courses (34-41 cr. hrs.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CHM 2045</td>
<td>(3)</td>
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<tr>
<td>CHM 2045L</td>
<td>(1)</td>
</tr>
<tr>
<td>CHM 2046</td>
<td>(3)</td>
</tr>
<tr>
<td>CHM 2046L</td>
<td>(1)</td>
</tr>
<tr>
<td>CHM 2047</td>
<td>(3)</td>
</tr>
<tr>
<td>CHM 2047L</td>
<td>(1)</td>
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</table>

Three courses in mathematics chosen from the following to attain 12 credits:

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</thead>
<tbody>
<tr>
<td>MAC 2243</td>
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<tr>
<td>MAC 2244</td>
<td>(4)</td>
</tr>
<tr>
<td>MAC 3281</td>
<td>(4)</td>
</tr>
<tr>
<td>MAC 3282</td>
<td>(4)</td>
</tr>
</tbody>
</table>


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 113).

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 113).

V. Free Electives (Including Distribution waivers) (40-47 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 2016 CHM 2045L CHM 2047
- GLY 2017 CHM 2046 CHM 2047L
- GLY 2100 CHM 2046L
- and CHM 2045

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

Minor in Geology

A minor in geology consists of 24 credit hours and must include GLY 2016, 2017 and 2100. Additional courses approved by the geology adviser, are designed to complement the student's major program. Only those courses which are acceptable toward the major in geology may be used toward the minor.

Teacher Education Programs:

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

Requirements for the M.S. Degree:

Requirements for admission to the Division of Graduate Studies and general graduate curriculum guidelines are given on pages 46-51.

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 major's program. In addition, a formal summer field course or equivalent professional experience is required.

The curriculum for a Geology graduate student will vary depending on the area of interest topic of the individual. Course work for the degree will be determined by the thesis committee after consultation with the student. A minimum of 45 credit hours (excluding GLY 6940) is required for the master's degree of which a minimum of 24 credits must be in courses numbered 6000 or above. All graduate students must take Graduate Seminar (GLY 6931) at least three times and GLY 6933 two times. A written thesis in the student’s field of specialization is required. A comprehensive oral qualifying exam is to be taken by the end of the third quarter in the program. An oral thesis defense 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 117, and also consult the College of Education section of the catalog.

The requirements for graduation for this degree are the same as those contained on page 113 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 adviser. At least three of the supporting courses must be at the 3000 level or above. The student must earn 2.0 grade point average 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)

Marine Science has been designated by the Board of Regents and the University as an academic Center of Excellence, the first such Center for USF. The department is devoted to research, graduate training, and public service in oceanography. It is located on a peninsula at Bayboro Harbor adjacent to downtown St. Petersburg.

Headquarters for the newly organized Florida Institute for Oceanography are located in the same building as the Department of Marine Science. FIO serves faculty members doing research in oceanography at all of the institutions in the State University System. It provides ship time, utilizing the 65' R/V Bellow, and a variety of shipboard equipment.

The Department owns a number of small boats, vehicles, and other field equipment. Its specialized laboratories include those for trace metal work, water quality and geochemistry, optical oceanography, sedimentology, micropaleontology, benthic ecology, phyology, bacteriology, ichthyology, and planktonology.

Student Admission

Prospective students with baccalaureate degrees in biology, chemistry, geology, or physics generally possess an adequate course work background for undertaking graduate studies in marine science. Those with such degrees who have an upper-level, undergraduate grade point average of 3.0 or better and a Graduate Record Examination score of 1100 or more (verbal + quantitative parts) are encouraged to apply for the Master of Science Program. Admission to the Ph.D. Program will be more selective than for the M.S. Program. In addition to meeting the GPA and GRE standards noted above, other factors such as the research interest of the prospective student and the availability of suitable laboratory space and equipment, will be considered.

The department has graduate scholarship and assistantship funds at its disposal and most of the individual faculty members are able to hire students to work part time on research grants. Those in need of financial support beginning at the start of the aca-
signed to encourage students to take an active role in the shaping of their own curricula. This flexibility is coupled with a desire to promote interdisciplinary research. In cooperation with the Departments of Marine Science and Physics, and the Colleges of Engineering and Medicine, the department offers special Ph.D. programs in the applications of mathematics.

The department is composed of four areas of concentration. These are as follows:

1. Algebra and Topology
   Number theory, algebraic coding theory, general topology, topological semigroups.

2. Analysis
   Real analysis, complex analysis, abstract harmonic analysis, abstract measure theory, approximations and expansions, functional analysis, geometric function theory.

3. Applied Mathematics and Computer Science
   Analysis of algorithms, differential equations, integral equations, numerical analysis.

4. Statistics
   Biomathematics, theory of probability and statistics, reliability theory, information theory, stochastic modeling in the life sciences and engineering, stochastic systems, and time series.

There are 30 faculty members in the department and about 50 graduate students. While programs in the more traditional areas of pure mathematics are offered, the department is committed to emphasizing applied mathematics at both the graduate and undergraduate levels. For both undergraduate and graduate work, students and faculty have access to the University's computer, an IBM 370/165-II.

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.

I. Mathematics Requirement (Min. 49 cr. hrs.)

 Majors must complete the following courses and either Program I or Program II.

| COP 3215 (4) | MAC 3414 (4) | MAA 4211 (3) |
| MAC 3411 (5) | MHF 3102 (3) | MAA 4212 (3) |
| MAC 3412 (4) | MAS 3103 (4) | MAS 4156 (3) |
| MAC 3413 (4) |

Program I

Three (3) courses (including one sequence) from the following:

| MAP 4302 (4) | MAA 5306-5307 (8) |
| MAS 5146 (4) | MAA 5402-5403 (8) |
| STA 4442 (4) | MAS 5311-5312 (8) |
| MTG 5316-5317 (8) |

Program II

Four (4) courses (including one sequence) from the following:

| MAP 4302 (4) | MAA 5306-5307 (8) |
| MAS 5146 (4) | MAA 4401-4402 (8) |
| MAA 5405 (4) | MAP 5316-5317 (8) |
| MAP 5205-6206 (6) | STA 4442-4321 (8) |

Although the following description of Programs I and II is neither exhaustive nor restrictive, it is intended as a general guide.

Program I is a liberal arts program designed to prepare a student in pure mathematics which could lead to either graduate study in pure or applied mathematics, a teaching career, or a career where mathematical approaches to problems are needed, such as law or business. Program II emphasizes various areas of applied mathematics which are frequently used in physical and engineering sciences. It could lead to graduate study in applied mathematics, an engineering career, or to a career in industry as an applied mathematician. Majors in mathematics for teaching should consult the section Mathematics (MAE) on page 78 for mathematics requirements.

Requirements for the Ph.D. Degree:

The Ph.D. in Oceanography is offered in cooperation with the Department of Oceanography at Florida State University. Students may apply to USF and, if accepted, will work under a USF professor. A student's committee will be comprised of faculty members from both institutions. Residency requirements—three quarters of consecutive course work in which the student must register for 12 hours—may be met on either campus. A minimum of 135 hours after the bachelor's degree is required.

An adviser will be appointed by the chairperson of the USF department for each student during his first quarter of residency. By the third quarter of residency, a major professor shall be selected. Designation of the major professor will be made by the department chairperson upon a recommendation from the student and faculty member concerned.

Any member of the graduate faculty at either university (USF or FSU) may serve on a doctoral committee but the majority must have doctoral directive status. Each committee will consist of at least five faculty members. One member of the doctoral committee shall be from a science department outside Marine Science or Oceanography. The committee appointment shall be by agreement between the two department chairmen (USF and FSU).

The student's doctoral committee will supervise the written and oral examinations for admission to Ph.D. candidacy. The qualifying examination will be open to the faculty of both institutions with questions solicited from the entire faculty. The doctoral committee will also conduct the dissertation defense which will be open to the general faculty. The chairman of the final examination shall be someone outside either department; a seminar will be presented by the candidate beforehand.

Students with exceptional qualifications may be accepted to work directly toward the Ph.D. without first earning the M.S. degree. However, in most cases the master's degree will be a prerequisite. The latter may have been earned in marine science or one of the related areas, i.e., biology, chemistry, geology, or physics.

**MATHEMATICS (MTH)**

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

The department has a flexible Ph.D. program which is de-
II. Mathematics Related Courses (21-26 cr. hrs.)
Majors, except for majors in mathematics for teaching, must take two of the following sequences, one of which must be in the College of Natural Sciences:
1. BSC 2010C, BSC 2011C, BSC 2012
2. CHM 2045, CHM 2045L, CHM 2046, CHM 2046L, CHM 2047, CHM 2047L or CHM 2055C, CHM 2056C
3. GLY 2016, GLY 2017, GLY 2100
4. ECO 2023, ECO 2013 and one of ECO 3101 or ECO 3203
5. EGN 3373, EGN 3374, EGN 3375.
6. EGN 3343, EGN 3344 and one of EMC 3103 or EMC 3117
7. EGN 3313, EGN 3321, EGN 3331
8. PHY 3040, PHY 3040L, PHY 3041, PHY 3041L and PHY 3042, PHY 3042L
9. PSY 2012, PSY 3013, PSY 3213
Majors will not receive credit toward graduation for the following courses:
   AST 3033
   ECO 4402
   PHY 4321
Majors wishing to take a course in statistics should take STA 3122.

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 1100, FRE 1101, FRE 1102
   GER 1100, GER 1101, GER 1102
   RUS 1100, RUS 1101, RUS 1102
   BSC 2010C, BSC 2011C, BSC 2012

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 113).

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

- Fall Quarter (I)
  - MAC 1104
  - MAC 1114

- Winter Quarter (II)
  - MAC 3411
  - MHF 3102

- Spring Quarter (III)
  - MAC 3413
  - MAC 3414

- Sophomore Year
  - MAS 3103
  - Two Mathematics electives

Students with a strong background in high school mathematics may omit either or both MAC 1104, MAC 1114 with the consent of the chairperson.

Teacher Education Programs:
For information concerning the degree programs for secondary school teachers and junior college teachers, see pages 78, 85, and 89 of this Catalog.

Requirements for the M.A. Degree:
General requirements for graduate work are given on page 46.
A thesis is optional. The thesis program requires a minimum of 45 credits of course work (excluding MAT 6945), 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 6000 or above and the program must total at least 45 credits.
The course of study is flexible and interdisciplinary work is encouraged.
The areas of specialization include the following:
  a. Algebra and Topology
  b. Analysis
  c. Applied Mathematics and Computer Science
  d. Statistics
Each candidate for the M.A. degree is required to pass a written examination in three of the following subjects:
  a. Algebra (MAS 5146, MAS 5311, MAS 5312)
  b. Applied Mathematics (MAP 5345, MAP 5407)
  c. Applied Statistical Methods (STA 5166, STA 5167)
  d. Complex Analysis (MAA 5402, MAA 5403, or MAA 5403, MAA 5405)
  e. Differential Equations (MAP 5316, MAP 5317)
  f. Probability Theory (STA 5446, STA 5447)
  g. Real Analysis (MAA 5306, MAA 5307)
  h. Topology (MTG 5316, MTG 5317)
Each examination will cover the prescribed contents of the courses listed above.
A reading knowledge of either French, German or Russian is required. Computer Science may be substituted for the language requirement.
For specific program requirements, the student should consult the department chairperson.

Requirements for the Ph.D. Degree:
In addition to the general University requirements for the Ph.D. degree, on page 51, the Mathematics department requires the following:

1. Qualifying Examinations
   Each doctoral student must pass at the Ph.D. level a written examination in four of the subjects listed under the Requirements for the M.A. degree.

2. Foreign Language Requirement
   Each student must pass an examination in two of the three languages: French, German or Russian. Computer Science may be substituted for one of the languages.

3. Course Requirements
   The student's program of study must meet the course requirements for the M.A. degree. Other course requirements will be determined by the student's Supervisory Committee.

4. Specialization Examination
   This examination shall be administered by the student's Supervisory Committee after he has passed the qualifying examinations, the language requirements, and has completed all course requirements. The composition and scheduling of this examination shall be determined by the Supervisory Committee and may be written and/or oral.

5. For specific program requirements, the student should consult the chairperson of the Department of Mathematics.

6. The student must submit a dissertation to be approved by the Supervisory Committee.
Special accommodations may be made for students with interest in interdisciplinary areas.

MEDICAL TECHNOLOGY (MET)
Medical Technology is one of the growing professions associated with the advances in modern medical science. Working in the clinical laboratory, the medical technologist performs chemical, microscopic, bacteriologic, and other scientific tests to help track the cause and treatment of disease. This talent requires specialized training and a baccalaureate degree is essential preparation for certification as a medical technologist.
The University of South Florida offers a four-year program leading to the Bachelor of Science degree in Medical Technology. A student electing to major in Medical Technology will spend the first three years of the program on the campus of the University of South Florida; the fourth year (12 months) will be spent in one of the affiliated hospitals or clinical laboratories. Admission to the fourth year is limited by the number of openings in the affiliated hospitals. Selection of interns is made by the hospitals.
During the first three years, the medical technology student will complete the liberal arts and basic science requirements for entrance into the fourth year of the program for clinical training. To remain in good standing as a Medical Technology major during this period, a reasonable grade point average, determined by the College of Natural Sciences, must be maintained. To be eligible
for entrance into the program's fourth year, the student must have completed not less than 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 and one course in immunology. Physiology (PCB 3700 or PCB 4743C) is strongly recommended.

2. Chemistry
   A minimum of 24 hours is required including organic chemistry. Biochemistry (BCH 3033) and Elementary Analytical Chemistry (CHM 3120C) 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 MGF 1203) 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 usually begins in early August or September of each year. During this period, one will continue to be registered as a full-time student of the University and will receive a total of 45 credit hours of work in:

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

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

**PHYSICS (PHY/PHS)**

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

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

Special courses may be offered upon sufficient demand. Modern excellently equipped classrooms and laboratories provide an outstanding environment for students. Opportunities for undergraduate students to participate in research projects with professors and graduate students form an integral part of the undergraduate experience. Undergraduate students have engaged in research efforts to the extent that their work has been published in scientific journals. There is a tradition of close working relationships between professors and students.

At the graduate level, thesis research areas include theoretical and experimental plasma physics, theoretical and experimental solid state physics, experimental gaseous electronics, elementary particle theory, and biophysics. Supporting facilities include an IBM 370/165-II computer, a Tektronix 4501 graphics systems terminal located in the Physics Building, an excellently equipped machine shop and electronic shop, a glass blowing shop, an electron microscope, and an x-ray photoelectron spectrometer. Teaching assistantships and financial aid through the college Work-Study Program are often available to qualified students. A supervised study hall is available where students may obtain help with their course work at their convenience throughout each week day.

**Requirements for the Baccalaureate Degrees:**

**I. Physics Courses**

**B.A. PHYSICS (PHY) 47-53 cr. hrs.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tr>
<td>PHY 2051</td>
<td>(4) or*</td>
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<tr>
<td>PHY 3223</td>
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<tr>
<td>PHY 3323C</td>
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<tr>
<td>PHY 3822L</td>
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<td>PHY 4224</td>
<td>(3)</td>
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<tr>
<td>PHY 4225**</td>
<td>(3)</td>
</tr>
<tr>
<td>PHS 4910</td>
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**B.S. PHYSICS (PHS) 58-65 cr. hrs.**

<table>
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<tr>
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<tr>
<td>PHS 5304/4</td>
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| *Credit will not be given to both general physics PHY 2050, PHY 2050L, PHY 2051, PHY 2051L, PHY 2052, PHY 2052L, and PHY 3040, PHY 3040L, PHY 3041, PHY 3041L, PHY 3042, PHY 3042L.**

**II. Supporting Courses in Natural Sciences**

**B.A. and B.S. PHYSICS (PHY/PHS) 28-33 cr. hrs.**

<table>
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<td>(1) or CHM 2055C</td>
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<tr>
<td>MAP 4302</td>
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</tr>
</tbody>
</table>

**III. 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 113). Selection of a foreign language, preferably French, German, or Russian, is also strongly recommended.

**IV. Liberal Education Electives**

The student must satisfy 24 hours of liberal education elec-
tives as described in item 3 of the graduation requirements of the 
College of Natural Sciences (see page 113).

V. Free Electives (Including General Distribution waivers)
   B.A. PHYSICS (PHY): 45-56 cr. hrs.
   B.S. PHYSICS (PHS): 33-45 cr. hrs.

Teacher Education Programs:
For information concerning the degree programs for second-
dary school teachers and junior college teachers, see pages 78, 85,
and 89 of this Catalog.

Requirements for the M.A. Degree:
General requirements are given on page 46. 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 aca-
demic goals, the duties of the Graduate Adviser will be assumed by
a Supervisory Committee appointed by the department chair-
person. The Supervisory Committee will have the right and the re-
sponsibility to add special requirements to meet any deficiency in
the student’s background.

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 6911, PHY 6935 and PHY 6971. Of these 45 credits, 24
must be in courses numbered 6000 or above. Required courses are:
   PHS 5113  PHY 5722C  PHY 6346  PHY 6846L
   PHY 5624  PHY 6246  PHY 6347
The Supervisory Committee will administer a comprehensive
examination before recommending that a degree be granted.

The student desiring the M.A. degree without a thesis is re-
quired to take a minimum of 45 credits (excluding PHY 6940), no
more than three of which may be for PHY 6911 and PHY 6935. Of
these 45 credits, 24 must be in courses numbered 6000 or above.
Required courses are:
   PHS 5113  PHS 5115  PHY 6347  PHY 6645
   PHS 5114  PHY 6247  PHY 6536  PHY 6846L
   and a choice of any two of the following:
   PHS 5405  PHS 5505  PHY 5722C
   or Biophysics
The Supervisory Committee will administer a written and an oral
comprehensive examination before recommending that a degree
be granted.

All graduate students are required to register for PHY 6935 in
the first quarter of each academic year and, in connection ther-
ewith, to attend all Physics Colloquia scheduled during the year.
New College, formerly a private liberal arts college, became a part of the University of South Florida in 1975, retaining its distinctive academic program and the status of an honors college within the greater University.

A small, residential, innovative, liberal arts college, New College provides an educational environment which allows students to obtain maximum academic and personal development. The curriculum is designed to promote self-direction and to supply the knowledge and skills appropriate to the Liberal Arts. New College is both traditional and contemporary in its orientation: dedicated to humane learning, but also purposely seeking the discovery, the development, and the creation of ways to equip people for survival in a fluid society.

Students are encouraged to develop their own educational plans—using the educational contract—that will help them reach individual goals. Flexibility, individualism, and broad freedom of choice characterize the program, giving to each student the opportunity to plan a major role in the construction of his or her program.

The Academic Calendar and Residence Requirements

New College operates on a slightly different academic year than the rest of the University. The College's academic year is divided into three 10-week terms beginning in September and ending in June with a special four-week period in late fall designed specifically to permit students to accomplish independent studies.

Because students are selected for their ability to benefit from the New College program, they are considered, at entrance, to have the ability to begin at an advanced level of preparation. Therefore, New College offers each student the opportunity to earn a bachelor's degree in three academic years, or nine terms of residence. However, each student also has the option to distribute his educational experience over a four-year period by taking some terms off from study at selected times during those four years.

Educational Contracts

The basic instrument of the New College educational program is the educational contract, a written document constructed at the beginning of a term by each student and expressing that student's plans for the ensuing term.

Each contract states the individual student's educational and personal goals for the term and possibly longer range objectives; a listing of the specific educational activities that will help accomplish these ends; and an explanation of how those specific educational activities will be evaluated at the end of the term.

Each contract is developed by the individual student as an expression of personal education and career goals, but faculty are expected to contribute substantially to help students determine the best ways to shape contracts to reach goals.

Admissions Requirements

New College welcomes applications from all qualified students without regard to nationality, creed, race, or sex. New College seeks those students who are unusually well-qualified to thrive in its intellectual and social atmosphere. The College uses a variety of indicators to help each student measure whether he or she is right for participating in this special program.

The most reliable index of student ability is past scholastic performance. About one-third of all New College entering students rank in the top 10 percent of their graduating classes.

Applicants must have the personal characteristics that will allow them to cope effectively with the educational program. These individual traits, in addition to motivation, are initiative, tenacity, maturity, curiosity, concern for others and an excitement about life and learning. Applicants may submit results of the Scholastic Aptitude Test from the College Entrance Examination Board or scores received from the American College Testing Program (ACT) to help the Admissions Office of New College determine whether a student should be selected.

Because the program at New College has been deliberately designed to fulfill the needs of individual students, it follows that the College will also accept students with varied academic preparation. The College does not require that certain courses be completed to gain admittance, but does urge prospective students to complete the customary courses within a college preparatory program before enrolling at New College. Particular attention is given to students who have participated in honors courses, advanced placement, or enriched and accelerated courses and independent studies.

Advanced placement provided at some institutions is not necessary for admission to New College of USF simply because all students are considered to be entering at advanced levels. Since there are no required courses, a student and a faculty adviser work together to design a program to take advantage of the student's abilities and previous academic preparation. Students are encouraged to begin studies at advanced levels if they have adequate backgrounds.

New College welcomes transfer students from other institutions. As many as one-third of each entering class are students with previous college experience. Transfer students must demonstrate through their transcripts that they can successfully handle college level work.

Application forms and literature may be obtained from the Director of Admissions, New College of USF, 5700 N. Tamiami Trail, Sarasota, Florida 33580. Prospective students should note that a supplemental application is needed for admission to New College.

Application Deadlines:

Fall Term/Term I: Application should be completed before March 1 and no later than August 1. Application for financial assistance should be received before February 1 for scholarships and March 1 for other types of aid.

Winter Term/Term II: Application should be completed by December 15.

Spring Term/Term III: Application should be completed by March 1.

Degree Requirements

All students who are graduated from New College of USF receive a Bachelor of Arts degree. However, students may elect to concen-
trate in any of a number of areas within the various divisions or to elect an interdisciplinary course of study in fields of their own shaping. Requirements for completion of a course of study at New College include satisfactory evaluations on nine educational contracts, on four independent study projects, on the senior project, and on the baccalaureate examination.

Areas of Study

New College is divided into three academic divisions—Humanities, Social Sciences, and Natural Sciences—and students may elect to study primarily in one area, to distribute their studies throughout the entire three divisions, or to create special interdisciplinary curricula which span offerings in any of the disciplines.

To aid prospective students of New College, each division has indicated broad areas of study which are available in each division. Within each area there are, of course, many subdivisions and information about these may be obtained from the New College Records Office.

<table>
<thead>
<tr>
<th>Humanities</th>
<th>Natural Sciences</th>
<th>Social Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art History</td>
<td>Mathematics</td>
<td>Economics</td>
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<td>Political Science</td>
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<tr>
<td>Religion</td>
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</tbody>
</table>

Special Programs

New College has two special programs which are available to students of New College but which fall outside of the regular divisional or interdisciplinary areas.

The Environmental Studies Program is an interdisciplinary and interdivisional program that is also expected to integrate academic and “real world” experiences in problem-solving situations. Students who elect the Environmental Studies Program may develop disciplinary knowledge and skills through courses and seminars in the College’s three academic divisions and then may apply their knowledge and skills in research projects dealing with practical problems in environmentally related areas.

Each year, for three weeks in June, the New College Music Festival is held on campus. The Festival brings to the campus a number of nationally and internationally known musicians to teach and to perform public concerts with emphasis on chamber music. Qualified New College students may enroll in Festival classes while Festival concert performances are open to everyone in the college community. Students for the Festival are drawn from all parts of the country and abroad coming to the college to study each year and also to perform in student concerts which are held frequently on campus. New College students have the opportunity to audit Festival master classes and rehearsals and also to attend the public concerts.

Costs

Costs for attending New College of USF are the same as those for attending any part of the State University System. Costs are on a per credit-hour basis (see page 20 for University credit-hour costs). Each term’s educational contract is the equivalent of 16 credit hours while each independent study project is equivalent to four credit hours. During the first three terms students are considered for fee purposes to be on a second-year college level. For the final six terms, students are considered to be taking upper-class courses with consequent cost differentials.

Since New College offers students the opportunity to have a more individualized type of study than is available in other University programs, it is easily seen that such a program would be more expensive. To help meet this difference in cost, the New College Foundation has agreed to provide an annual subsidy to the University System to make up the difference of state funding and the actual cost of the educational program. These funds are raised by the New College Foundation and its Board of Trustees from individuals, corporations, and foundations.

Student Life

New College is essentially a residential institution with the majority of the students living either on campus or in the surrounding community. Students are challenged to accept major responsibilities for the direction of their own affairs, including their social and extracurricular activities. The Student Affairs Office is an essential part of New College and is concerned with almost all phases of student life from orientation of arriving students to commencement plans for those ready to depart. Student Affairs, through its professional staff, is responsible for counseling, housing, recreation and health services. Staff also are concerned with helping students assume responsibilities in relation to others on campus and in the outside communities.

All first-year students live on campus during their initial academic year. Upper-class students may choose College or non-College residency. All resident students are required to take meals in the campus dining hall. Others have the option of using the food service or of making independent arrangements.

New College offers counseling for students in several different areas. New College provides for students a small health center on campus, staffed while the college is in session. Excellent specialized medical services are readily available in the community with a community hospital only minutes away from campus. Qualified clinical psychologists provide for students a broad range of psychological counseling and therapy as well as dealing with students concerned about life goals, academic and career decisions, and study skills. Professional medical and psychiatric counsel is available in the community at the student’s expense.
NEW COLLEGE OF THE UNIVERSITY OF SOUTH FLORIDA
ACADEMIC CALENDAR 1979-80

Fall Term (I), 1979
and Independent Study Period

September 3, Monday  Labor Day Holiday
September 5-8, Wed.-Sat.  Orientation and Advising
September 10, Monday  Classes Begin
September 14, Friday  Fees Due; Last day to withdraw without financial penalty
September 19, Wednesday  Contracts Due
September 21, Friday (noon)  Last day for contract submission for Term I
November 1, Thursday  Deadline for declaring option/off-campus study for Term I
November 2, Friday  ISP Sign-Up Forms Due
November 16, Friday  End of Fall Term
November 19, Monday  Independent Study Period Begins
November 22-23, Thurs.-Fri.  Thanksgiving Day Holiday
December 14, Friday  Independent Study Period Ends, Projects Due

Winter Term (II), 1980

January 4, Friday  Registration, Orientation, and Advising
January 7, Monday  Classes Begin
January 11, Friday  Fees Due; Last day to withdraw without financial penalty
January 16, Wednesday  Contracts Due
January 18, Friday (noon)  Last day for contract submission for Term II
March 3, Monday  Deadline for declaring option/off-campus study for Term III
March 14, Friday  End of Winter Term

Spring Term (III), 1980

March 31, Monday  Classes Begin
April 4, Friday  Fees Due; Last day to withdraw without financial penalty
April 9, Wednesday  Contracts Due
April 11, Friday (noon)  Last day for contract submission for Term III
May 5, Monday  Senior Theses Due
May 19-23, Mon.-Fri.  Baccalaureate Examinations
May 26, Monday  Memorial Day Holiday
June 2, Monday  Deadline for declaring option/off-campus study for Term III
June 6, Friday  ISP Sign-Up Forms and Contracts Due for Summer
June 9, Monday  End of Spring Term
June 10, Tuesday  Evaluations due for graduating students
June 11, Wednesday  Contract Certifications due for graduating students
June 14, Saturday  Faculty Review of graduating students
Commencement

1 Students who have not submitted contracts to the Office of Records and Registration by noon of this deadline will be considered as withdrawn by default with no refund or cancellation of fees.
2 Under no circumstances will students be granted option for the following term past this deadline. Off-campus contracts for the following term should be submitted as soon as possible, following declaration, but must be submitted prior to the first day of the term of the off campus work.
The College of Nursing is committed to the improvement of nursing and health care services through its education 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 currently provides two curricula: 1) Curriculum A for generic students (qualified students with no previous preparation in nursing), and 2) Curriculum B for registered nurses who are graduates of diploma or associate degree nursing programs. Curriculum A is offered for full-time students on the Tampa campus. Curriculum B is currently offered for both full-time and part-time students on the Tampa campus. In addition the same curriculum is offered for qualified part-time registered nurse students on the University’s regional campuses at Fort Myers, Sarasota, and St. Petersburg. Beginning in the fall of 1980 there will be one curriculum to which all students will be admitted.

The health care delivery system is rapidly changing and these changes are creating new demands on health care professionals, including nurses. Since nursing is a vital component of the health care delivery system, nursing practice has become increasingly complex in terms of knowledge and skills required for nurses to assume added responsibilities and functions.

Professional nursing practice is based on a dynamic, helping relationship which fosters client growth whether that client be an individual, a family group, or a community. This relationship is based on theoretical knowledge and a body of cognitive, affective, and psychomotor skills exemplified in the nursing process. Such practice, by fostering optimal wellness and promoting client growth, contributes to the positive development of a society based on the respect of the individual.

The practice of professional nursing involves problem solving and decision making based on knowledge from the humanities, natural and social and behavioral sciences. Thus, the nursing major builds upon a foundation of general education and basic sciences.

The nursing program is based on the philosophy that nurses must be self-directing professionals who assume responsibility for their own learning and their own practice. Therefore, the faculty provide opportunities for students to identify their individual learning needs, to participate in the planning of learning activities to meet those needs, and to develop cognitive, affective, and psychomotor skills essential to professional nursing practice in a variety of settings where professional nursing services are provided: i.e., acute care hospitals, community health agencies, extended care facilities, industry, physicians’ offices, military health services, and so on. Opportunities are also provided for the development of interpersonal and leadership skills needed by nurses in order to meet their responsibilities as citizens and as accountable professionals in the health field. Additionally, students can establish investigative and independent study habits that will persist throughout a lifetime of professional growth and development.

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

Admission to the Undergraduate Program

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 or associate degree or hospital programs are eligible for admission. Students may complete all requirements for admission to the College of Nursing through enrollment at the University of South Florida or they may complete the University’s general education distribution requirements and College of Nursing admission prerequisites elsewhere and transfer to USF for the nursing major. Lower division students who enroll at USF are admitted to the Division of University Studies. They must meet the same requirements as other applicants for admission to the University and should follow the admission procedures outlined elsewhere in this Catalog. College graduates and transfer students from other baccalaureate nursing programs are also eligible for admission to the major.

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 based upon a selective process through special application directly to the College of Nursing. Florida residents are given priority.

At the present time, one class is admitted to Curriculum A in the fall quarter each year. The deadline for acceptance of applications is February 1. Full-time registered nurse students are admitted to Curriculum B twice each year. The deadline for acceptance of applications for summer (Quarter IV) admission is February 1; the deadline for acceptance of applications for winter (Quarter II) admission is October 1. In addition, part-time students may be admitted each quarter to Curriculum B. The application deadline is the end of the third week of the quarter prior to the one in which the applicant is seeking admission.

Application dates and deadlines are subject to change in Fall Quarter (I), 1980 with the implementation of the revised curriculum. Prospective applicants are advised to contact the College of Nursing Coordinator of Academic Advising for the specific dates and deadlines for Fall Quarter (I), 1980 admission.

Transfer students seeking admission to the College of Nursing must also apply for admission to the University. Applications for admission to the University may be obtained by contacting the Office of Admissions, University of South Florida, Tampa, Florida 33620. Transfer students may not be admitted to the College of Nursing unless they are eligible for admission to the University. Official transcripts certifying completion of all requirements for admission must be available to the College of Nursing before admission will be confirmed and enrollment permitted. Deadline for University application is January 4 of the year in which the student enrolls.

GENERAL REQUIREMENTS

CURRICULUM A AND CURRICULUM B

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

A. Overall Requirements

1. Completion of 90 quarter (60 semester) hours of college level work with a cumulative grade point average of 2.0. This becomes a 2.5 in Fall Quarter (I), 1980. Credit received on the
basis of CLEP examinations or other appropriate procedures may be included to meet some of these requirements.

2. Completion of the University of South Florida general education distribution requirements as part of the above. These requirements may be satisfied by the completion of 60 quarter (40 semester) hours in the following areas with not less than 8 quarter hours (6 semester) hours in each area:
   a) English Composition
   b) Humanities/Fine Arts
   c) Mathematics/Quantitative Methods
   d) Natural Sciences
   e) Social Sciences

   Students with an A.A. degree will be considered to have met the above requirements.

B. Specific Course Prerequisites

Some specific courses in the natural sciences, mathematics and in the social and behavioral sciences are required for admission to the College of Nursing. These courses also apply toward meeting the general education distribution requirements in these areas. These requirements are outlined below. Coursework transferred from other institutions will be evaluated for comparability to listed requirements. A grade of "C" or better must be earned in each prerequisite course.

1. Mathematics/Quantitative Methods: Completion of one course in college level mathematics and one course in statistics. (USF: STA 3122)

2. Natural Sciences: at least one course in biology or chemistry must include a laboratory or have a corequisite laboratory course.

   a) Biology: completion of at least one year of biology with content including cell structure, genetics, and ecology. At least one of these courses must be completed prior to the admission application deadline. (USF: BSC 2010C and BSC 2011C and BSC 2012). Students applying for admission to Curriculum B may use anatomy in lieu of one biology course until Fall Quarter (I), 1980.

   b) Chemistry: completion of at least two quarters of chemistry with content in inorganic, organic, and biochemistry. At least one course must be completed prior to the admission application deadline. (USF: CHM 2045 and CHM 2046). Students applying to Curriculum B may use a physics course in lieu of one chemistry course until Fall Quarter (I), 1980.

   c) For all students entering in 1980, one course in general physics will also be a prerequisite.

3. Social Sciences:
   a) American Government: completion of one course in American government. (USF: POS 2041 or POS 2112 or PAD 3003 or POT 4204 or POS 4424)
   b) Social and Behavioral Sciences: completion of at least three courses in the areas of individual and social/community behavior with at least one course in psychology and one course in sociology. Any course in psychology, sociology, anthropology, group dynamics, aging studies, cultural issues, etc. is acceptable for the third course in this area. Courses with education prefixes which have content in these areas are also acceptable. At least two of these courses must have been completed by the admission application deadline.

4. Supporting Sciences: Microbiology and at least one of the other courses must be completed prior to enrollment in the major. For students entering in Fall Quarter (I), 1980, microbiology, anatomy, and physiology of at least two of the other courses must be completed prior to enrollment in the major.

   a) Microbiology: completion of one course (USF: APB 3110 or MCB 3010C)
   b) Anatomy: completion of one course (USF: NUS 3210C)
   c) Physiology: completion of one course (USF: NUS 3211C or PCB 3700)
   d) Nutrition: completion of one course (USF: HUN 3201)
   e) Life Cycle: completion of one course in human growth and development throughout the life span — birth through the aging process and death (USF: HUS 4020 or DEP 3103 and GEY 3000 or DEP 4005 and GEY 3000)

C. CLEP Examinations

College Level Examination Program (CLEP) general and subject examinations may be taken in several areas. The General Examinations of CLEP apply toward the distribution requirements at USF and successful performance results in achieving credit in any one or all five of the required areas. In addition, credit may be earned for a number of College of Nursing prerequisite courses, including: American government POS 2041; English Composition ENC 1102, 1135, 1168; Biology BSC 2010C, 2011C, 2012; General Chemistry CHM 2045; and Statistics STA 3122. Additional information may be obtained from the Office of Testing and Advanced Placement, University of South Florida.

D. ACT/PEP and College of Nursing Examinations

Registered nurse applicants are eligible to take the ACT/PEP subject examination in anatomy/physiology to fulfill the course requirement in physiology. The College also offers an examination in nutrition which RN students may take to meet this requirement. Until Fall Quarter (I), 1980, registered nurses may receive up to 20 hours of lower division elective credit for previous nursing education and/or experience through satisfactory performance on the ACT/PEP proficiency examinations in any of the approved four areas: 1) Fundamentals of Nursing (Code No. 403), 2) Maternal and Child Nursing (Code No. 457), 3) Psychiatric/Mental Health Nursing (Code No. 503), 4) Adult Nursing (Code No. 5540). These credits do not apply toward meeting the University requirements of 60 upper division credits or toward meeting the requirements of the upper division nursing major. The credits earned by passing the ACT/PEP Examinations in nursing apply only to the B.S. with a major in nursing program offered by the College of Nursing. Additional information about the CLEP and ACT/PEP examinations may be obtained from the Office of Evaluation and Testing, University of South Florida. Information about the College examination in nutrition may be obtained by contacting the Dean's Office, College of Nursing, University of South Florida.

Minimum Admission Requirements —
Curriculum A and Curriculum B

1. Application submitted to USF by the appropriate deadline.
2. Application and all supporting materials including transcripts, submitted to the College of Nursing by the appropriate deadline.
3. Cumulative grade point ratio of 2.0 with a grade of "C" or better in each prerequisite course. (This becomes 2.5 as of Fall Quarter (I), 1980).
4. No prerequisite course repeated more than once and no more than two (2) prerequisite courses repeated.
5. Completion of at least one prerequisite course in chemistry, one in biology, and two in the social/behavioral sciences, prior to the appropriate application deadline.
6. Completion of at least 45 hours of general education and prerequisite courses prior to the application deadline.
7. Registered nurse applicants must have current licensure to practice as a registered nurse in Florida.

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

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

Students are certified for the Bachelor of Science degree with a major in nursing upon completion of 180 quarter hours of credit distributed among the general education, supporting sciences, minimum requirements for the major and electives. For students admitted beginning Quarter I, 1980 a minimum of 195 quarter hours of credit will be required for graduation. A minimum grade of "C" must be attained in each course in the major and a cumulative grade point ratio of 2.0 or better must be maintained throughout the program. At least 60 quarter hours must be upper division level work (courses numbered 3000 or above). Overall requirements, which differ for Curriculum A and Curriculum B, are outlined below. Some of these requirements will change with the implementation of a new curriculum in 1980.

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 primary, secondary and tertiary 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.

Curriculum A

Curriculum A for students preparing for initial entry to the profession is an upper division major built upon general education and supporting sciences previously discussed as requirements for admission to the College. The nursing major is composed of required nursing courses and electives.

Nursing Courses

<table>
<thead>
<tr>
<th>Junior Year (3 quarters)</th>
<th>Senior Year (3 quarters)</th>
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<tbody>
<tr>
<td>NUU 3210C-Nursing Process I (6)</td>
<td>NUU 4220-Nursing Core II (5)</td>
</tr>
<tr>
<td>NUU 3320-Nursing Process II (3)</td>
<td>NUU 4220L-Nursing Intervention II (6)</td>
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<td>NUU 3121L-Nursing Process Lab (5)</td>
<td>NUU 4222-Nursing Seminar III (2)</td>
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<td>NUU 3321-Nursing Seminar (2)</td>
<td>NUU 4630-Nursing Inquiry I (3)</td>
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<td>NUU 4223-Nursing Seminar IV (2)</td>
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<td>*NUR 4910C-Independent Study (1-5)</td>
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<td>NUU 4432-Nursing Core IV (3)</td>
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<td>NUR 4935-Nursing Seminar V (2)</td>
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<td>*NUR 4930-Selected Topics (2-4)</td>
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Curriculum B

Curriculum B is an upper division major for registered nurse students and is built upon the general education and supporting science courses previously discussed as requirements for admission to the College. The nursing major is composed of required nursing courses and electives. At least 60 quarter hours of credit at the upper division level with at least 45 quarter hours in nursing courses (not to include human physiology and nutrition) are required for graduation.

Nursing Courses

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
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<tr>
<td>*NUR 4910C-Independent Study</td>
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<tr>
<td>*NUR 4930-Selected Topics</td>
<td>(2-4)</td>
</tr>
<tr>
<td>(May be repeated up to 12)</td>
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</tbody>
</table>

General Elective Credit

The number and kinds of electives taken will depend upon the number of credits needed to fulfill the 180 quarter hours requirement for the degree and upon individual interest and goals. They may be chosen from language, literature, fine arts, natural science, etc., or from areas relating to nursing roles and relationships—e.g., management, health education, mental retardation, gerontology, urban problems, race relations, women's studies, biological or physical sciences, social or behavioral sciences, or from NUR 4930, Selected Topics in Nursing.

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 $50-75 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 prior to enrollment in the nursing major.

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.

Electives in nursing. These courses are offered on the basis of student interest to provide an opportunity to investigate some area of interest in depth. All students are expected to undertake at least two credits of NUR 4910C (Independent Study) under the guidance of a faculty member.
The social and behavioral sciences are concerned with human beings and their development, problems, behavior, and institutions. The study of man helps the student to understand the world of which he/she is a part, to become a more informed citizen, and to prepare for a role in contemporary society. The social and behavioral sciences provide the student with knowledge, experience, and background for future application in business and industry, government, human service professions, and graduate education.

Three programs in the college — Urban Community Psychology, Gerontology, and Urban Anthropology — have been approved by the Board of Regents as Programs of Distinction. Although the programs are housed respectively in the Department of Psychology, the Aging Studies Program, and the Department of Anthropology, they utilize faculty expertise from many disciplines.

Students majoring in these areas receive distinctive educational experiences in both university and community settings. Furthermore, approval has been requested to institute a Center of Excellence in Human Services for the development of distinguished programs in the applied social and behavioral sciences.

The College of Social and Behavioral Sciences has established the Human Resources Institute to address critical issues in the broad human resources sector through a comprehensive program of research and service. The following Centers are related to the Human Resources Institute: Center for Applied Anthropology, Center for Applied Gerontology, Center for Community Development and Analysis, Center for Community Psychology, and Center for Evaluation Research.

**BACCALAUREATE LEVEL DEGREE PROGRAMS**

**Admission to the College**

Admission to the College of Social and Behavioral Sciences is open to students who have been accepted to the University of South Florida and who declare a major in a particular field within the college.

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

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

**Honors Programs**

The College of Social and Behavioral Sciences offers undergraduate honors programs in two fields: Political Science and Psychology. Students interested in one of these honors programs should consult the appropriate department for further information.

**General Requirements for Degrees**

The College of Social and Behavioral Sciences currently offers two undergraduate degrees: Bachelor of Arts and Bachelor of Social Work. Requirements for graduation (referred to on page 36) are summarized as follows:

1. 180 credits with at least a "C" average (2.0) in courses taken at the University of South Florida. At least 60 of these 180 credits must be in courses numbered 3000 or above. (A maximum of four credits of physical education courses may be counted toward graduation requirements; no credits in physical education are required.)

2. 60 hours of general distribution courses as required by the University in the areas of English Composition, Fine Arts and Humanities, Mathematics and Quantitative Methods, Natural Sciences, and Social and Behavioral Sciences. (See General Distribution Requirements, page 35).

3. Completion of a major in a subject or an integrated major, with at least a "C" average (2.0). (See following pages for requirements in specific majors offered in the college.)

4. 120 credits outside the major, including 62 credits outside the College of Social and Behavioral Sciences. These requirements are designed to insure breadth of academic experience.

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

6. A student must complete at least 45 of the last 90 credits in academic residence at USF. The approval of the dean of the college granting the degree must be secured for any transfer credits offered for any part of these last 90 hours.

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

**Programs Leading to the Baccalaureate Degree**

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

A Bachelor of Arts Degree is offered in the following:

- Afro-American Studies (AFA)
- Anthropology (ANT)
- Criminal Justice (CJ)
- Economics (ECN)
- Geography (GPY)
- History (HTY)
- Interdisciplinary Social Sciences (SSI)
International Studies (INT)
Political Science (POL)
Psychology (PSY)
Sociology (SOC)

Social Science Education (SSE)*
A Bachelor of Social Work Degree (B.S.W.) is also offered.
Social Work (SOK)

*Offered jointly with the College of Education.

GRADUATE LEVEL DEGREE PROGRAMS

Master's Degree Programs

Graduate level courses are now offered in most social and behavioral science areas. The Master of Arts Degree is offered in the following:

- Anthropology (ANT)
- Criminal Justice (CCJ)
- Geography (GPY)
- Gerontology (AGE)*
- History (HTY)
- Political Science (POL)
- Psychology (PSY)
- Rehabilitation Counseling (REH)
- Post-Baccalaureate
- Rehabilitation Counseling (REF)
- Interdisciplinary Social Sciences
- Sociology (SOC)

*A Master of Public Administration Degree (M.P.A.) is also offered.
Public Administration (PAD)
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) in the college offers a Master of Science Degree in the following:

- Audiology (AUD)
- Post-Baccalaureate
- Audiology (AUF)
- 5-year program
- Aural (Re) Habilitation (ARH)
- Post-Baccalaureate
- Aural (Re) Habilitation (ARF)
- 5-year program
- Speech Pathology (SPS)
- Post-Baccalaureate
- Speech Pathology (SPP)
- 5-year program

Doctor of Philosophy

The Department of Psychology offers a program leading to the degree of Doctor of Philosophy.

SPECIAL NON-DEGREE PROGRAMS

The AGING STUDIES undergraduate program consists of a core of courses designed for interested students. These courses are GEY 3000, GEY 3100, GEY 4930. Additional information will be found in the Aging Studies Program section of the catalog.

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

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

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

- HUS 3010
- HUS 4500
- MHT 4302
- HUS 3300
- HUS 5224
- SOW 4332
- HUS 4020

Academic Minor Programs

The College of Social and Behavioral Sciences offers minors in the following fields: Afro-American Studies, Anthropology, Geography, History, International Studies, Political Science, Sociology, and Women's Studies. (See following pages for requirements in specific minors offered in the college.) There are certain restrictions that apply to students earning a minor in the College of Social and Behavioral Sciences: (1) students who major and minor in the College of Social and Behavioral Sciences may not use courses in the major or the minor for general distribution requirements; (2) only degree-seeking students may earn a minor in the social and behavioral sciences; and (3) SSI majors may not earn a minor in any of the social and behavioral sciences.

Certificate in Latin American Studies

The College of Social and Behavioral Sciences also offers a Certificate in Latin American Studies for students who wish to gain an intensive multidisciplinary understanding of this important area.

A minimum of 32 quarter hours is required of all students seeking such a certificate. Of these, at least 16 must be planned around the following core courses:

- GEA 4400 Geography of Latin America
- LAH 3022 Modern Latin America
- CPO 4930 Comparative Government and Politics (Latin America)
- SPT 3131 Spanish American Literature in Translation; or equivalent in original language.

The remaining 16 hours must be selected from other specified courses with Latin American content, a list of which is available from the Latin American Studies Coordinator.

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

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

AFRO-AMERICAN STUDIES (AFA)

Afro-American Studies Program provides a quality undergraduate education leading to a Bachelor of Arts degree in Afro-American Studies. Essentially it is a service program which provides opportunities for all students to broaden the bases of their knowledge of the entire human experience and intercultural understanding so essential to living in a multi-racial society and a world that has become a global village. It provides a new horizon in liberal education that seeks reunification of the knowledge of human experience and strikes at the narrowness and ethnocentrism of the traditional disciplines which have contributed much to race prejudice and misunderstanding. Part of its mission is to assist its black student clientele to achieve a more dignifying identity and fuller participation in the mainstream of American life. It attempts to help them to develop a greater awareness of themselves and their talents and to provide them educational and research opportunities necessary for the acquisition of understanding of political and economic realities and tools that must enable black people and other minorities to become effective determinants of their own political and economic life.

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

Requirements for the B.A. Degree:

The major in Afro-American Studies consists of a minimum of 56 hours in the field specified as follows:

**Required Core Courses (20 cr. hrs.)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>AFA 2001</td>
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</tr>
<tr>
<td>AFH 3100</td>
<td>4</td>
</tr>
<tr>
<td>AMH 3572</td>
<td>4</td>
</tr>
<tr>
<td>AMH 3571</td>
<td>4</td>
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**Required Supporting Courses (12 cr. hrs.)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>AFA 4150</td>
<td>4</td>
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<tr>
<td>AFS 3111</td>
<td>4</td>
</tr>
<tr>
<td>ECP 4143</td>
<td>4</td>
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<tr>
<td>PHM 4120</td>
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</tbody>
</table>

**Suggested Elective Courses (24 cr. hrs.)**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>AFA 4331</td>
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<tr>
<td>AFS 4321</td>
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<tr>
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<tr>
<td>CPO 4204</td>
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<tr>
<td>INR 4254</td>
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<tr>
<td>AFA 4900</td>
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<tr>
<td>CPO 4244</td>
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<tr>
<td>PUP 3313</td>
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<tr>
<td>AFA 4931</td>
<td>1-4</td>
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<tr>
<td>CPO 4254</td>
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Majors must maintain a minimum of 2.0 average and are also responsible for fulfilling College and University general education requirements.

Requirements for the Minor:

Afro-American Studies Program offers minors in African and Afro-American Studies to meet the interests of students. Each minor comprises twenty eight (28) quarter hours, exactly one-half of the upper division credits required for a major. Requirements for the minors are as follows:

**Afro-American Studies Option I (Minimum of 28 hours):**

**Required Core Courses (12 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
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<tr>
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<tr>
<td>or AFH 3200</td>
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<tr>
<td>One of:</td>
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<tr>
<td>AMH 3571</td>
<td>4</td>
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<tr>
<td>or AMH 3572</td>
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**Electives (16 hours) selected from:**

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<tr>
<th>Course</th>
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<tbody>
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<td>AHM 3571</td>
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**Afro-American Studies Option II (Minimum of 28 hours):**

**Required Core Courses (16 hours)**

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<td>PUP 3313</td>
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</table>

**Electives (12 hours) selected from:**

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<th>Credits</th>
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<tbody>
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<tr>
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<tr>
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<tr>
<td>ECP 4143</td>
<td>4</td>
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<tr>
<td>PHM 4120</td>
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</tbody>
</table>

**Afro-American Studies (Minimum of 28 hours)**

**Required Core Courses (16 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>AFH 3100</td>
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<tr>
<td>CPO 4204</td>
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<td>CPO 4254</td>
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<tr>
<td>HUM 3420</td>
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</tbody>
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AGING STUDIES (AGE)

Undergraduate Program

Although no baccalaureate degree in gerontology is offered, the Aging Studies Program does provide a core of four courses at the undergraduate level. These courses range from Introduction to Gerontology to Seminar in Selected Topics in Social Gerontology, and are designed as electives for students from a variety of areas, particularly the human service areas. More generally, the objective of the sequence of undergraduate courses is to provide students with a broad educational experience in gerontology.

The Human Services Courses

The Human Services Courses are designed for students interested in careers in the human sciences and services, and may be taken in conjunction with any major, or by special students. They are closely related to our Urban Community Psychology and Gerontology Program of Distinction and will be taught by qualified faculty from the various disciplines within the college. The Human Services sequence is coordinated by the Aging Studies Program.

Center for Applied Gerontology

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

Graduate Program

The primary objective of the graduate program in aging is to train personnel for leadership positions in the planning, development, delivery, and evaluation of community services for older persons. In keeping with this objective, the program offers a broad range of cross-disciplinary courses. As an important part of the training process, each graduate student spends a supervised internship for one academic quarter in a community agency or facility which provides services for older persons. A Master of Arts degree in Gerontology is awarded upon satisfactory completion of the requirements.

Requirements for the M.A. Degree in Gerontology

The M.A. degree requires five quarters of full-time study — or the part-time equivalent thereof — including one quarter of supervised field experience. The courses in the degree program were developed specifically to meet the objectives of the program and are offered under the Aging Studies Program. The M.A. degree in Gerontology requires a minimum of 54 credit hours in approved
Aging Studies courses. Prior to beginning the program, each student will confer with a departmental adviser who will thoroughly review the student's academic background, experience, and career interests and develop an approved, individualized curriculum from the available Aging Studies courses.

Required courses for the M.A. degree include:
GEY 6930 (2) GEY 6932 (2) GEY 6940 (12)
GEY 6931 (1) GEY 6933 (2)

Majors are also required to take a minimum of 34 hours from the following:
GEY 5250 (4) GEY 5642 (4) GEY 6450 (4)
GEY 5350 (4) GEY 5645 (4) GEY 6460 (4)
GEY 5600 (4) GEY 5901 (1-3) GEY 6500 (4)
GEY 5610 (4) GEY 6325 (4) GEY 6643 (4)
GEY 5620 (4) GEY 6390 (4) GEY 6911 (1-6)
GEY 5630 (4) GEY 6391 (4) GEY 6912 (1-6)

There are no language or thesis requirements. However, following completion of the necessary coursework, there will be a comprehensive examination designed to test the student's knowledge of and ability to integrate key concepts and information in the field of gerontology. This examination must be taken and passed before the student begins the required field placement.

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 or have a minimum score of 900 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
3. An M.A. in a related field from an accredited university may be accepted in lieu of undergraduate grade point requirements and Graduate Record Examination score requirements
4. Applicants with significant experience and demonstrated commitment to the field of aging may be approved for admission in lieu of one or more of the above listed requirements.

Special consideration may be given to mature students (25 years of age or older) who demonstrate commitment to or experience in the field of aging.

In addition to the University Graduate Studies application, a program application is required and should be obtained from the Aging Studies Program. Entering full-time students are ordinarily admitted only in the Fall Quarter (September) each year. At that time a new cycle of courses begins.

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

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

The major in Anthropology consists of a minimum of 48 credit hours including 44 credit hours in the field and the course Social Sciences Statistics (STA 3122) or its equivalent. ANT 2000 is prerequisite to all subsequent courses. ANT 3100, ANT 3410, ANT 3511 and ANT 3610 are required as intermediate level training in the main subdivisions of the field, and ANT 4034 and ANT 4935 complete the specific requirements. Majors are required to complete a minimum of 16 hours of elective coursework, 12 hours of which must come from three of the following four subdivision clusters:

Cluster I (Archaeology)
ANT 4133 (4) ANT 4172 (4) ANT 4124 (5)
ANT 4153 (4) ANT 4181 (5) ANT 4158 (5)
ANT 4162 (4) ANT 4182 (4) ANT 4180 (5)
ANT 4163 (4)

Cluster II (Physical Anthropology)
ANT 4542 (4) ANT 4552 (4) ANT 4583 (4)
ANT 4586 (4)

Cluster III (Anthropological Linguistics)
ANT 4620 (4) ANT 4750 (4)

Cluster IV (Cultural Anthropology)
ANT 4226 (4) ANT 4316 (4) ANT 4462 (4)
ANT 4231 (4) ANT 4326 (4) ANT 4495 (4)
ANT 4241 (4) ANT 4340 (4) MUH 4521 (4)
ANT 4302 (4) ANT 4367 (4) ANT 4705 (4)
ANT 4305 (4) ANT 4432 (4)
ANT 4312 (4) ANT 4442 (4)

The remaining 4 minimum elective hours may come from any of the department's elective offerings, including ANT 4901 (1-6), ANT 4907 (3-6), ANT 4930 (4), and those in the clusters described above. Anthropology majors are 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.)

The context includes emphasis in applied anthropology coursework and a practicum course in which the student applies anthropological method and theory in off-campus settings.

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

The primary objective of the graduate program is to provide both basic education and specialized training in several specific fields of applied anthropology (medical and urban anthropology, public archaeology), which will enable the graduate to render valuable and substantive service at local, state, national and international levels in a context of non-academic, non-teaching employment. Graduates will be capable of assuming vital positions in the various agencies and institutions charged with understanding and acting on the complex problems which beset our society.

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.

The major in Anthropology consists of a minimum of 48 credit hours including 44 credit hours in the field and the course Social Sciences Statistics (STA 3122) or its equivalent. ANT 2000 is prerequisite to all subsequent courses. ANT 3100, ANT 3410, ANT 3511 and ANT 3610 are required as intermediate level training in the main subdivisions of the field, and ANT 4034 and ANT 4935 complete the specific requirements. Majors are required to complete a minimum of 16 hours of elective coursework, 12 hours of which must come from three of the following four subdivision clusters:

Cluster I (Archaeology)
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Required Core Courses (28 cr. hrs.)

ANT 2000 (4) ANT 3511 (4) ANT 4034 (4)
ANT 3100 (4) ANT 3610 (4) ANT 4935 (4)
ANT 3410 (4)
Requirements for the Minor in Anthropology

The minor in Anthropology consists of a minimum of 24 credit hours with a "C" average (2.0), distributed among three areas. Students will normally progress through these areas in the order listed below, selecting courses prerequisite or otherwise appropriate to courses desired in subsequent areas. Exceptions to this pattern must be approved by the department's undergraduate adviser. Students are urged to consult with the major and minor student advisers to create the most beneficial specific set of courses.

A. 2000-level required core course (4 cr. hrs.)
   - ANT 2000 (4)
B. 3000-level subfield courses (4-8 cr. hrs.)
   - ANT 3100 (4) ANT 3511 (4)
   - ANT 3410 (4) ANT 3610 (4)
C. 4000-level elective courses (12-16 cr. hrs.) (as described in Clusters I, II, III, and IV above)

Requirements for the Undergraduate Focus in Applied Anthropology

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

- ANT 4495 (4)
- ANT 4705 (4)
- ANT 4442 (4)
 or
- ANT 4462 (4)

In addition, the student must take ANT 4907 (4), the setting in which the off-campus practicum is pursued. A departmental Letter of Achievement is awarded upon graduation and successful completion of Focus requirements with a "B" average (3.0). Information regarding admission into the Focus program may be obtained from the department undergraduate adviser.

Requirements for the M.A. Degree

General requirements for graduate work are listed on page 46 and should be studied carefully.

The student must complete 49 quarter hours of graduate course work. 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 graduate level statistics course, for a minimum of six quarter hours, chosen in mutual agreement by the student and his/her adviser; successfully pass the comprehensive examination; undertake directed research (internship); and write a thesis. The student must maintain a "B" average in all course work. In addition, the program requires a "B" average for the four core seminars before the student can proceed to take the comprehensive examination.

I. Courses Required of All Students

A. Core Courses
   - ANT 6186 (4) ANT 6588 (4)
   - ANT 6490 (4) ANT 6676 (4)
B. Additional Requirements
   - Two graduate-level courses normally taken outside the department; one graduate-level statistics course;
C. ANT 6915 (1-15) ANT 6971 (1-9)

II. Courses in One of Three Tracks

A. Medical Anthropology Track
   - ANT 6463 (4) ANT 6737 (4)
B. Urban Anthropology Track
   - ANT 6446 (4) ANT 6448 (4)
   - ANT 6447 (4)
C. Public Archaeology Track
   - ANT 6196 (4) ANT 6198 (4)
   - ANT 6197 (4)

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

A Master of Science degree is offered through the Department of Communology 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)Habilitation. Students may apply for acceptance in the M.S. degree program upon attaining—junior class standing, completion of the basic departmental core curriculum with a 3.0 grade point average, submitting cumulative Graduate Record Examination scores of 850 or greater (Verbal/Quantitative), and demonstrating competency in communication skills as determined by the chairperson or his/her delegate. Students may not apply for the 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 with appropriate prerequisite coursework will be eligible for admission if the following minimal requirements are met:

1. Submission of a cumulative score of 1000 or greater for the GRE aptitude tests (Verbal/Quantitative) plus a grade point average of 3.0 (A=4.0) for the last half of their undergraduate course work.
2. Submission of three satisfactory letters of recommendation for graduate study, and
3. Demonstration of competency in communication skills as determined by the Chairperson or his/her delegate.

Requirements for the M.S. Degree in Speech Pathology — Post-Baccalaureate (SPP)

General requirements for graduate work are already delineated by the University's Division of Graduate Studies. A minimum of 45 credits is required as well as completion of sufficient coursework and practicum to meet the American Speech and Hearing Association's requirement for clinical certification in speech pathology. The attainment of clinical competency as determined by a minimum GPA of 3.0 in Graduate Practicum and the approval of a majority of the academic staff of the Department of Communology is also required for graduation. The student with an existing bachelor's degree and appropriate prerequisites may plan his/her degree program from among the following courses with approval of the department chairperson or his/her delegate:

SPA 4333 (3) SPA 6245 (4)
SPA 5002 (6) SPA 6322 (6)
SPA 5131 (6) SPA 6332 (6)
SPA 5201 (4) SPA 6335 (3)
SPA 5210 (4) SPA 6410 (4)
SPA 5222 (4) SPA 6423 (6)
SPA 5303 (6) SPA 6505 (1-12)
SPA 5402 (4) SPA 6825 (4)
SPA 5550 (6) SPA 6930 (4)
SPA 5552 (6) SPA 6910 (var.)
SPA 5557 (1-12) SPA 6971 (6)
SPA 6231 (4)
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:

- LIN 3010 (4) SPA 5402 (4)
- LIN 4040 (4) SPA 5550 (6)
- LIN 4710 (4) SPA 5552 (6)
- SPA 3020 (6) SPA 5557 (1-12)
- SPA 3080 (6) SPA 5600 (4)
- SPA 3101 (6) SPA 6305 (4)
- SPA 3105 (6) SPA 6307 (4)
- SPA 3106 (6) SPA 6322 (6)
- SPA 3107 (6) SPA 6332 (6)

In addition, sufficient and appropriate coursework (approved by the chairperson or his/her delegate) will be included to meet the preparation requirements of the American Speech and Hearing Association for the Certificate of Clinical Competence. The attainment of clinical competence as determined by a minimum GPA of 3.0 in Graduate Practicum and the approval of a majority of the academic staff of the Department of Communicology is also required for graduation.

Requirements for the M.S. Degree in Audiology — Post Baccalaureate (AUD)

General requirements for graduate work are already delineated by the University's Division of Graduate Studies. A minimum of 45 credits is required 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. The attainment of clinical competence as determined by a minimum GPA of 3.0 in Graduate Practicum and the approval of a majority of the academic staff of the Department of Communicology is also required for graduation. Students may plan programs with emphasis in the areas of preschool, school age, multiply 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 the following:

- SPA 4333 (3) SPA 6332 (6)
- SPA 4363 (6) SPA 6335 (3)
- SPA 5002 (6) SPA 6345 (4)
- SPA 5201 (4) SPA 6423 (6)
- SPA 5303 (6) SPA 6505 (1-12)
- SPA 5402 (4) SPA 6825 (4)
- SPA 5557 (1-12) SPA 6910 (var.)
- SPA 6305 (4) SPA 6971 (6)
- SPA 6322 (6) SPA 6971 (6)

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:

- LIN 3010 (4) SPA 5402 (4)
- LIN 4040 (4) SPA 5600 (4)
- LIN 4710 (4) SPA 6305 (4)
- SPA 3020 (6) SPA 6307 (4)
- SPA 3080 (6) SPA 6322 (6)
- SPA 3101 (6) SPA 6332 (6)
- SPA 3110 (6) SPA 6345 (4)
- SPA 4050 (1-12) SPA 6354 (4)
- SPA 4333 (3) SPA 6423 (6)
- SPA 4363 (6) SPA 6505 (1-12)
- SPA 5002 (6) SPA 6825 (4)
- SPA 5132 (6) SPA 6910 (var.)
- SPA 5303 (6) SPA 6971 (6)

In addition, sufficient and appropriate coursework (approved by the department chairperson or his/her delegate) must be included to meet the preparation requirements of the American Speech and Hearing Association for the Certificate of Clinical Competence in Audiology. The attainment of clinical competence as determined by a minimum GPA of 3.0 in Graduate Practicum and the approval of a majority of the academic staff of the Department of Communicology is also required for graduation.

Requirements for the M.S. Degree in Aural (Re)Habilitation — Post Baccalaureate (ARH)

General requirements for graduate work are already delineated by the University's Division of Graduate Studies. A minimum of 45 credits is required 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. The attainment of clinical competence as determined by a minimum GPA of 3.0 in Graduate Practicum and the approval of a majority of the academic staff of the Department of Communicology is also required for graduation. Students may plan programs with emphasis in the areas of preschool, school age, multiply 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 the following:

- SPA 4333 (3) SPA 6332 (6)
- SPA 4363 (6) SPA 6335 (3)
- SPA 5002 (6) SPA 6345 (4)
- SPA 5201 (4) SPA 6423 (6)
- SPA 5303 (6) SPA 6505 (1-12)
- SPA 5402 (4) SPA 6825 (4)
- SPA 5557 (1-12) SPA 6910 (var.)
- SPA 6305 (4) SPA 6971 (6)
- SPA 6322 (6) SPA 6971 (6)

Requirements for the Combined Undergraduate/Graduate M.S. Degree in Aural (Re)Habilitation (ARF)

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. The attainment of clinical competence as determined by a minimum GPA of 3.0 in Graduate Practicum and the approval of a majority of the academic staff of the Department of Communicology is also required for graduation. Students may plan programs with emphasis in the areas of preschool, school age, multiply handicapped, and adult hearing impaired. In addition to the General Distribution requirements all teachers 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:

- LIN 3010 (4) SPA 5557 (1-12)
- LIN 4040 (4) SPA 6305 (4)
- LIN 4710 (4) SPA 6322 (6)
- SPA 3020 (6) SPA 6332 (6)
- SPA 3080 (6) SPA 6335 (3)
- SPA 3101 (6) SPA 6345 (4)
- SPA 3110 (6) SPA 6354 (4)
- SPA 4333 (3) SPA 6423 (6)
CRIMINAL JUSTICE (CCJ)

The major in criminal justice provides students with an in-depth exposure to the total criminal justice system including law enforcement, detention, the judiciary, corrections, and probation and parole. The program concentrates on achieving balance in the above aspects of the system from the perspective of the criminal justice professional, the offender, and society.

The objective of the graduate program in criminal justice is to develop a sound educational basis for professional training in one or more of the specialized areas comprising the modern urban Criminal Justice System.

Requirements for the B.A. Degree:

A minimum of 53 quarter hours is required of all undergraduate majors* in Criminal Justice including the following courses or their equivalents:

- CCJ 3020 (5) CCJ 3610 (8) CCJ 4934 (3)
- CCJ 3280 (4) CCJ 3620 (4) CCJ 4940 (12)

In addition to the above, a minimum of 17 hours in Criminal Justice selected by the student complete the requirements.

*In-service students are required to take only 4 hours of CCJ 4940, thus reducing their major course credits to 45 quarter hours.

Any student who receives a grade of "D" or lower in more than one USF CCJ course will be automatically barred from continuing as a Criminal Justice major. This applies only to students whose first USF CCJ course was taken during Fall Quarter (I) 1975 or thereafter.

Students electing to major in Criminal Justice as of Quarter I (Fall 1978) will be required to obtain a score acceptable to the Department of Criminal Justice on an English proficiency test. This performance requirement must be met before the student completes 13 CCJ hours.†

†Approval Pending.

Requirements for the M.A. Degree:

University requirements for graduate study are given on page 46. Additionally, each graduate applicant should submit three letters of recommendation, a letter of intent to the Department of Criminal Justice, and show successful completion of an acceptable undergraduate social science introductory statistics course or equivalent.

Admission into graduate courses and/or the graduate program is contingent upon demonstrated proficiency in the English language, as determined by the department. Special provisions for meeting this requirement may be arranged for out-of-state applicants.

NOTE: Individuals who wish to take courses in the graduate program as "Special Students" should contact the Director of Graduate Studies for the department prior to their first class appearance. Such students will in general be prohibited from enrolling in CCJ 6910.

Further information may be obtained by contacting the Director of Graduate Studies of the Department of Criminal Justice.

Requirements for graduation for all M.A. candidates will consist of:

1. 45 credits of CCJ course work (or approved equivalents) which include:
   - CCJ 6285 (4) CCJ 6705 (4) CCJ 6946 (4)
   - CCJ 6605 (4) **CCJ 6920 (1)

2. Completion of a thesis; CCJ 6971

*Should be taken first quarter in the program.

3. Completion of an oral defense of the thesis (occurs after the final draft of the thesis has been accepted by the student's committee).

All course work counted toward the degree must have the prior approval of the student's major professor and the Director of Graduate Studies in the Criminal Justice program.

ECONOMICS (ECN)

Requirements for B. A. Degree

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 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. These 48 credits include:

- ECO 2013 (4) ECO 3203 (5) GEB 2111 (3)
- ECO 2023 (4) ECO 4303 (5) GEB 3121 (5)
- ECO 3101 (5)

Economics majors working at the regional campuses cannot expect to fulfill all economics course requirements at those regional campuses.

In addition to this core, students are encouraged to select 3000-level courses in several of the applied areas during their junior year. The remaining economics electives must be selected from those upper level courses that provide the type of program that best meets the students' interests and objectives. Additional flexibility in pursuing these interests is provided by the ECO 4905 and ECO 4914 courses. However, not more than 10 hours of credit may be earned in ECO 4905 and ECO 4914.

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 students 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 student's program. Thus students have the option of broad interdisciplinary programs, a general grounding in many areas of economics, or a more concentrated area 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.

GEOGRAPHY (GPY)

Requirements for the B.A. Degree:

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

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

Students are encouraged to take elective credits in a wide variety of disciplines because of the cross-disciplinary approach of geography. Both social and natural sciences are recommended.

Geography majors generally teach or work in various planning, resource management, or consulting agencies, both private and governmental at all levels—local, state, and federal.

A major in geography consists of 50 credit hours as follows:

**Required core courses (40 cr. hrs.)**

- GEA 3000 (5)
- GEO 3402 (5)
- GEO 4500 (5)
- GEO 3013 (5)
- GEO 4100C(5)
- MET 4010C(5)
- GEO 3370 (5)

Plus a regional course of student's choice such as Asia, Africa, Europe, etc. and ten credit hours in geography courses numbered 4000-5000.

**Requirements for the Minor:**

A minor in Geography is basically a name given to a set of geography courses taken by a student that totals one-half of the upper division credits required for a major. Twenty-five credit hours consisting of the following courses must be completed with a minimum grade point average of 2.0:

- GEA 3000
- GEO 3013
- GEO 3370
- GEO 3402

One upper level elective (GEA, GEO, MET, or URP 4000-5000 level)

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

General requirements for graduate work are given on page 46. 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:

- GEA 6195
- GEO 5166C
- GEO 6209C
- GEO 6971
- GEO 5065
- GEO 5945C
- GEO 6428

Up to eight credits outside the department may be elected with the approval of the student's committee and major professor.

**Non-Thesis Program:** The 45 credit hours in geography must include:

- GEA 6195
- GEO 5166C
- GEO 6209C
- GEO 6945
- GEO 5065
- GEO 5945C
- GEO 6428
- GEO 6947

Up to four credits outside the department may be elected with the approval of the student's committee and major professor.

**HISTORY (HTY)**

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

A minimum of 48 quarter hours is required for a major in history, 16 hours of 2000 level courses, or their equivalent, constitute the lower level requirements. HIS 4070, 4152, and 4936 constitute the upper level requirements for the degree. At least 20 hours of course work must be drawn from the 3000-4000 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 ENC 3466, "Advanced Expository Writing," SPC 2023, "Fundamentals of Speech Communication," LIS 2001, "Use of the Library," and 27 quarter hours drawn from the following disciplines: Afro-American Studies, Anthropology, Economics, Geography, Political Science, Interdisciplinary Social Sciences, Psychology, Philosophy, Sociology, Literature, the Humanities, and the Fine Arts. Majors intending to pursue graduate work should take a minimum of two years of classical or modern foreign language.

**Requirements for the Minor:**

The Department of History offers two options for students interested in the minor in History. **Option one** requires 20 hours of history courses at the 3000 and 4000 level drawn from a minimum of three of the following fields: a) Ancient; b) Medieval; c) Modern European; d) United States; e) Non-Western; Latin American, Asian, African. **Option two** entails a 20-hour program organized and contracted by the student and the department around the specific needs of the student's major program. In both plans, a minimum of 12 hours must be completed at the University of South Florida and the student must maintain a 2.0 GPA in the minor. Certification of the minor will be supervised by the department. Students interested in a minor in history are encouraged to see the History department adviser as early in their undergraduate program as possible.

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

The Department of History offers both a thesis and non-thesis Master of Arts degree organized around the following fields:

**Field I:** American History to 1877
**Field II:** American History Since 1877
**Field III:** Ancient/Medieval
**Field IV:** Early Modern Europe to 1789
**Field V:** Modern Europe Since 1789
**Field VI:** Latin America

The thesis degree program emphasizes preparation for further graduate study. The non-thesis degree program is designed to meet the needs of those students seeking a terminal degree at the Masters level.

In addition to the general requirements of the University, a candidate is required to complete a total of 48 hours in the following distribution: 8 hours of core courses; 16 hours in a major field in history; 8 hours in a minor field; and 8 hours of electives inside or outside the Department of History. Additionally, students in the thesis degree program will be expected to complete the remaining 8 hours in thesis credits. Non-thesis degree students must complete the remaining hours of their program in 6000 level courses.

Of the 48 hours required for the Master of Arts, at least 30 must be in formal, regularly scheduled course work. A minimum of 24 must be at the 6000 level. Subject to the satisfaction of additional requirements, courses at the 5000 level are acceptable as part of a planned degree program. In special circumstances major advisers may approve up to 8 hours at the 4000 level with the definite understanding that additional and superior work will be required of the graduate student. The core courses, HIS 6112, "Analysis of Historical Knowledge," and HIS 6113, "Theory and Interpretation," are required of all M.A. students.

A reading proficiency in one foreign language must be demonstrated by students in the thesis degree program. A satisfactory preparation in the core course program, two fields, and the completion of a comprehensive examination are required of all M.A. students for graduation.

Upon admission into the graduate program, the M.A. students will select an adviser in their anticipated major field of study. Students will arrange their programs and schedules of appropriate courses with their major adviser. Additionally, the student in consultation with the adviser solicits two other members to serve on a guidance committee.

**INTERDISCIPLINARY SOCIAL SCIENCES (SSI/INT)**

The Department of Interdisciplinary Social Sciences offers two academic majors: the College major (Interdisciplinary Social
Sciences), which is administered by the Coordinator of Advising in the college, and the major and minor in International Studies which are administered by the department. It offers a non-degree program and a minor in Women's Studies and a series of interdisciplinary social science core courses; it also administers the Off-Campus Term Program. Requirements for the Interdisciplinary Social Science major, the International Studies' major and minor, and the minor in Women's Studies are described below.

The College Major (SSI)

Requirements for the B.A. Degree:
The college major offers students whose educational and vocational interests and objectives cross disciplinary lines an opportunity to undertake a program of study individually designed to serve those interests and objectives. That program of study must include 64 credits in courses offered in the college of which 12 must be in the course offerings of the Department of Interdisciplinary Social Science and one of these must be STA 3122, Social Science Statistics. At least 40 of the 64 hours required must be upper level. Within these parameters each student's program of study is to be evolved in consultation with and must be formally approved by the major adviser, who is the Coordinator of Advising. 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 multi-disciplinary focus. The choice of areas of concentration and of courses within them is to be directly related to the educational goals of the student such as to provide an educational experience of excellent quality.

International Studies (INT)

Requirements for the B.A. Degree:
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.

Required Core Courses (24 cr. hrs.)
SSI 3221 (4) SSI 4250 (4) SSI 4936 (4)
SSI 3260 (4)

One of the following:
AFS 3930 (4) ASN 3030 (4) LAS 3001 (4)
ASN 3000 (4) EUS 3000 (4)

One of the following with international content:
SSI 3930 (2-5) SSI 4900 (1-4) SSI 4910 (1-4)
The additional 24 credits (6 courses) required 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 3955 (1-9).

Minor in International Studies
The minor in International Studies is basically a name given to a set of International Studies courses taken by a student that totals one-half of the upper division level credits required for a major. The 24 credit hours constituting the minor shall consist of six courses as follows:
SSI 3221, America's Role in the World; SSI 3260, Communism in the Modern World; SSI 4250, The Emerging Nations; three upper level courses chosen from EUS 3000, Europe area study; LAS 3001, Latin America area study; ASN 3000, Asia area study; AFS 3930, Africa area study; ASN 3030, Middle East area study; and SSI 3930, Selected Topics in International Studies. Each student's program must be planned with the International Studies adviser, who is empowered to make appropriate substitutions when educationally justified.

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

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

Women's Studies Program
The Women's Studies Program offers a concentration of interdisciplinary courses focusing on the role of women in the modern world. Several of its courses are cross-listed with those of other departments, such as Anthropology and Psychology.

Minor in Women's Studies Program
An undergraduate minor in Women's Studies is available for those who wish to combine their selected majors with study of current research focusing on women. The courses are offered from a multi-discipline perspective, and many may be taken for credit in other departments as well. Requirements for the minor are a total of 24 hours, 24 of them in upper-level courses, and include:

4 credit hours, either WST 2010 (4), or WST 2011 (4);
24 credit hours, chosen from among the following:

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<th>Credits</th>
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<td>WST 3210</td>
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<tr>
<td>Either WST 4910 or WST 4900 (1-4)</td>
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POLITICAL SCIENCE (POL)

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

A minimum of 48 credit hours is required to satisfy the requirements of the major. Students must take the eight credit hours which make up the core curriculum, and, in addition, a total of 40 credit hours in political science, of which at least 16 credit hours must be in courses at or above the 4000 level. For instructional purposes, the political science curriculum is divided into seven fields. However, there are no field requirements. Students are free to select courses from any and all fields within the curriculum.

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

**Required Core Courses** (8 cr. hrs.)
- POS 2041 (4)
- POS 3713 (4)

**Electives from the seven fields** (40 cr. hrs.)

**Field I: Political Theory**
- POS 4204 (4)
- POT 3003 (4)
- POT 4064 (4)
- POS 5734 (4)
- POT 3013 (4)
- POT 4204 (4)
- POS 5764 (4)
- POT 4054 (4)
- POT 5626 (4)

**Field II: Comparative Government and Politics**
- CPO 3002 (4)
- CPO 4930 (4)
- CPO 5934 (4)
- CPO 4034 (4)

**Field III: International Relations**
- INR 3002 (4)
- INR 4334 (4)
- INR 5086 (4)
- INR 3102 (4)
- INR 4502 (4)

**Field IV: American National and State Governments**
- POS 2041 (4)
- POS 3273 (4)
- POS 4413 (4)
- POS 2112 (4)
- POS 3453 (4)
- POS 4424 (4)
- POS 3173 (4)
- POS 4233 (4)
- POS 5094 (4)
- POS 3182 (4)

**Field V: Urban Government and Politics**
- PAD 5807 (4)
- POS 4165 (4)
- PUP 4534 (4)
- POS 3142 (4)
- POS 5155 (4)
- URP 4050 (4)

**Field VI: Public Administration**
- PAD 3003 (4)
- PAD 5333 (4)
- PAD 5612 (4)
- PAD 4204 (4)
- PAD 5417 (4)
- PAD 5836 (4)
- PAD 5035 (4)

**Field VII: Law and Politics**
- INR 3403 (4)
- INR 3493 (4)
- POS 4624 (4)
- PAD 5605 (4)
- POS 3691 (4)
- POS 4693 (4)
- POS 3284 (4)
- POS 4614 (4)
- POS 5699 (4)

The following courses are not included within any of the seven fields, but may still be used as elective hours:
- POS 4905 (1-5)
- POS 4941 (4)
- POS 4910 (1-8)
- POS 4970 (4)
- POS 4936 (4)

**Requirements for a Minor in Political Science**

A minor in political science consists of 24 credit hours, made up of POS 2041 (4 credit hours) and an additional 20 credit hours of courses from the seven subfields in political science: Political Theory, Comparative Government and Politics, International Relations, American National and State Governments, Urban Government and Politics, Public Administration, and Law and Politics. At least 8 credit hours must be in courses at the 4000/5000 level. No more than 4 credit hours can be taken from POS 4910, POS 4941, POS 4970, and POS 4905. A GPA of 2.0 is required. Subject to these limitations, students may take any undergraduate course offered in political science. There are no field or sequence requirements.

**Field Work**

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

**Honors in Political Science**

Honors in political science is designed for the outstanding undergraduate who seeks an intensive program plus academic recognition during the senior year. Admission to the honors sequence, which is available to all undergraduate majors, will be controlled by grade point average, personal interviews and close scrutiny of the student's program and record. Students admitted will participate in an honors seminar, POS 4936 (4) and will write an honors thesis, POS 4970 (4).

**Pre-professional Plan in Political Science**

This plan is designed for students seeking an intensive undergraduate concentration in political science. Typically, students electing this plan will be oriented towards graduate work in political science or other social sciences. A minimum of 52 credit hours is required.

Students must take eight credit hours of required courses:
- POS 2041 (4)
- POS 3713 (4)

Eleven additional courses in political science (44 cr. hrs.) must be taken, of which at least seven must be above the 3000 level. Concentration within fields will be encouraged.

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

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

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 of Princeton, New Jersey.

The Law School Admission Test is given simultaneously several times each year at the University of South Florida and numerous other testing centers throughout the state. Students should plan to take the test no later than February of the year in which they make application to a law school. Information pamphlets and application forms for the test are obtainable from the Department of Political Science, University of South Florida.

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

**Requirements for the M.A. Degree**

The graduate program leading to the M.A. in political science is designed to offer advanced general instruction in political science and public administration on national, state, and local levels of government. It prepares its graduates for positions of responsibility in the public and private sectors as well as in research, teaching, and study at the doctoral level.

General requirements for graduate study are given on page

The student must complete a minimum of 45 credit hours of graduate level courses, of which at least 24 hours must be at the 6000 level. A minimum of 30 credit hours must be taken in formal,
regularly scheduled classes. Courses at the 5000 level are accepted for credit towards the degree when taken as part of a planned program, with the approval of the student’s adviser and the Department of Political Science.

A minimum of 28 credit hours must be taken in political science; eight credit hours of approved electives may be taken outside the department. All graduate students must write a thesis (nine credit hours) or petition for substitution with 12 credit hours of regular courses.

All students must pass a comprehensive examination in order to satisfy the degree requirements. This examination normally will be given following the completion of thesis. Students whose petitions for the non-thesis option have been approved will be permitted to take the examination upon successful completion of at least 40 credit hours.

Students who do not have an undergraduate major in political science, or its equivalent, may be admitted to the program upon the consent of the department. Such students may be asked to take additional courses beyond the minimum requirements. Students must be registered as full-time graduate students for at least one quarter of study.

Graduate students in the M.A. program are required to take the graduate core curriculum:

> POS 5734 (4) or POS 5764 (4) and POS 6706 (4)

For instructional purposes, the graduate curriculum in political science has been divided into seven fields:

**Field I Political Theory**

- PO5 5734 (4)
- PO5 6246 (4)
- PO5 6264 (4)
- PO5 6266 (4)

**Field II Comparative Government and Politics**

- CPO 5934 (4)
- CPO 6008 (4)
- CPO 6036 (4)

**Field III International Relations**

- INR 5086 (4)
- INR 6007 (4)
- INR 6107 (4)

**Field IV American National and State Governments**

- POS 5094 (4)
- POS 6127 (4)
- POS 6427 (4)

**Field V Urban Government and Politics**

- PAD 5807 (4)
- PAD 5915 (4)
- PUP 6338 (4)

**Field VI Public Administration**

- PAD 5035 (4)
- PAD 5836 (4)
- PAD 6207 (4)

**Field VII Law and Politics**

- PAD 5605 (4)
- PAD 6607 (4)
- PAD 6698 (4)

The following non-field courses may be used as elective hours:

- POS 6909 (1-5)
- POS 6942 (1-8)
- POS 6919 (var.)
- POS 6971 (9)
- POS 6934

More detailed instructions on specific programmatic requirements may be obtained from the Department of Political Science.

The plan of study for an M.P.A. student consists of the following course distribution:

1. **Twelve credit hours of core courses:**
   - PAD 6060
   - POS 5734
   - POS 5764

2. **Twenty credit hours in one of the three substantive areas:**
   - **Area I—National and State Administrative Systems:**
     - PAD 5035
     - PAD 5807
     - POS 6095
   - **Area II—Urban Administration:**
     - PAD 5333
     - PAD 6306
     - POS 6919
   - **Area III—Public Policy:**
     - PAD 5035
     - PAD 6207
     - POS 6919

3. **Twelve credit hours of electives with a minimum of 6 hours from the College of Business Administration and other courses to be designated by the Department.**

4. **Eight credit hours of Field Work: POS 6942**

Students must pass a comprehensive examination in the chosen substantive area. This examination may be oral or written, upon the recommendation of the student’s adviser and the consent of the department. Students may also petition the department for permission to substitute a thesis in place of the fieldwork requirement, according to procedures established by the Department.

### PSYCHOLOGY (PSY)

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

The faculty of the Psychology department is divided into...
regularly scheduled classes. Courses at the 5000 level are accepted for credit towards the degree when taken as part of a planned program, with the approval of the student's advisor and the Department of Political Science.

A minimum of 25 credit hours must be taken in political science; eight credit hours of approved electives may be taken outside the department. All graduate students must write a thesis (nine credit hours) or petition for substitution with 12 credit hours of regular courses.

All students must pass a comprehensive examination in order to satisfy the degree requirements. This examination normally will be given following the completion of thesis. Students whose petitions for the non-thesis option have been approved will be permitted to take the examination upon successful completion of at least 40 credit hours.

Students who do not have an undergraduate major in political science, or its equivalent, may be admitted to the program upon the consent of the department. Such students may be asked to take additional courses beyond the minimum requirements. Students must be registered as full-time graduate students for at least one quarter of study.

Graduate students in the M.A. program are required to take the graduate core curriculum:

- Areas: Social Science (Area I—National and State Administrative Systems, Area II—Urban Administration, Area III—Public Policy)
- Field: International Relations
- Field: Comparative Government and Politics
- Field: Political Theory
- Field: American National and State Governments
- Field: Urban Government and Politics
- Field: Law and Politics
- Field: Public Administration

For instructional purposes, the graduate curriculum in political science has been divided into seven fields:

Field I Political Theory
- POS 5734 (4)
- POS 5764 (4)
- POS 6706 (4)
- POS 6207 (4)

Field II Comparative Government and Politics
- CPO 5934 (4)
- CPO 6008 (4)
- CPO 6036 (4)
- CPO 6007 (4)

Field III International Relations
- INR 5086 (4)
- INR 6007 (4)
- INR 6107 (4)

Field IV American National and State Governments
- POS 5094 (4)
- POS 6127 (4)
- POS 6427 (4)
- POS 6045 (4)
- POS 6415 (4)
- POS 6455 (4)

Field V Urban Government and Politics
- PAD 5807 (4)
- PAD 5155 (4)
- PAD 6306 (4)
- PUP 6538 (4)
- PUP 6056 (4)

Field VI Public Administration
- PAD 5035 (4)
- PAD 5836 (4)
- PAD 6207 (4)
- PAD 5333 (4)
- PAD 6037 (4)
- PAD 6228 (4)
- PAD 5417 (4)
- PAD 5934 (4)

Field VII Law and Politics
- PAD 5605 (4)
- PAD 5612 (4)
- PAD 6060 (4)
- POS 5699 (4)

The plan of study for an M.P.A. student consists of the following course distribution:

1. Twelve credit hours of core courses:
   - PAD 6060
   - POS 5734
   - POS 5764

2. Twenty credit hours in one of the three substantive areas:
   - Area I—National and State Administrative Systems:
     - PAD 5035
     - PAD 5807
     - POS 6095
     - PAD 5333
     - PAD 5836
     - POS 6919
     - PAD 5417
     - PAD 6037
     - POS 6934
     - PAD 5605
     - PAD 6207
     - POS 6934
     - PAD 5612
   - Area II—Urban Administration:
     - PAD 5333
     - PAD 6306
     - POS 6919
     - PAD 5417
     - POS 5155
     - POS 6934
     - PAD 5807
     - POS 6095
     - PUP 6538
     - PAD 6207
     - POS 6157
     - URP 6056
     - PAD 6228
     - POS 6909
   - Area III—Public Policy:
     - PAD 5035
     - PAD 6207
     - POS 6919
     - PAD 5333
     - PAD 6306
     - POS 6934
     - PAD 5417
     - POS 6909
     - PUP 6007
     - PAD 6037

3. Twelve credit hours of electives with a minimum of 6 hours from the College of Business Administration and other courses to be designated by the Department.

4. Eight credit hours of Field Work: POS 6942

Students must pass a comprehensive examination in the chosen substantive area. This examination may be oral or written, upon the recommendation of the student's advisor and the consent of the department. Students may also petition the department for permission to substitute a thesis in place of the fieldwork requirement, according to procedures established by the Department.

- PSYCHOLOGY (PSY)

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

The faculty of the Psychology department is divided into
three broad program areas: Clinical-Community, Experimental-Physiological, and Industrial-Organizational. Each of these program areas offers M.A. and Ph.D. level training as well as instruction at the undergraduate level. Members of the Clinical-Community faculty offer coursework and training in the areas of abnormal psychology, developmental psychology, behavior modification, psychotherapy, personality, and psychological assessment. Individual research experience is also available to qualified students. Members of the Experimental-Physiological faculty provide coursework and, for qualified students, direct and extensive research experience, in the areas of comparative psychology, electrophysiology, learning and conditioning, human memory, perception, and information processing. Members of the Industrial-Organizational faculty offer coursework and special training in areas including selection, training and evaluation of employees, job motivation and satisfaction, small group analysis, organizational theory, and human factors.

Requirements for the B.A. Degree:

 Majors must complete at least 46 credit hours in the field. All majors must complete:

- PSY 2012 (4)
- PSY 3013 (4)
- PSY 3213 (5)
- PSY 3214 (5)

and select four courses as follows:

- CLP 4143 EXP 4204C
- or or
- PPE 4004 (4) or PSB 4013C (4)
- or or
- DEP 4005 EXP 4404
- or or
- SOP 4004 (4) or EXP 4523C (4)

In addition 12 elective credits in psychology courses must be completed. PSY 4205 (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 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, and the Graduate Program in Psychology Handbook, are available from the Chairperson, Graduate Admissions Committee, Department of Psychology, USF, Tampa, Florida 33620.

All graduate applicants are accepted to work toward the Ph.D. Work on the M.A. is considered as the initial portion of the Ph.D. Program. The M.A. is not intended to be the terminal degree.

Requirements for the M.A. Degree:

General requirements for graduate study, are given on pages 46-51.

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 6217. In addition, the student must complete a minimum of five of the following ten courses:

- CLP 6166 (5) EXP 6406 (5)
- PPE 6058 (5)
- DEP 6058 (5) EXP 6526 (5)
- PSB 6056 (5)
- EXP 6208 (5) INP 6056 (5)
- SOP 6059 (5)
- EXP 6307 (5)

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 6971, is required and the student must successfully pass an oral examination of the 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 72).

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 31.

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 substitutive areas currently approved are computer usage skills and electronics 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 as available for Ph.D. students in the Industrial-Organizational Psychology program.

REHABILITATION COUNSELING (REH/REF)

The mission of Rehabilitation Counseling is to help the disabled live normal and productive lives. Rehabilitation counselors work in a wide variety of human service settings, most frequently those serving the physically, mentally, or emotionally disabled. The Rehabilitation Counseling Program emphasizes training in the vocational, psychological, sociological, and medical aspects of disability. Graduates are prepared to work as both counselors and rehabilitation specialists.

The Rehabilitation Counseling Program at the University of South Florida leads to the M.A. degree. Most students are admitted after completing an undergraduate program in one of the behavioral, social, health related, or educational disciplines. There is some flexibility in that students may opt to enter the program while still University seniors.

The Rehabilitation Counseling Program is fully accredited by the Council on Rehabilitation Education, the national accrediting body for rehabilitation counselor training programs. Upon completing the program graduates are eligible to sit for the national certification examination of the Commission on Rehabilitation Counselor Certification. After passing this examination the graduate is registered with the commission as a Certified Rehabilitation Counselor (CRC).

Requirements for the M.A. Degree:

General requirements for graduate work are given on pages 46.

The M.A. program in Rehabilitation Counseling requires a minimum of 60 credit hours and offers the student the flexibility of entering while a University senior (REF) or after earning a baccalaureate degree (REH).

Minimum admission requirements for students electing the five-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, three letters of recommendation, and a personal interview. All General Distribution requirements must be completed and students 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, three letters of recommendation, and a personal interview.

The GRE must be taken by all students before applying to the program and the scores received by the department before the admission deadline. New students are accepted in Quarters I and III only, and the deadlines for completed applications are May 1 for Quarter I admission and December 31 for Quarter III admission.

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 five-year program. The following 50-hour core courses are consistent with national certification standards of rehabilitation counselors and must be taken by all students:

- EGC 5065 (5) EGC 6374 (3)
- EGC 5376 (5) EGC 6494 (4)
- EGC 5493 (4) EGC 6727 (5)
- EGC 5725 (5) EGC 6581 (2)
- EGC 5850 (2) EGC 6885 (10)
- EGC 6205 (5)

Additional hours to complete either the minimum of 60 credit hours or the minimum of 225 credit hours may be elected from other Rehabilitation Counseling 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.

## SOCIAL WORK (SOK)

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

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

The secondary objectives of the B.S.W. Program are:

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

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

The student will also become aware of the value base of the profession and engage in a self-examination process as it relates to the development and reflection of ethical and effective professional practice. The Social Work Program, as any professional program, places great emphasis on the development of a professionally responsible graduate in terms of one's obligations to the client system served, the profession itself, the organization in which one works, and to the general public which ultimately provides any profession with legitimacy.

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

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

### Admission to the Social Work Program

To be considered for admission to the B.S.W. Program as a major, a student must satisfy certain criteria. Specific admission criteria may be waived for a student who is a regular employee of a social service agency. In such instances, supporting documentation of skill and experience from the agency may be used in waiving a requirement. Generally, a student must meet the following requisites:

1. A student must be admitted to the University of South Florida.
2. A student must have filed a formal declaration of intent to major in Social Work with the College of Social and Behavioral Sciences, followed by a statement to the B.S.W. Program of intent to apply for admission into the program, at least one quarter in advance of application for admission.
3. A student must have completed all the General Distribution Requirements for the bachelor's degree and hold a minimum of Junior Class standing.
4. A student must have a minimal grade point average of 2.75 in transfer to USF or have achieved a minimal grade point average of 2.75 in work at USF.
5. A student must have completed at least one basic course in each of the following areas—economics, political science, psychology, and sociology.
6. A student must have completed the prerequisite course SOW 3302, Theory and Practice of Social Work I, with a minimum grade of "B".
7. A student must file a formal application for admission to the Social Work Program and provide the names and addresses of three persons who can serve as references to the student's character and abilities. Students will not be allowed to register for advanced coursework (SOW 3403, 4232, 4102, 4343, 4510, 4361, 4341, 4930) unless a completed admission application is on file with the Social Work Admissions Committee. Admission to advanced courses in subsequent quarters is contingent upon favorable action by the Admissions Committee.
8. A student must participate in a personal admissions interview with an Admissions Committee.
Waiver of the foregoing specific criteria may be considered by the Social Work Program upon presentation of documentation of extreme unusual circumstances. An example of such a circumstance might be a person who, though not currently employed in a social service agency, possesses a number of years of experience in the field.

Requirements for the B.S.W. Degree

1. Required Prerequisite for Admission to the Social Work Program
   
   SOW 3302 (4)

2. Social Work Practice Courses
   
   SOW 4341 (5) SOW 4343 (5)

3. Social Welfare Policy & Service Courses
   
   SOW 3203 (4) SOW 4232 (4)

4. Human Behavior and Social Environment Courses
   
   HUS 4020 (5) SOW 4102 (4)

5. Social Research Courses
   
   STA 3122 (4) SOW 3403 (4)

6. Directed Field Experience
   
   SOW 4510 (15)

7. Additional Requirements
   
   SOW 4361 (4) PAD 3003 (4)

   Approved Electives (8)

Summary:

| Core Courses | 47 credits |
| Field Experience | 15 |
| Approved Electives | 8 |

**70 credits**

**SOCIOTOLOGY (SOC)**

Sociology offers both a major and a minor.

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. Students should understand that sociology majors are not restricted to social work or even social action types of careers.

Careers for which a major in sociology seems appropriate, judging from those who have so majored and succeeded in their fields, cover a wide range of lines utilizing interpersonal relations. Law, for example, is well predicated on sociology. So are personnel related careers, as in counseling. Similarly, knowledge of social relations, social structure, and class differences appear valuable to the entire spectrum of sales opportunities. Generally speaking, any career dealing with the public in a direct or indirect way will benefit from training in sociology. The benefits derive either from the knowledge gained or the skills (as in interviewing, a fundamental aspect of any formal system of people interacting with each other), or both. Specific elective courses should reflect individual differences; and the student’s departmental major adviser will assist each one in making particular choices.

As an undergraduate minor, Sociology serves as a convenient body of knowledge and experience for a variety of disciplines. For the major in Mass Communications, for example, a Sociology minor would give some substance to stories and insights to backgrounds of stories thus enabling a reporter better to do an assigned job. Those majoring in Sales would similarly have an understanding of the process of whatever organization they work in or for, as well as a knowledge of the public. Similarly, students in advertising, politics, religion, counseling, aging studies, criminal justice, and related areas will find a sociological minor of particular value. Finally, those seeking to teach social studies at the high school level will find a minor in Sociology compatible with their interests.

Requirements for the Major (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 1020, MAF 2001, SOC 3696, SOC 4910. 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.)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 2000</td>
<td>4</td>
</tr>
<tr>
<td>SOC 3612</td>
<td>4</td>
</tr>
<tr>
<td>STA 3122</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 3500</td>
<td>4</td>
</tr>
</tbody>
</table>
Additional Requirements (8 cr. hrs.)

One course of:
- SOC 3800 (4)
- SOC 4850 (4)
- SOC 5825 (4)

One course of:
- SOC 3410 (4)
- SOC 3422 (4)
- SOC 4316 (4)

For students electing a major after having successfully taken 16 upper division credits without having had a formal introductory course, SOC 3422, Social Organization, may be substituted for SOC 2000 as a requirement. Students making this choice choose between SOC 3410 and SOC 4316 to meet the Additional Requirements stated above.

Requirements for a Minor:

A minor consists of a total of 20 credits: SOC 2000, Introduction to Sociology (or equivalent) plus 16 quarter hour credits at the 3000 level or higher. Though we do not require an adviser, feeling students to be capable of making reasonable choices, we recommend the use of an adviser to find the best set of courses fitting one’s personal interests.

Requirements for the M.A. Degree:

A minimum of 45 credit hours and a thesis.

Required Courses (23 cr. hrs.)

- SOC 6502 (4)
- SOC 6606 (4)
- SOC 6971 (8)
- SOC 6526 (5)
- SOC 6699 (2)

University requirements for graduate study are given on pages 46-51.

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 (STA 3122, SOC 3612, SOC 3500, or equivalent). Documents are sent to the Office of Admissions. Instructions for applicants are available from the Department of Sociology.
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 State Common Course prefix and number (see below), title of the course, and number of credits.

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

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

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

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

Credits separated by a hyphen indicates variable credit:

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

The abbreviation "var." also indicates variable credit:

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

The following abbreviations are utilized in various course descriptions:

- **GR** See Grades in the Graduate Program heading in the Division of Graduate Studies, p. 50.
- **PR** Prerequisite
- **CI** With the consent of the instructor
- **CC** With the consent of the chairperson of the department or program
- **CR** Corequisite
- **Lec.** Lecture
- **Lab.** Laboratory
- **Dem.** Demonstration
- **Pro.** Problem
- **Dis.** Discussion

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

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

- Afro-American Studies
- Aging Studies (Gerontology)
- American Studies
- Anthropology
- Art
- Astronomy
- Biology
- Botany
- Microbiology
- Zoology
- Business Administration
- Accounting
- Economics
- Finance
- Foundation Courses in Business (Graduate)
- General Business Administration
- Management
- Marketing
- Chemistry
- Communication
- Communicology
- Cooperative Education
- Criminal Justice
- Dance
- Education:
  - Art Education
  - Curriculum
  - Elementary Education
  - English Education
  - Exceptional Child Education
  - Foreign Language Education
  - Foundations
  - Guidance
  - Health Education
  - Humanities Education
- Junior College Education
- Library, Media, and Information Studies
- Measurement-Research-Evaluation Studies
- Music Education
- Natural Science-Mathematics Education
- Physical Education for Teachers
- Reading Education
- Social Science Education
- Speech Communication-English Education
- Vocational and Adult Education
- Engineering:
  - Basic and Interdisciplinary Engineering
  - Electrical Engineering
  - Energy Conversion and Mechanical Design
  - Industrial Systems
  - Structures, Materials, & Fluids
  - Computer Service Courses
  - Engineering Technology
- English
- Environment
- Foreign Languages:
  - General Foreign Languages
  - Arabic
  - Classics
  - French
  - German
  - Greek
  - Hebrew
  - Italian
  - Latin
- Portuguese
- Romance
- Russian
- Spanish
- Geography
- Geology
- History
- Honors Program
- Human Services
- Humanities
- International Studies Program
- Liberal Studies
- Marine Science
- Mass Communications
- Mathematics
- Medical Technology
- Medicine
- Medical Sciences
- Military Science
- Music
- Nursing
- Off-Campus Term
- Philosophy
- Physical Education, Elective
- Physics
- Political Science
- Psychology
- Rehabilitation Counseling
- Religious Studies
- Ancient Studies
- Social Sciences, Interdisciplinary
- Social Work
- Sociology
- Theatre
- Women’s Studies
Explanation of Florida's Common Course Numbering System

The course numbers appearing in this Catalog are part of a statewide system of prefixes and numbers developed for use by all public postsecondary and participating private institutions in Florida. One of the major purposes of this system is to make transferring easier by identifying courses which are equivalent, no matter where they are taught in the state. All courses designated as equivalent will carry the same prefix and last three digits.

The classifying and numbering of courses was done by community college and university faculty members in each academic discipline. Their work was reviewed by faculty members in all of Florida's postsecondary institutions who made suggestions and criticisms to be incorporated into the system.

The course numbering system is, by law, descriptive and not prescriptive. It in no way limits or controls what courses may be offered or how they are taught. It does not affect course titles or descriptions at individual schools. It seeks only to describe what is being offered in postsecondary education in Florida in a manner that is intelligible and useful to students, faculty and other interested users of the system.

The course numbering system was developed so that equivalent courses could be accepted for transfer without misunderstanding. Each public institution is to accept for transfer credit any course which carries the same prefix and last three digits as a course at the receiving institution. For example, if a student has taken SOC _000 at a community college, he cannot be required to repeat SOC _000 at the school to which he transfers. Further, credit for any course or its equivalent, as judged by the appropriate faculty force and published in the course numbering system, which can be used by a native student to satisfy degree requirements at a state university can also be used for that purpose by a transfer student regardless of where the credit was earned.

It should be noted that a receiving institution is not precluded from using non-equivalent courses for satisfying certain requirements.

General Rule for Course Equivalencies

All undergraduate courses bearing the same alpha prefix and last three numbers (and alpha suffix, if present) have been agreed upon to be equivalent. For example, an introductory course in sociology is offered in over 40 post secondary institutions in Florida. Since these courses are considered to be equivalent, each one will carry the designator SOC _000.

First Digit

The first digit of the course number is assigned by the institution, generally to indicate the year it is offered — e.g., 1 indicates freshman year, 2 indicates sophomore year. In the sociology example mentioned above, one school which offers the course in the freshman year will number it SOC 100; a school offering the same course in the sophomore year will number it SOC 2000. The variance in first numbers does not affect the equivalency. If the prefix and last three digits are the same, the courses are substantively equivalent.

Titles

Each institution will retain its own title for each of its courses. The sociology courses mentioned above are titled at different schools “Introductory Sociology,” “General Sociology,” and “Principles of Sociology.” The title does not affect the equivalency. The courses all carry the same prefix and last three digits; that is what identifies them as equivalent.

Lab Indicators

Some courses will carry an alpha suffix indicating a lab. The alpha suffixes “L” and “C” are used as follows to indicate laboratories:

“L” means either (a) a course, the content of which is entirely laboratory, or (b) the laboratory component of a lecture-lab sequence in which the lab is offered at a different time/place from the lecture.

“C” means a combined lecture-lab course in which the lab is offered in conjunction with the lecture at the same time/place.

Examples: Marine Biology OCB _013 (lecture only)

OCB _013L (lab only)

Marine Biology OCB _013C (lecture and lab combined)

with Lab

Therefore, OCB _013C is equivalent to OCB _013 plus OCB _013L.

Equivalency of Sequences

In certain cases, the sequences of courses in a given discipline are equivalent rather than the individual courses which make up these sequences. (For example, MAC _132, _133, _134.) In these cases the subject matter topics may not be taught in the same sequence, course by course, in several institutions; however, upon completion of the full sequence at any of the several institutions, students have completed substantively equivalent content. These sequences are clearly identified in the Course Equivalency Profiles.

Explanation of Prefixes and Numbers

Prefixes and numbers in the course numbering system are not chosen at random; they are designed to describe course content in an organized fashion within a classification system developed for each subject matter area.

Generally, each of the major classifications in a discipline is represented by a three-alpha prefix. In some cases, one three-alpha prefix has been sufficient for the entire discipline. A discipline may use as many prefixes as necessary to accommodate its major classifications. The logic of the system allows it to be infinitely expandable with minimal disruption to existing numbers.

History, for example, has seven prefixes: AFH, African History; AMH, American History; ASH, Asian History; EAH, European History; HIS, History-General; LAH, Latin American History; and WOH, World History. All history courses in the state will carry one of these prefixes.

A more specific example is AMH 3421, "Early Florida History:"

<table>
<thead>
<tr>
<th>Broad area of American history:</th>
<th>AMH</th>
</tr>
</thead>
<tbody>
<tr>
<td>part of discipline of History</td>
<td>3</td>
</tr>
<tr>
<td>Junior level offering (at this = 4</td>
<td></td>
</tr>
<tr>
<td>particular institution)       = 2</td>
<td></td>
</tr>
</tbody>
</table>

In Taxonomy for AMH this indicates "Areas in American History" |

In Taxonomy for AMH this digit indicates courses in "History of Florida"

Last digit in this case refers to group of equated courses dealing with "Early History of Florida"

(Not all titles are used for each particular course. The last three numbers are used to indicate equivalency.)

The number of prefixes is a function of the extent of the subclassifications of the given subject matter area.

When this work began there were 920 alpha prefixes in existence; with the new system there are now 370. As in most states there existed no uniformity in Florida's prefixes as indicated by the example below:

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>History</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>Sociology</td>
<td>24</td>
<td>3</td>
</tr>
</tbody>
</table>
Although it is true that a student majoring at one of the 38 participating institutions may have only one alpha prefix for his major (e.g., HY-History) and now he will have seven, all prefixes in the same subject matter areas will be the same throughout these institutions.

A complete inventory of taxonomic listings, equivalent and unique courses, has been made available to each academic department of every institution in the state. Students, through their local advisers, should use this information in designing programs which will transfer smoothly.

**Exceptions to the Rule for Equivalencies**

The following are exceptions to the general rule for course equivalencies:

A. All graduate level courses (except those which the faculty and their reviewing colleagues have determined to be substantively equivalent with undergraduate courses) are not automatically transferable.

B. All numbers which have a second digit of 9 (e.g., ART 2905) are “place keeper” numbers for such courses as directed independent study, thesis hours, etc.

Courses with _900 numbers must be evaluated individually and are not automatically transferable.

C. All internships, practicums, clinical experiences, and study abroad courses, whatever numbers they carry, are not automatically transferable.

D. Performance or studio courses in Art, Dance, Theatre, and Music are not automatically transferable but must be evaluated individually.

**Authority for Acceptance of Equivalent Courses**

The following amendment to Section 6A-10.24(7) of the Articulation Agreement was approved by the Community Colleges Council on Instructional Affairs, the President’s Council, the Division of Community Colleges, the State University System Council of Vice Presidents for Academic Affairs, the Council of Presidents and the Board of Regents. It was adopted by the State Board of Education on March 7, 1978: “...Students who earn credit in a course determined by the appropriate faculty task force to be equivalent and which is published in the state-wide course numbering system, and who later transfer to another institution within the system can transfer and use the credit in that course at the receiving institution for the same purpose as that course can be used by native students who complete the course at the receiving institution.”

**Cross-Listing of Departments and Programs Alphabetically by Department/Program**

<table>
<thead>
<tr>
<th>Department/Program</th>
<th>Common Course Prefixes</th>
<th>Department/Program</th>
<th>Common Course Prefixes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afro-American Studies</td>
<td>AFA, AFH, AFS, AMH, CPO, ECP, HUM, INR, PHM, PUP</td>
<td>African Language Education</td>
<td>FLE</td>
</tr>
<tr>
<td>Aging Studies</td>
<td>GEY</td>
<td>Foundations</td>
<td>EDF</td>
</tr>
<tr>
<td>American Studies</td>
<td>AMS</td>
<td>Guidance</td>
<td>EGC</td>
</tr>
<tr>
<td>Anthropology</td>
<td>ANT, MUH</td>
<td>Health Education</td>
<td>HES</td>
</tr>
<tr>
<td>Art</td>
<td>ARH, ART</td>
<td>Humanities Education</td>
<td>HUM</td>
</tr>
<tr>
<td>Astronomy</td>
<td>AST</td>
<td>Junior College Education</td>
<td>EDH</td>
</tr>
<tr>
<td>Biology</td>
<td>APB, BOT, BSC, PCB</td>
<td>Library, Media, and Information Studies</td>
<td>COP, LIS</td>
</tr>
<tr>
<td>Botany Courses</td>
<td>APB, BOT</td>
<td>Measurement-Research-Evaluation</td>
<td>EDF</td>
</tr>
<tr>
<td>Microbiology Courses</td>
<td>APB, MCB, PCB</td>
<td>Music Education</td>
<td>MUE</td>
</tr>
<tr>
<td>Zoology Courses</td>
<td>ENY, PCB, ZOO</td>
<td>Natural Science-Mathematics Education</td>
<td>CAP, MAE, SCE</td>
</tr>
<tr>
<td>Business Administration</td>
<td>ACC</td>
<td>Physical Education for Teachers</td>
<td>HES, LEI, PEL, PEP, PEQ, PET</td>
</tr>
<tr>
<td>Accounting</td>
<td>ECO, ECP, ECS, GEB</td>
<td>Reading Education</td>
<td>RED</td>
</tr>
<tr>
<td>Economics</td>
<td>FIN, REE, RMI</td>
<td>Social Science Education</td>
<td>FLE, SSE</td>
</tr>
<tr>
<td>Finance</td>
<td>GEB, MAN</td>
<td>Speech Communication-English Education</td>
<td>SED</td>
</tr>
<tr>
<td>Foundation Courses in Business (Graduate)</td>
<td>BUL, COC, GEB, MAN, QMB</td>
<td>Vocational and Adult Education</td>
<td>ADE, BTE, DEC, EIV, EVT</td>
</tr>
<tr>
<td>General Business Administration</td>
<td>MAN, QMB</td>
<td>Engineering</td>
<td>EGN, EMC</td>
</tr>
<tr>
<td>Management</td>
<td>MAR</td>
<td>Basic and Interdisciplinary Engineering</td>
<td>CDA, CIS, CNM, COP, COT, EEL, ELR, ESI, MAP</td>
</tr>
<tr>
<td>Marketing</td>
<td>BCH, CHM, CHS, OCC</td>
<td>Electrical Engineering</td>
<td>ECH, EMC, EML, ENU</td>
</tr>
<tr>
<td>Chemistry</td>
<td>COM, ESL, LIN, ORI, PHI, SED, SPC, TSI</td>
<td>Energy Conversion and Mechanical Design</td>
<td>EIN, ESI</td>
</tr>
<tr>
<td>Communication</td>
<td>LIN, SPA</td>
<td>Industrial Systems</td>
<td>CES, EAS, ECI, EES, EGMA, EMA, ENV, SUR, TTE</td>
</tr>
<tr>
<td>Communicology</td>
<td>COE</td>
<td>Structures, Materials, and Fluids</td>
<td>CAP, CDA, COC, COP, CRM</td>
</tr>
<tr>
<td>Cooperative Education</td>
<td>CCJ</td>
<td>Computer Service Courses</td>
<td>BCN, ETC, ETE, ETG, ETI, ETM, EVS</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>DAA, DAN</td>
<td>Engineering Technology</td>
<td></td>
</tr>
<tr>
<td>Dance</td>
<td>ARE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>EDA, EDE, EDG, EDS, ESE, LAE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Art Education</td>
<td>ARE, EDE, EDG, EDS, EEC, HLP, LAE, MAE, MUE, RED, SCE, SSE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curriculum</td>
<td>EDG, LAE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary Education</td>
<td>EDG, EED, EEX, EGI, ELD, EMR, EPH, EVI</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Cross-Listing of Departments/Programs
Alphabetically by Prefix

**Common Course Prefixes**

**Department/Program**

- ACC Accounting (Business Administration)
- ADE Vocational & Adult Education (Education)
- ADV Mass Communications
- AFA Afro-American Studies
- AFH Afro-American Studies, History
- AFS Afro-American Studies, International Studies Program
- AMH Afro-American Studies, History
- AML English
- AMS American Studies
- ANT Anthropology, Women's Studies
- APB Biology, Botany (Biology), Microbiology (Biology)
- ARA Arabic (Foreign Languages)
- ARE Art Education (Education), Elementary Education (Education)
- ARH Art
- ART Art
- ASH History
- ASN International Studies Program
- AST Astronomy
- BCC Medicine
- BCH Chemistry
- BCN Engineering, Technology (Engineering)
- BMS Medical Sciences (Medicine)
- BOT Biology, Botany (Biology)
- BSC Biology
- BTE Vocational & Adult Education (Education)
- BUL General Business Administration (Business Administration)
- CAP Computer Service Courses (Engineering), Natural Science-Mathematics Education (Education)
- CBH Psychology
- CCJ Criminal Justice
- CDA Computer Science Courses (Engineering), Electrical Engineering (Engineering)
- CES Structures, Materials, & Fluids (Engineering)
- CHM Chemistry
- CHS Chemistry
- CIS Electrical Engineering (Engineering)
- CLA Ancient Studies (Religious Studies)
- CLP Psychology
- CLT Classics (Foreign Language)
- CNM Electrical Engineering (Engineering)
- COC Computer Service Courses (Engineering), General Business Administration (Business Administration)
- COE Cooperative Education
- COM Communication
- COP Computer Service Courses (Engineering), Electrical Engineering (Engineering), Library, Media, & Information Studies
- COT Electrical Engineering (Engineering)
- CPO Afro-American Studies, Political Science
- CRM Computer Science Courses (Engineering)
- CRW English
- DAA Dance, Physical Education Elective
- DAN Dance
- DEC Vocational & Adult Education (Education)
- DEP Psychology
- DHE Sociology
- EAB Psychology
- EAS Structures, Materials, & Fluids (Engineering)
- ECH Energy Conversion & Mechanical Design (Engineering)
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECI</td>
<td>Structures, Materials, &amp; Fluids (Engineering)</td>
<td>FRW</td>
<td>French (Foreign Languages)</td>
</tr>
<tr>
<td>ECO</td>
<td>Economics (Business Administration)</td>
<td>GEOA</td>
<td>Geography</td>
</tr>
<tr>
<td>ECP</td>
<td>Afro-American Studies, Economics (Business Administration)</td>
<td>GEB</td>
<td>Economics (Business Administration), Foundation Courses in Business (Graduate) (Business Administration), General Business Administration (Business Administration), General Business Administration (Business Administration), Geographic Information Systems (GIS)</td>
</tr>
<tr>
<td>ECS</td>
<td>Economics (Business Administration)</td>
<td>GER</td>
<td>German (Foreign Languages)</td>
</tr>
<tr>
<td>EDA</td>
<td>Curriculum (Education)</td>
<td>GET</td>
<td>German (Foreign Languages)</td>
</tr>
<tr>
<td>EDE</td>
<td>Curriculum (Education), Elementary Education</td>
<td>GEW</td>
<td>German (Foreign Languages)</td>
</tr>
<tr>
<td>EDF</td>
<td>Foundations (Education), Measurement-Research-Evaluation (Education), Women's Studies</td>
<td>GEY</td>
<td>Aging Studies (Gerontology)</td>
</tr>
<tr>
<td>EDG</td>
<td>Curriculum (Education), Elementary Education</td>
<td>GLY</td>
<td>Geography</td>
</tr>
<tr>
<td>EDH</td>
<td>Jr. College Education (Education)</td>
<td>GMS</td>
<td>Medical Sciences (Medicine)</td>
</tr>
<tr>
<td>EDS</td>
<td>Curriculum (Education), Elementary Education</td>
<td>GRE</td>
<td>Greek (Foreign Languages), Religious Studies</td>
</tr>
<tr>
<td>EEC</td>
<td>Elementary Education (Education)</td>
<td>GRW</td>
<td>Greek (Foreign Languages)</td>
</tr>
<tr>
<td>EED</td>
<td>Exceptional Child Education (Education)</td>
<td>HEB</td>
<td>Ancient Studies (Religious Studies), Hebrew</td>
</tr>
<tr>
<td>EEL</td>
<td>Electrical Engineering (Engineering)</td>
<td>HES</td>
<td>Health Education (Education), Physical Education for Teachers (Education)</td>
</tr>
<tr>
<td>EES</td>
<td>Structures, Materials, &amp; Fluids (Engineering)</td>
<td>HIS</td>
<td>History</td>
</tr>
<tr>
<td>EEX</td>
<td>Exceptional Child Education (Education)</td>
<td>HLP</td>
<td>Elementary Education (Education)</td>
</tr>
<tr>
<td>EGC</td>
<td>Guidance (Education), Rehabilitation Counseling</td>
<td>HUM</td>
<td>Afro-American Studies, Humanities (Education)</td>
</tr>
<tr>
<td>EDI</td>
<td>Exceptional Child Education (Education)</td>
<td>HUN</td>
<td>Nursing</td>
</tr>
<tr>
<td>EGM</td>
<td>Basic and Interdisciplinary Engineering (Engineering)</td>
<td>HUS</td>
<td>Human Services</td>
</tr>
<tr>
<td>EIN</td>
<td>Industrial Systems (Engineering)</td>
<td>IDS</td>
<td>Environment, Honors Program, Liberal Studies, Off-Campus Term</td>
</tr>
<tr>
<td>EIV</td>
<td>Vocational &amp; Adult Education (Education)</td>
<td>INP</td>
<td>Psychology</td>
</tr>
<tr>
<td>ELD</td>
<td>Exceptional Child Education (Education)</td>
<td>INR</td>
<td>Afro-American Studies, International Studies Program, Political Science</td>
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<tr>
<td>ELR</td>
<td>Electrical Engineering (Engineering)</td>
<td>ITA</td>
<td>Italian (Foreign Languages)</td>
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<tr>
<td>EMA</td>
<td>Structures, Materials, &amp; Fluids (Engineering)</td>
<td>ITT</td>
<td>Italian (Foreign Languages)</td>
</tr>
<tr>
<td>EMC</td>
<td>Basic and Interdisciplinary Engineering (Engineering), Energy Conversion &amp; Mechanical Design (Engineering)</td>
<td>ITW</td>
<td>Italian (Foreign Languages)</td>
</tr>
<tr>
<td>EML</td>
<td>Energy Conversion &amp; Mechanical Design (Engineering)</td>
<td>JOU</td>
<td>Mass Communications</td>
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<tr>
<td>EMR</td>
<td>Exceptional Child Education (Education)</td>
<td>LAE</td>
<td>Curriculum (Education), Elementary Education (Education), English, English Education (Education)</td>
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<tr>
<td>ENC</td>
<td>English</td>
<td>LAH</td>
<td>History</td>
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<tr>
<td>ENG</td>
<td>English, Mass Communications</td>
<td>LAS</td>
<td>International Studies Program</td>
</tr>
<tr>
<td>ENL</td>
<td>English</td>
<td>LAT</td>
<td>Latin (Foreign Languages)</td>
</tr>
<tr>
<td>ENU</td>
<td>Energy Conversion &amp; Mechanical Design (Engineering)</td>
<td>LEI</td>
<td>Physical Education for Teachers (Education), Social Science Interdisciplinary</td>
</tr>
<tr>
<td>ENV</td>
<td>Structures, Materials, &amp; Fluids (Engineering)</td>
<td>LIN</td>
<td>Communication, Communicology, English</td>
</tr>
<tr>
<td>ENY</td>
<td>Zoology (Biology)</td>
<td>LIS</td>
<td>Library, Media, and Information Studies (Education)</td>
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<tr>
<td>EOC</td>
<td>Marine Science</td>
<td>LIT</td>
<td>English, Women's Studies</td>
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<tr>
<td>EPD</td>
<td>Exceptional Child Education (Education)</td>
<td>LNW</td>
<td>Latin (Foreign Languages)</td>
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<tr>
<td>ESE</td>
<td>Curriculum (Education)</td>
<td>MAA</td>
<td>Mathematics</td>
</tr>
<tr>
<td>ESI</td>
<td>Electrical Engineering (Engineering), Industrial Systems (Engineering)</td>
<td>MAC</td>
<td>Mathematics</td>
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<tr>
<td>ESM</td>
<td>Communication, English</td>
<td>MAD</td>
<td>Mathematics</td>
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<tr>
<td>ESL</td>
<td>Engineering Technology (Engineering)</td>
<td>MAE</td>
<td>Elementary Education (Education), Mathematics, Natural Science-Mathematics Education (Education)</td>
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<td>ETC</td>
<td>Engineering Technology (Engineering)</td>
<td>MAD-</td>
<td>Sociology</td>
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<tr>
<td>ETE</td>
<td>Engineering Technology (Engineering)</td>
<td>MAF</td>
<td>Foundation Courses in Business (Graduate) (Business Administration), General Business Administration (Business Administration), Human Services, Nursing, Social Work (Sociology)</td>
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<td>ETO</td>
<td>Electrical Technology (Engineering)</td>
<td>MAN</td>
<td>Electrical Engineering (Engineering), Mathematics</td>
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<td>ETI</td>
<td>Engineering Technology (Engineering)</td>
<td>MAP</td>
<td>Sociology</td>
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<tr>
<td>ETM</td>
<td>Engineering Technology (Engineering)</td>
<td>MAR</td>
<td>Marketing (Business Administration)</td>
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<td>EUI</td>
<td>History</td>
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<td>Mathematics</td>
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<td>EUS</td>
<td>International Studies Program</td>
<td>MAT</td>
<td>Mathematics</td>
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<tr>
<td>EVI</td>
<td>Exceptional Child Education (Education)</td>
<td>MCB</td>
<td>Microbiology (Biology)</td>
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<tr>
<td>EVS</td>
<td>Engineering Technology (Engineering)</td>
<td>MEC</td>
<td>Medical Education</td>
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<td>EVT</td>
<td>Vocational &amp; Adult Education (Education)</td>
<td>MET</td>
<td>Geography</td>
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<td>EXP</td>
<td>Psychology</td>
<td>MGF</td>
<td>Mathematics</td>
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<tr>
<td>FIL</td>
<td>Mass Communications</td>
<td>MHI</td>
<td>Mathematics</td>
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<tr>
<td>FIN</td>
<td>Finance (Business Administration)</td>
<td>MHT</td>
<td>Human Services</td>
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<tr>
<td>FLE</td>
<td>Foreign Language Education (Education), French (Foreign Languages), Social Science Education (Education)</td>
<td>MIS</td>
<td>Military Science</td>
</tr>
<tr>
<td>FOL</td>
<td>General Foreign Language, Romance (Foreign Languages)</td>
<td>MLS</td>
<td>Medical Technology</td>
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<tr>
<td>FOW</td>
<td>Romance (Foreign Languages)</td>
<td>MLC</td>
<td>Mass Communications</td>
</tr>
<tr>
<td>FRE</td>
<td>French (Foreign Languages)</td>
<td>MLC</td>
<td>Mass Communications</td>
</tr>
<tr>
<td>FRT</td>
<td>French (Foreign Languages)</td>
<td>MLC</td>
<td>Mass Communications</td>
</tr>
</tbody>
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COURSE DESCRIPTIONS

MTG  Mathematics
MUC  Music
MUE  Elementary Education (Education), Music Education (Education)
MUG  Music
MUH  Anthropology, Music
MUL  Music
MUN  Music
MUO  Music
MUS  Music
MUT  Music
MVB  Music
MVK  Music
MVP  Music
MVS  Music
MVV  Music
MVW  Music
NUR  Nursing
NUS  Nursing
NUU  Nursing
OCB  Marine Science
OCC  Chemistry, Marine Science
OCE  Geology, Marine Science
OCG  Marine Science
OCP  Marine Science
ORI  Communication
PAD  Political Science
PCB  Biology, Marine Science, Microbiology (Biology), Zoology (Biology)
PEL  Physical Education Elective, Physical Education for Teachers (Education)
PEM  Physical Education Elective
PEN  Physical Education Elective
PEP  Physical Education for Teachers (Education)
PEQ  Physical Education Elective, Physical Education for Teachers (Education)
PET  Physical Education Elective, Physical Education for Teachers (Education)
PHH  Philosophy
PHI  Communication, Philosophy
PHM  Afro-American Studies, Philosophy
PHP  Philosophy
PHS  Physics
PHY  Physics
POR  Portuguese (Foreign Languages)
POS  Political Science, Women's Studies
POT  Political Science
POW  Portuguese (Foreign Languages)
PPE  Psychology
PSB  Psychology
PSY  Psychology
PUP  Afro-American Studies, Political Science
PUR  Mass Communications
QMB  General Business Administration (Business Administration), Management (Business Administration)
REA  English
RED  Elementary Education (Education), Reading Education (Education)
REE  Finance (Business Administration)
REL  Religious Studies, Women's Studies
RMI  Finance (Business Administration)
RTV  Mass Communications
RUS  Russian (Foreign Languages)
RUT  Russian (Foreign Languages)
RUW  Russian (Foreign Languages)
SCE  Elementary Education (Education), Natural Science-Mathematics Education (Education)
SED  Communication, Speech Communication-English Education (Education)
SOC  Sociology
SOP  Psychology, Women's Studies
SOW  Human Services, Social Work
SPA  Communicology
SPC  Communication
SPN  Spanish
SPT  Spanish (Foreign Languages)
SPW  Spanish (Foreign Languages)
SSE  Elementary Education (Education), Social Sciences Education (Education)
SSI  International Studies Program, Social Sciences Interdisciplinary
STA  Mathematics, Social Science Interdisciplinary
SUR  Structures, Materials, & Fluids (Engineering)
THE  Theatre
TPA  Theatre
TTP  Theatre
TSL  Communication
TTE  Structures, Materials, & Fluids (Engineering)
URP  Geography, Political Science
VIC  Mass Communications
WOH  History
WST  International Studies Program, Women's Studies
ZOO  Marine Science, Zoology (Biology)
### UNDERGRADUATE COURSES

**AFA 2001 INTRODUCTION TO AFRO-AMERICAN STUDIES**  
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. (4)

**AFA 4150 AFRICA AND THE UNITED STATES**  
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. (4)

**AFA 4331 SOCIAL INSTITUTIONS AND THE Ghetto**  
A study of social institutions as they relate to the American Black ghetto, with emphasis on social systems operating within and on the ghetto. (4)

**AFA 4419 SEMINAR IN TEACHING BLACK STUDIES**  
An examination of instructional media, resources and approaches relevant to the study and teaching of the black experience. (4)

**AFA 4900 DIRECTED READINGS**  
Independent readings in a particular area of Afro-American Studies, selected by student and instructor. (2-4)

**AFA 4931 SELECTED TOPICS IN AFRO-AMERICAN STUDIES**  
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. (1-4)

**AFA 4936 SENIOR SEMINAR**  
In-depth study of a particular topic in the area of Afro-American Studies. Individual research by students required. (4)

**AFH 3100 INTRODUCTION TO AFRICAN HISTORY**  
An outline survey of pre-colonial African history including a prefatory introduction to the use of primary sources (such as archaeology, oral tradition, cultural anthropology, comparative linguistics, documents) in reconstructing the African past. (Also listed under History.) (4)

**AFH 3200 AFRICAN HISTORY SINCE 1850**  
Survey of the colonial and post-colonial history of Africa. Emphasis on the impact of European and other alien influences on the continent, emergence of independent African states and post-independence problems of nation building and economic development. (Also listed under History.) (4)

**AFS 3311 THE AFRICAN DIASPORA AND PANAFRICANISM**  
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. (4)

**AFS 4321 EDUCATIONAL DEVELOPMENT IN THE AFRICAN WORLD**  
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. (4)

**AFS 4910 RESEARCH AND FIELD STUDIES**  
A course linking the study pursued by the student with research and work projects in the Tampa Black community. (1-4)

**AMH 3571, 3572 AFRO-AMERICAN HISTORY**  
A survey of the Afro-American history in the Western Hemisphere. Emphasis on the experience in North America (AMH 3571; 1493-1865; AMH 3572; 1865-to present). (4,4)

**CPO 4204 GOVERNMENT AND POLITICS OF AFRICA**  
Designed to provide the information and analytical tools necessary to interpret current Sub-Saharan African politics. Survey of political organizations in traditional African societies; politics under colonial rule; the struggle for independence, and post-independence politics. (4)

**CPO 4244 GOVERNMENT AND POLITICS OF EAST, CENTRAL AND SOUTHERN AFRICA**  
In depth study of political developments, ideologies and modernization in East, Central and Southern Africa including race relations and white minority rule in Southern Africa. (4)

**CPO 4254 GOVERNMENT AND POLITICS OF WEST AFRICA**  
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. (4)

**ECP 4143 BLACK AMERICANS IN THE AMERICAN ECONOMIC PROCESS**  
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. (4)

**HUM 3420 ARTS AND MUSIC OF THE AFRICAN PEOPLE**  
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. (4)

**INR 4254 AFRICA IN WORLD POLITICS**  
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. (4)

**PHM 4120 CONTEMPORARY BLACK PHILOSOPHY**  
Major themes and participants in the Black liberation movement since 1900. (4)

**PUP 3313 BLACKS IN AMERICAN POLITICAL PROCESS**  
An examination of the political experience of blacks in the American political process including their political socialization, and struggle to become effective participants in the American political process. (4)
AGING STUDIES


UNDERGRADUATE COURSES

GEY 3000 INTRODUCTION TO GERONTOLOGY (4)
This course is designed to be an introduction to the study of aging. The aging process is viewed from a multi-disciplinary perspective including the biological, psychological, and sociological aspects of aging.

GEY 3100 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.

GEY 3200 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.

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

GEY 4930 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.

GRADUATE COURSES

GEY 5250 LEISURE FOR THE AGING (4)
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.

GEY 5350 AGING AND PERSONALITY (4)
PR: CI. An introduction to personality theory and concepts of adjustment with an overview of counseling techniques and rehabilitative efforts with the aged.

GEY 5600 PHYSICAL CHANGE AND AGING (4)
PR: CI. Lectures and discussion concerned with normal functioning of major organ systems of the body, age-related changes, and implications for behavior.

GEY 5610 PSYCHOLOGY OF AGING (4)
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.

GEY 5620 SOCIOLOGICAL ASPECTS OF AGING (4)
PR: CI. Examine, 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.

GEY 5630 ECONOMICS AND AGING (4)
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.

GEY 5642 PERSPECTIVES ON DEATH AND DYING (4)
PR: CI. An examination of man's attempt to understand the meaning of death, and of his ways of meeting the personal and social crises which death presents. Study of the various psychological, medical, legal, and religious problems caused by dying and death, and of how individuals and groups have responded in the past and present. Emphasis on challenging and assisting the student to develop an objective and creative view of death and loss as it relates to the end of human life.

GEY 5645 MID-LIFE DEVELOPMENT (4)
PR: CI. The life space of middle age is explored through an examination of the physical, social, and psychological forces which influence this period of the human life span.

GEY 5901 DIRECTED READINGS (1-3)
PR: CI. A reading program with topics in gerontology conducted under the supervision of a faculty member.

GEY 6325 SOCIAL POLICY AND PLANNING FOR GERONTOLOGISTS (4)
PR: CI. This course is intended to enable graduates to be more knowledgeable and hence more effective practitioners in the processes of social policy development and social planning. It is designed to provide an empirical and analytical base for understanding the major issues and trends involved in existing and proposed programs and services in the field of aging at local, state, and federal levels of service planning and provision.

GEY 6390 INTERPERSONAL RELATIONS PRACTICUM (4)
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.

GEY 6391 PRACTICUM IN DEATH AND LOSS (4)
PR: GEY 5642 and GEY 6643. This course is offered for students who have a particular interest in gaining a deeper insight into the area of death and dying. The student will interact with dying patients and bereaved families in local nursing homes and hospitals. Laboratory and class discussions. Not restricted to majors. (S/U only.)

GEY 6450 SOCIAL RESEARCH METHODS APPLIED TO GERONTOLOGY (4)
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.

GEY 6460 ADMINISTRATIVE APPLICATIONS OF DEMOGRAPHY (4)
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.

GEY 6500 INSTITUTIONAL ADMINISTRATION (4)
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.

GEY 6643 THE CONCEPT OF GRIEF AND LOSS (4)
PR: GEY 5642. Deals with the concepts of grief and loss, with particular emphasis on the loss of a significant other. Will provide the opportunity for the individual to explore his own orientation toward death and dying.

GEY 6907 INDEPENDENT STUDY (var.)
Independent study in which student must have a contract with an instructor. Repeatable. (S/U only.)

GEY 6911 PROJECTS IN AGING I (1-6)
PR: CI. In-depth study of special topics with the objective of identifying problems for research and developing research proposals.
GEY 6912 PROJECTS IN AGING II (1-6)
PR: GEY 6911 and CI. A continuation of GEY 6911.

GEY 6930, 6931, 6932, 6933 SEMINAR IN SOCIAL GERONTOLOGY (2, 2, 2, 2)
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. ($/U only.)

GEY 6940 FIELD PLACEMENT (12)
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. ($/U only.)

AMERICAN STUDIES

Chairperson: H.C. Kiefer (Acting); Professors: D.R. Harkness, H.C. Kiefer, H.M. Robertson; Visiting Assistant Professor: M.K. Kosinski; Visiting Lecturer: C.E. Conway; Affiliate Faculty: J.J. Iorio, J.B. Moore, R.C. O'Hara, J.A. Parrish, S.A. Zylstra

UNDERGRADUATE COURSES

AMS 2363 ISSUES IN AMERICAN CIVILIZATION (2)
Through lecture and demonstration an examination of such topics as the role of higher education in America, the American success myth, 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 3001 INTRODUCTION TO AMERICAN CIVILIZATION (5)
Integration of major aspects of American life between 1898 and 1914. Should be taken the first term a student becomes an American Studies major. Elective for non-majors.

AMS 3201 THE COLONIAL PERIOD (5)
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 3210 THE AGRARIAN MYTH (5)
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 3230 AMERICA DURING THE TWENTIES AND THIRTIES (5)
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 3302 ARCHITECTURE AND THE AMERICAN ENVIRONMENT (4)
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 3303 THE AMERICANIZATION OF ENGLISH (4)
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 3930 SELECTED TOPICS IN AMERICAN STUDIES (1-5)
Offerings include The American Success Myth, Cultural Darwinism in America, America Through Foreign Eyes, Contemporary Topics in American Studies, Nineteenth and Twentieth Century American Communes.

AMS 4910 INDIVIDUAL RESEARCH (1-5)
The content of the course will be governed by student demand and instructor's interest. Instructor's approval required prior to registration.

AMS 4930 SELECTED TOPICS IN AMERICAN STUDIES (1-5)
Offerings include American Painting: its social implications, Environmental Problems, Popular Culture in America.

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

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

AMS 4937 SENIOR SEMINAR IN AMERICAN STUDIES (4)
PR: AMS 4935, AMS 4936.

GRADUATE COURSES

AMS 6155 OUTSTANDING AMERICAN ACHIEVEMENTS (4)
PR: Graduate standing. Open to non-majors. Representative works (from the arts, sciences, social sciences) reflecting the development of civilization in the U.S. from colonial times to the present.

AMS 6254 U.S.A.: A DECADE IN DEPTH (4)
PR: Graduate standing. Open to non-majors. An example would be The Thirties: Inter-related Aspects of American Life from the Stock Market Crash to Pearl Harbor. Other decades would serve in subsequent offerings to weave the interdisciplinary pattern of American life within a discrete period. May be repeated, up to eight (8) credit hours.

AMS 6805 MAJOR IDEAS INFLUENCING AMERICAN CIVILIZATION (4)
PR: Graduate standing. Open to non-majors. Examination of such concepts as individualism, freedom and liberalism as embodied in literature, politics, religion, architecture, economics, science and technology.

AMS 6901 DIRECTED READINGS IN AMERICAN STUDIES (1-5)
PR: Graduate standing. Open to non-majors. Guided reading designed to expand a student's knowledge in a particular area of interest. May be repeated up to six credit hours.

AMS 6915 DIRECTED RESEARCH (var.)
PR: GR. Master's level. Repeatable. ($/U only.)

AMS 6934 SPECIAL TOPICS IN AMERICAN STUDIES (2-5)
PR: Graduate standing. Open to non-majors. Variable titles offered periodically on topics of special interest to American Studies students. May be repeated up to eight credit hours.

AMS 6971 THESIS: MASTER'S (var.)
Repeatable. ($/U only.)
ANCIENT STUDIES—see Religious Studies

ANTHROPOLOGY

Chairperson: G. Kushner; Professors: R. T. Grange, Jr., G. Kushner, A. Shiloh, A. W. Wolfe; Associate Professors: M. V. Angrosino, J. J. Smith, C. W. Wicnker, J. R. Williams; Assistant Professors: E. Chambers, S. J. Gluckman, P. P. Waterman; Visiting Assistant Professor: M. D. Vesperi.

UNDERGRADUATE COURSES

ANT 2000 INTRODUCTION TO ANTHROPOLOGY (4)
An introduction to anthropology, the study of the human species in biological and social perspective. The course surveys the four major branches of anthropology: physical anthropology (human biology), archaeology (the analysis of the prehistoric and historic remains of human cultures), anthropological linguistics (the analysis of language in its cultural context) and cultural anthropology (the comparative study of the cultures of peoples living in the world today, be they in tribal, peasant, or urban societies).

ANT 3005 THE ANTHROPOLOGICAL PERSPECTIVE (4)
This course, designed for non-anthropology majors only, presents the basic concepts of anthropology as they are relevant to contemporary life. It aims at enabling the non-major to understand the anthropologist’s view of the human species as adapting through biosocial means to live on this planet. May not be counted for credit toward an anthropology major.

ANT 3100 ARCHAEOLOGY (4)
PR: ANT 2000 or CI. The study of humankind from its beginnings up to and including the historic period through the recovery, description, and analysis of the remains of past cultures and societies. Emphasis on the theory, methods, and goals of archaeology as part of anthropology.

ANT 3410 CULTURAL ANTHROPOLOGY (4)
PR: ANT 2000 or CI. A survey of modern cultural anthropology. The course includes discussion of major methods and orientations to the study of the world’s peoples. Representative case studies are used to demonstrate variations in human adaptations and to encourage an appreciation of diverse values and lifestyles.

ANT 3511 PHYSICAL ANTHROPOLOGY (4)
PR: ANT 2000 or CI. Non-human primates, the fossil record and the biology of races are surveyed in order to understand the human animal as a product of biosocial phenomena. Anatomy, genetics, culture and evolution are emphasized.

ANT 3610 ANTHROPOLOGICAL LINGUISTICS (4)
PR: ANT 2000 or CI. The comparative study of language in its cultural context, especially emphasizing the role of language in the cultural interpretation of physical and social reality.

ANT 4034 HISTORY OF ANTHROPOLOGICAL THEORY (4)
PR: Senior standing with major in anthropology or equivalent. The major concepts that form the anthropological view of humanity are reviewed in historical perspective. Basic ideas of the western philosophical tradition are analyzed from the Greeks to the 19th Century when they became incorporated into the new discipline of anthropology. 20th Century anthropological developments on these themes are considered.

ANT 4124 FIELD METHODS IN ARCHAEOLOGY (5)
PR: ANT 2000, ANT 3100 or CI. This course is normally offered as part of a Summer Field Session and students also take Florida Archaeology and Laboratory Methods in Archaeology. Emphasis on appropriate methods of archaeological excavation and recovery and recording of data.

ANT 4133 UNDERWATER ARCHAEOLOGY (4)
PR: ANT 2000, ANT 3100 or CI. This course covers the methods, theory and history of underwater archaeology. Diving history and physiology are considered. Emphasis on underwater archaeology as anthropology and the management of underwater archaeological resources.

ANT 4153 NORTH AMERICAN ARCHAEOLOGY (4)
PR: ANT 2000, ANT 3100 or CI. An examination of the evidence which ties the settlement of North America to people from Asia some 20,000 years ago through the development of aboriginal culture to the period of European conquest. Emphasis is placed upon processual development by examining the material culture at selected sites from all time periods. No field work is involved.

ANT 4158 FLORIDA ARCHAEOLOGY (5)
PR: ANT 2000, ANT 3100 or CI. The content of prehistoric cultures such as Paleoindian, Weeden Island, and Safety Harbor are reviewed and examined in terms of their temporal and spatial relationships to each other and the Eastern U.S. The course is normally offered as part of a Summer Field Session and students also take Field Methods in Archaeology and Laboratory Methods in Archaeology.

ANT 4162 SOUTH AMERICAN ARCHAEOLOGY (4)
PR: ANT 2000, ANT 3100 or CI. This course describes and analyzes the sequence of cultural development in prehistoric South America. Cultures such as the Inca, Chavin, Moche, Wari, Chimú are included, with emphasis on the environmental setting and the relationship between cultural ecology and the growth of civilization.

ANT 4163 MESOAMERICAN ARCHAEOLOGY (4)
PR: ANT 2000, ANT 3100 or CI. The chronological sequence from its beginnings through Protohistoric development is described and analyzed. Cultures such as the Maya, Aztec, Mixtec, Zapotec, Olmec, and Toltec are included, with emphasis on the environmental setting and the relationship between cultural ecology and the growth of civilization.

ANT 4172 HISTORICAL ARCHAEOLOGY (4)
PR: ANT 2000, ANT 3100 or CI. A survey and analysis of archaeology focused on the historic period. Laboratory research with data recovered from historic sites in addition to classwork.

ANT 4180 LABORATORY METHODS IN ARCHAEOLOGY (5)
PR: ANT 2000, ANT 3100 or CI. This course is normally offered as part of a Summer Field Session and students also enroll in Florida Archaeology and Field Methods in Archaeology. Data recovered in excavation are cleaned, catalogued, identified, and analyzed in the laboratory.

ANT 4181 MUSEUM METHODS (5)
PR: ANT 2000, ANT 3100 or CI. Design, preparation and installation of exhibits in the Department of Anthropology Teaching Exhibit Gallery. Emphasis on theory, research, design and construction. Discussion of museum-related issues such as administration.

ANT 4182 CONTEMPORARY PROBLEMS IN ARCHAEOLOGY (4)
PR: ANT 2000, ANT 3100 or CI. This course focuses on the development and implications of the “new” or “processual” archaeology. The relationship between current activities in archaeology and the philosophy of science will be considered. Theory and method in contemporary archaeology will be compared to theory and method in contemporary anthropology.

ANT 4226 PRIMITIVE ART (4)
PR: ANT 2000, ANT 3410 or CI. An examination of the relationship between the visual arts (sculpture, painting, masks, carving, etc.) and culture in non-Western societies. Emphasis on formal symbolic and functional comparative analysis of specific art styles based on cross-cultural materials. Consideration of diffusion and change of art forms, commercial and ethnic arts, and role of the artist.
ANT 4231 FOLKLORE (4)  
PR: ANT 2000, ANT 3410 or CI. A survey of the field of folkloristics, the course considers the history of folklore collection and analysis, the major folklore schools, and the techniques of collecting and classifying such materials as myths, folktales, riddles, jokes, games, and items of material culture. African (or African derived), Oceanic and Native American societies will be surveyed.

ANT 4241 ANTHROPOLOGY OF RELIGION (4)  
PR: ANT 2000, ANT 3410 or CI. The study of the social and cultural aspects of religion. Religious activities in primitive and modern societies will be discussed. Ritual behavior, religious practitioners and symbols of belief will be considered in light of their impact on the social, political or economic aspects of peoples' lives.

ANT 4302 WOMEN IN CROSS-CULTURAL PERSPECTIVE (4)  
PR: ANT 2000, ANT 3410 or CI. A cross-cultural perspective on women. The course focuses on various theories, models and beliefs about male-female behaviors and interactions in human cultures throughout history and in various societies in the world today. (Also offered under Women's Studies.)

ANT 4305 VISUAL ANTHROPOLOGY (4)  
PR: ANT 2000, ANT 3410 or CI. The use of photographic techniques for the recording and analysis of human activities. The study of ethnographic photography as both art and science, and the production of an anthropological study that expresses the goal of "visual literacy." Review and evaluation of the uses of visual techniques and the evidences they provide to the social scientist.

ANT 4312 CULTURES OF NATIVE NORTH AMERICA (4)  
PR: ANT 2000, ANT 3410 or CI. An examination of the evidence for the origin and antiquity of human beings in North America and of patterns of regional development until the period of contact with European Colonists. Emphasis on varieties of ecological adaptation, social, political and religious systems, enculturation and worldview, folklore and visual art.

ANT 4316 CULTURES OF THE CONTEMPORARY UNITED STATES (4)  
PR: ANT 2000, ANT 3410 or CI. An examination of anthropology's contribution to the study of contemporary United States society. Special concerns include the American community, change and continuity in American values and lifestyles, and the historical background and recent manifestations of human problems in the United States.

ANT 4326 CULTURES OF Mesoamerica (4)  
PR: ANT 2000, ANT 3410 or CI. A review of the peoples of modern Mesoamerica, with emphasis on Mexico and Guatemala. The course includes discussion of the historical development of these two countries, contemporary values and interpersonal relationships, and patterns of rural and urban life.

ANT 4340 CULTURES OF THE CARIBBEAN (4)  
PR: ANT 2000, ANT 3410 or CI. The islands and mainland territories of the Caribbean are studied in social anthropological perspective. Main themes include: the depopulation of the aboriginal population and the resettlement of the area via slavery, indenture and migration; contemporary ethnic heterogeneity; economic problems of Third World microstates; development of a modern social and political consciousness. Religious diversity, music, the graphic arts and the literature of the contemporary Caribbean will also be surveyed.

ANT 4367 CULTURES OF THE MIDDLE EAST (4)  
PR: ANT 2000, ANT 3410 or CI. This course describes the environment and cultural ecology of the Middle East and analyzes how they have influenced the variety of subcultures of the region. The rise and fall of the "great civilizations" and the "little tradition" of the enduring folk cultures will be delineated. Contemporary culture change will be analyzed in a temporal perspective.

ANT 4432 CULTURE AND PERSONALITY (4)  
PR: ANT 2000, ANT 3410 or CI. The interplay between the individual personality and the social group to which he/she belongs is studied cross-culturally. Analysis of descriptive studies from various cultures of child-rearing practices, psychosomatic illness and curing. Discussion of theories and models of personality development with special reference to their applicability to the emerging field of cross-cultural mental health planning.

ANT 4442 URBAN ANTHROPOLOGY (4)  
PR: ANT 2000, ANT 3410 or CI. A course devoted to the anthropological study of urban origins, growth, and current human problems associated with city environments. Particular emphasis is placed on the ethnography of city life and its relationship to the practical applications of urban research.

ANT 4462 MEDICAL ANTHROPOLOGY (4)  
PR: ANT 2000, ANT 3410 or CI. The study of health and human behavior in cross-cultural perspective. Main themes include: the impact of disease on the development of human culture; comparative studies of curing practices; medical systems in their relationship to ideology. Emphasis on understanding the role of medicine, and the behavior of both practitioners and patients, in modern societies.

ANT 4495 RESEARCH METHODS IN CULTURAL ANTHROPOLOGY (4)  
PR: CI. The stages in the development and execution of ethnological research are discussed and practiced. Literature search, hypothesis formation, selection of data collection techniques, elicitation of information, data analysis and report presentation are stressed. Research design models from the case literature are studied and supervised research in the local community is designed and carried out.

ANT 4542 CULTURE AND PHYSICAL ANTHROPOLOGY (4)  
PR: ANT 2000, ANT 3511 or CI. A survey of the many ways in which behavior and technology influence the biology of prehistoric and modern human populations. Phenomena such as mating practices, urbanization and dietary habits are related to humans as animals. Behavior genetics and sociobiology are covered.

ANT 4552 EVOLUTIONARY BIOLOGY OF THE PRIMATES (4)  
PR: ANT 2000, ANT 3511 or CI. A survey of non human primates focusing on biological and evolutionary patterns. Anatomy, genetics and evolution are stressed; major primate types are surveyed for their biological adaptation. Primate sociobiology is discussed.

ANT 4583 THE PHYSICAL ANTHROPOLOGY OF LIVING HUMANS (4)  
PR: ANT 2000, ANT 3511 or CI. An overview of evolution and biological variations of human races. Anatomical, morphological and physiological patterns are surveyed geographically. Cultural influences on racial biology are explored.

ANT 4586 THE PHYSICAL ANTHROPOLOGY OF PREHISTORIC HUMANS (4)  
PR: ANT 2000, ANT 3511 or CI. A survey of the fossil record from early primates through the ascent of Homo Sapiens Sapiens, focusing on the human lineage. Biosocial patterns and cultures of the past are also covered.

ANT 4620 LANGUAGE AND CULTURE (4)  
PR: ANT 2000, ANT 3610 or CI. An examination of the relationships between language and culture in cross-cultural perspective. The extent to which languages shape the world views of their speakers will be explored in depth. At issue will be the nature and degree of fit between linguistic and cultural systems of knowledge.

ANT 4705 APPLIED ANTHROPOLOGY (4)  
PR: ANT 2000, ANT 3410 or CI. A review of approaches applying the anthropological perspective to contemporary human problems. Particular emphasis placed on public policy issues in United States society. The course includes discussion of the his-
torical development of applied anthropology, problems of eco-

nomic development in the Third World, and the ethics of ap-

plied research and intervention.

ANT 4750 ETHNOGRAPHY OF COMMUNICATION (4)
PR: ANT 2000, ANT 3610 or Cl. An exploration of the role of
language and other modes of communication in the social set-
tings of speech communities. Reading, discussions, and student
field projects will focus on the description and analysis of com-
municative resources in ethnographic contexts.

ANT 4901 DIRECTED READING (1-6)
PR: Cl. Individual guidance in concentrated reading on a
selected topic in anthropology.

ANT 4907 INDIVIDUAL RESEARCH (3-6)
PR: Cl. Individual guidance in a selected research project.

ANT 4930 SPECIAL TOPICS IN ANTHROPOLOGY (4)
PR: Cl. Topics to be chosen by students and instructor per-
mitting newly developing subdisciplinary special interests to be
explored. May be repeated as topics vary.

ANT 4935 SENIOR SEMINAR IN ANTHROPOLOGY (4)
PR: Senior standing with major in anthropology, or equivalent.
Through seminar discussion of readings and student papers, stu-
dents rethink and reevaluate the nature of anthropology as a dis-
cipline and the integration of its branches and specialty fields.
On this basis each student develops and articulates his/her cur-
rent image and vision of anthropology.

MUH 4521 FOLK MUSIC (4)
PR: ANT 2000, ANT 3410 or Cl. An examination of ethnic mu-
sics in America, emphasizing the functions of folk music in rural
and urban settings. Materials drawn cross-culturally are used in
both religious and secular forms. When feasible, classwork is
supplemented by live performances. Technical knowledge of
music is not required.

GRADUATE COURSES

ANT 5904 DIRECTED READING (1-6)
PR: Cl. Individual guidance in concentrated reading on a
selected topic in anthropology.

ANT 5915 INDIVIDUAL RESEARCH (3-6)
PR: Cl. Individual guidance in a selected research project.

ANT 5937 SEMINAR IN ANTHROPOLOGY (3-6)
PR: Cl. Topics to be chosen by students and instructor.

ANT 6186 SEMINAR IN ARCHAEOLOGY (4)
PR: Graduate standing. One of four core courses required of all
students. A critical survey of archaeology emphasizing contribu-
tions to applied anthropology. Open to non-majors.

ANT 6196 METHODS IN PUBLIC ARCHAEOLOGY (4)
PR: Three of the core courses, or Cl. Field techniques, methods
of collection, analysis, and interpretation of data. May be re-
peated up to 8 credit hours as topics vary. Open to non-majors.
Lec-lab, field trips.

ANT 6197 SELECTED TOPICS IN PUBLIC
ARCHAEOLOGY (4)
PR: Three of the core courses, or Cl. Current topical issues in
public archaeology. May be repeated up to 8 credit hours as top-
ics vary. Open to non-majors.

ANT 6198 REGIONAL PROBLEMS IN PUBLIC
ARCHAEOLOGY (4)
PR: Three of the core courses, or Cl. Contemporary problems in
public archaeology in the context of a specific region. May be
repeated up to 8 credit hours as topics vary. Open to non-majors.

ANT 6446 METHODS IN URBAN ANTHROPOLOGY (4)
PR: Three of the core courses, or Cl. Field techniques, methods
of collection, analysis, and interpretation of data. May be re-
peated up to 8 credit hours as topics vary. Open to non-majors.

ANT 6448 REGIONAL PROBLEMS IN URBAN
ANTHROPOLOGY (4)
PR: Three of the core courses, or Cl. Contemporary problems in
urban anthropology in the context to a specific region. May be
repeated up to 8 credit hours as topics vary. Open to non-majors.

ANT 6463 REGIONAL PROBLEMS IN MEDICAL
ANTHROPOLOGY (4)
PR: Three of the core courses, or Cl. Contemporary problems in
medical anthropology in the context of a specific region. May be
repeated up to 8 credit hours as topics vary. Open to non-majors.

ANT 6469 SELECTED TOPICS IN MEDICAL
ANTHROPOLOGY (4)
PR: Three of the core courses, or Cl. Current topical issues in
medical anthropology. May be repeated up to 8 credit hours as top-
ics vary. Open to non-majors.

ANT 6490 SEMINAR IN CULTURAL
ANTHROPOLOGY (4)
PR: Graduate standing. One of four core courses required of all
students. A critical survey of cultural anthropology emphasizing
collections applied anthropology. Open to non-majors.

ANT 6588 SEMINAR IN PHYSICAL
ANTHROPOLOGY (4)
PR: Graduate standing. One of four core courses required of all
students. A critical survey of physical anthropology emphasizing
collections applied anthropology. Open to non-majors.

ANT 6676 SEMINAR IN ANTHROPOLOGICAL
LINGUISTICS (4)
PR: Graduate standing. One of four core courses required of all
students. A critical survey of anthropological linguistics em-
phasizing contributions to applied anthropology. Open to non-
majors.

ANT 6737 METHODS IN MEDICAL
ANTHROPOLOGY (4)
PR: Three of the core courses, or Cl. Field techniques, methods
of collection, analysis and interpretation of data. May be re-
peated up to 8 credit hours as topics vary. Open to non-majors.
Lec-lab, field trips.

ANT 6908 INDEPENDENT STUDY (var.)
Independent study in which student must have a contract with
an instructor. Repeatable. (S/U only.)

ANT 6915 DIRECTED RESEARCH (var.)
PR: GR. Master's level. Repeatable. (S/U only.)

ANT 6971 THESIS: MASTER'S
Repeatable. (S/U only.)

ART

UNDERGRADUATE COURSES

ARH 3000 INTRODUCTION TO ART (4)
An expanded introductory treatment of basic concepts. For art
majors and non-majors.

ARH 4100 PREHISTORIC AND ANCIENT ART (4)
A comprehensive study of Paleolithic, Neolithic, Egyptian, As-
syrian and Mesopotamian painting, sculpture and architecture.

ARH 4170 GREEK AND ROMAN ART (4)
A comprehensive study of Aegean, Mycenaean, Etruscan, Greek and Roman painting, sculpture and architecture.

ARH 4200 MEDIEVAL ART (4)
A comprehensive study of early Christian, Byzantine and Medieval painting, sculpture, architecture and manuscript illumination.

ARH 4301 RENAISSANCE ART (4)
A comprehensive study of Renaissance and Mannerist painting, sculpture and architecture in Italy and Northern Europe.

ARH 4350 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.

ARH 4430 NINETEENTH CENTURY ART (4)
A comprehensive study of nineteenth century painting, sculpture and architecture in France and England.

ARH 4450 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.

ARH 4530 ORIENTAL ART (4)
An introduction to concepts of the arts of China, Japan and other Far Eastern countries.

ARH 4743 INTRODUCTION TO THE PERSONAL FILM (4)
PR: ART 3630C. Comparison of philosophical and technical distinctions between the personal film and theatrical or commercial release.

ARH 4746 ANATOMY OF THE COLLABORATIVE FILM (4)
PR: ART 4631C. Analysis of aesthetic and other selected aspects of film produced through collaborative efforts. May be repeated.

ARH 4790 SELECTED TOPICS IN THE HISTORY OF FILM (4)
In-depth investigation of a selected period, development, or school in the history of film as art. May be repeated.

ARH 4796 CRITICAL STUDIES IN ART HISTORY (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.

ARH 4937 SEMINAR IN THE HISTORY OF ART HISTORY (4)
PR: Four courses in Art History at the 4000 level, CI. An examination of the origins of Art History as a discipline and changing nature of Art History from Vasari to the present.

ART 2202C VISUAL CONCEPTS I (4)
Studio problems supplemented by reading and discussion. Consideration of spatial organization of the two-dimensional surface.

ART 2203C VISUAL CONCEPTS II (4)
Studio problems supplemented by reading and discussion. Consideration of three-dimensional organization of space and mass.

ART 2205C VISUAL CONCEPTS III (4)

ART 3110C CERAMICS I (4)
PR: Visual Concepts II and Introduction to Art. Intermediate problems in ceramics with emphasis on the exploration of methods and media and the development of individual concepts.

ART 3301C DRAWING I (4)
PR: Visual Concepts I and III and Introduction to Art. Drawing as a means of formal organization. Introduction to intermediate drawing methods and media.

ART 3400C GRAPHICS I (4)
PR: Visual Concepts I and III, Introduction to Art, and Drawing
ART 4905 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 4930 IDEA SEMINAR (2)
PR: Introduction to Art. Readings, discussion. Subjects will change each quarter, determined by mutual student and faculty interests. May be repeated.

ART 4935 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.

GRADUATE COURSES
Admission to all 5000 level studio courses by Consent of Instructor

ART 6055 ART HISTORY (4)
PR: CI. May be repeated.

ART 5125C CERAMICS (4)
PR: ART 4111C. Advanced problems in the various ceramic techniques, including throw and glaze calculation. May be repeated.

ART 5340C DRAWING (4)
PR: ART 4320C. Advanced problems in various drawing techniques. Emphasis on individual creative expression. May be repeated.

ART 5422C LITHOGRAPHY (4)
PR: ART 4421C. Advanced problems in various lithographic techniques. Emphasis on individual creative expression. May be repeated.

ART 5432C SILKSCREEN (4)
PR: ART 4431C. Advanced problems in the various silkscreen techniques. Emphasis on individual creative expression. May be repeated.

ART 5472C INTAGLIO (4)
PR: ART 4471C. Investigations into more complex intaglio processes including photoengraving and color printing procedures. Emphasis on personal conceptual development in graphic media. May be repeated.

ART 5532C PAINTING (4)
PR: ART 4520C. Advanced problems in the various painting techniques. Emphasis on individual creative expression. May be repeated.

ART 5604C PHOTOGRAPHY (4)
PR: CI. Advanced work in photography and related media leading to development of personal/expressive statements. May be repeated.

ART 5642C CINEMATOGRAPHY (4)
PR: ART 4631C. Advanced studio work using black and white, color and sound as technical and aesthetic factors in visual, artistic productions. May be repeated.

ART 5730C SCULPTURE (4)
PR: ART 4702C. Advanced problems in the various techniques of sculpture. Emphasis on individual creative expression. May be repeated.

ART 5910 RESEARCH (1-6)
PR: CC. May be repeated.

ART 5936 STUDIO TECHNIQUES: SELECTED PROJECTS (2)
PR: Visual Concepts I, II, and III, Introduction to Art, the topic-technique-related 3000-4000 level studio sequence and CI. Concentration in specialized technical data and process. May be repeated for credit for different topics only.

ART 6126C CERAMICS (4)
PR: CI. May be repeated.

ART 6341C DRAWING (4)
PR: CI. May be repeated.

ART 6423C LITHOGRAPHY (4)
PR: CI. May be repeated.

ART 6490C SILKSCREEN (4)
PR: CI. May be repeated.

ART 6473C INTAGLIO (4)
PR: CI. May be repeated.

ART 6580C PAINTING (4)
PR: CI. May be repeated.

ART 6620C PHOTOGRAPHY (4)
PR: CI. May be repeated.

ART 6645C CINEMATOGRAPHY (4)
PR: CI. May be repeated.

ART 6731C SCULPTURE (4)
PR: CI. May be repeated.

ART 6907 INDEPENDENT STUDY (var.)
Independent study in which student must have a contract with an instructor. Repeatable. (S/U only.)

ART 6911 DIRECTED RESEARCH (var.)
PR: GR. Master's level. Repeatable. (S/U only.)

ART 6936 GRADUATE SEMINAR (2)
PR: CI. Advanced course in theoretical and conceptual foundations of the visual arts. The specific structure and content to be determined by the instructor. Must be repeated for a minimum of four hours.

ART 6937 GRADUATE INSTRUCTION METHODS (1-5)
Special course to be used primarily for the training of graduate teaching assistants. Variable credit, repeatable. Limited to a cumulative total of five credits per student. (S/U only.)

ART 6940 SELECTED TOPICS IN ART (1-6)
PR: Graduate Standing and CI. A variable credit depending upon the scope and magnitude of the work agreed to by the student and the responsible member of the faculty. May be repeated.

ART 6956 GRADUATE STUDIO THESIS DOCUMENTATION (2)
PR: CI. An advanced seminar focused on the problems of documenting in verbal form the development of a body of work in the visual arts.

ART 6971 THESIS: MASTER'S (var.)
Repeatable. (S/U only.)

ASTRONOMY

UNDERGRADUATE COURSES

AST 2005 DESCRIPTIVE ASTRONOMY I (5)
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 2006 DESCRIPTIVE ASTRONOMY II (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 2032C ILLUSTRATIVE ASTRONOMY (4)
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. No credit for astronomy majors. Lec.-lab.
AST 3033 CONTEMPORARY THINKING IN ASTRONOMY (5)
PR: Junior or senior standing or CI. Current concepts of astronomy and space science of general interest; background facts; artificial satellites, space probes; surface conditions of planets and evolution of the star; cosmology. No credit for astronomy majors or mathematics majors.

AST 3043 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 3652 NAVIGATION (3)
PR: Some knowledge of geometry, algebra and trigonometry. Timekeeping, use of sextant, constellations, navigation with minimum equipment; some spherical astronomy.

Chairperson: S. L. Swihart

BIOLOGY

APB 2130 ENVIRONMENT (4)
The application of basic principles of ecology to relevant problems and topics relating to man's environmental interaction through consideration of scientific and popular literature. For non-majors.

APB 2140 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.

APB 2160 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.

APB 2250 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.

APB 3110 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.

APB 3123 MAN'S BIOLOGICAL ENVIRONMENT (4)

BOT 4663 INTRODUCTION TO TROPICAL BIOLOGY (5)

BSC 2010C FUNDAMENTALS OF BIOLOGY I (4)
A brief review of living organisms, respiration, photosynthesis, cell structure, and specialization. Lec-lab. Qtr. I, II.

GRADUATE COURSES

AST 5506 INTRODUCTION TO CELESTIAL MECHANICS (5)
PR: MAC 3411 and some knowledge of differential equations, or CI. The two-body problem, artificial satellites, elements of perturbation theory.

AST 5932 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.

AST 6507 CELESTIAL MECHANICS (6)
PR: AST 5506 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.

BSC 2011C FUNDAMENTALS OF BIOLOGY II (4)
Cell division, genetics, reproduction and development, physiology. Lec-lab. Qtr. II, III.

BSC 2012 FUNDAMENTALS OF BIOLOGY III (4)
Neurophysiology, behavior patterns, genetics, and evolution; ecology. Lec.-dis. Qtr. I, III.

BSC 2933 TOPICS IN BIOLOGY (4)
Lectures, individual reading, movies, classroom discussions, and evaluation of selected biological topics, reflecting biological principles. For non-majors.

BSC 3263 INTRODUCTORY MARINE BIOLOGY (3)
PR: BSC 2010C, BSC 2011C, BSC 2012 or CI. An introduction to the marine environment, the types of organisms found inhabiting a variety of marine habitats, and the adaptations of the organisms to those habitats. Emphasis is placed on shallow water Florida environments. Majors and non-majors.

BSC 4905 INDEPENDENT STUDY (1-4)
PR: CI. Specialized independent study determined by the student's needs and interests. The written contract required by the College of Natural Sciences specifies the regulations governing independent study. May be repeated. (S/U only.)

BSC 4910 UNDERGRADUATE RESEARCH (1-6)
PR: CI. Individual investigation with faculty supervision. (S/U only.)

BSC 4930 SEMINAR IN BIOLOGY (1)
PR: CI. Senior or advanced junior standing. May be repeated once. (S/U only.)

BSC 4933 SELECTED TOPICS IN BIOLOGY (1-4)
PR: CI.

PCB 2670 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.

PCB 3063 GENERAL GENETICS (4)

PCB 3183C HISTOLOGICAL TECHNIQUES (5)

PCB 4023C CELL BIOLOGY I (5)
PR: CHM 3211, CHM 3211L and PCB 3063. 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.
PCB 4024C  CELL BIOLOGY II (5)
PR: PCB 4023C. 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.

PCB 4043C  PRINCIPLES OF ECOLOGY (4)

PCB 4064C  EXPERIMENTAL GENETICS (4)
PR: PCB 3063 or CI. Experimental analysis of genetic systems. Lec-lab: 2 hour lec., 2-3 hour labs.

PCB 4674C  ORGANIC EVOLUTION (4)
PR: PBC 3063 or CI. An introduction to modern evolutionary theory. Lecture on population genetics, adaptations, speciation theory, phylogeny, human evolution and related areas.

GRADUATE COURSES

BSC 5931C  SELECTED TOPICS IN BIOLOGY (1-4)
PR: CI. Each topic is a course in directed study under supervision of a faculty member.

BSC 6907C  INDEPENDENT STUDY (var.)
Independent study in which student must have a contract with an instructor. Repeatable. (S/U only)

BSC 6910C  DIRECTED RESEARCH (var.)
PR: GR. Master's level. Repeatable. (S/U only)

BSC 6912C  GRADUATE RESEARCH METHODS (1-5)
Special course to be used primarily for the training of graduate research assistants. Variable credit, repeatable. Limited to a cumulative total of 5 credits per student. (S/U only)

BSC 6932C  SELECTED TOPICS IN BIOLOGY (1-6)
PR: CI

BSC 6935C  GRADUATE SEMINAR IN BIOLOGY (1)
PR: CI. (S/U only)

BSC 6945C  GRADUATE INSTRUCTION METHODS (1-5)
Special course to be used primarily for the training of graduate teaching assistants. Variable credit, repeatable. Limited to a cumulative total of 5 credits per student. (S/U only)

BSC 7912C  DIRECTED RESEARCH (var.)
PR: GR. Ph.D. level. Repeatable. (S/U only)

BSC 7980C  DISSERTATION: DOCTORAL (var.)
PR: Must be admitted to Doctoral Candidacy. Repeatable. (S/U only)

PCB 5115C  CYTOGENETICS (4)

PCB 5235C  PRINCIPLES OF IMMUNOLOGY (4)
PR: PCB 4023C or CI. Course will emphasize the biological principles involved in the vertebrate immune response. It will present the homeostatic, defense, and detrimental aspects of the immune system in terms of basic cellular and molecular mechanisms. Techniques will be described to familiarize the student with the types of immunological tools available to the cellular and molecular biologist.

PCB 5525C  MOLECULAR GENETICS (4)
PR: PCB 3063. Detailed examination of DNA, RNA and protein synthesis; the effects of mutations on proteins, cellular control; selected aspects of viral, bacterial, and fungal genetics. Lec-lab. Qtr. II.

PCB 5615C  EVOLUTIONARY GENETICS (4)
PR: PCB 3063 or CI. Examination of factors such as mutation, migration, natural selection, and genetic drift which modify the genetic structure of populations.

PCB 5825C  NEUROPHYSIOLOGY (4)
PR: PCB 4743C. A comparative analysis of the physiochemical basis and evolution of nervous systems and sensory mechanisms. Lec-lab.

PCB 6176C  ULTRASTRUCTURE TECHNIQUES IN ELECTRON MICROSCOPY (6)

PCB 6356C  TROPICAL ECOCOLOGY (4)
PR: PCB 4043C. Graduate Standing or CI. A discussion of a series of related ecological topics to illustrate the features peculiar to the tropics.

PCB 6426C  POPULATION BIOLOGY (4)
PR: PCB 5615 and PCB 6456C 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.

PCB 6456C  BIOMETRY (4)
PR: MAC 2242, MAC 2243, MAC 2244 or CI. An introduction to statistical procedures for research in the biological sciences. Experimental design, analysis of data, and presentation of results are emphasized.

PCB 6566C  CHROMOSOME STRUCTURE AND CHEMISTRY (4)
PR: PCB 5115C. Introduction to the molecular organization of the Eukaryotic chromosome.

Biology-Botany

UNDERGRADUATE COURSES

APB 3103  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 3010  INTRODUCTION TO BOTANY (5)
PR: BSC 2010C, BSC 2011C, BSC 2012 or equivalent. Knowledge of basic biological principles will be assumed. A presentation of the fundamentals of plant life, structure and function of flowering plants; history of agriculture, plants and man; plant distribution and ecology; survey of major plant groups, algae, fungi, bryophytes, ferns, gymnosperms and flowering plants.

BOT 3143C  FIELD BOTANY (3)

BOT 3713C  SYSTEMATIC BOTANY (5)
PR: BOT 3010. Identification and classification of the more interesting vascular plants of Florida; angiosperm evolution; principles of taxonomy. Conducted largely in the field.

BOT 3823C  HORTICULTURAL BOTANY (3)
PR: Course in botany, biology or 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 4223C  PLANT ANATOMY (5)
PR: BOT 3010. Comparative studies of tissue and organ systems of fossil and present-day vascular plants. Functional and phylogenetic aspects stressed. Lec.-lab.

BOT 4535C  MORPHOLOGY OF VASCULAR PLANTS (5)
PR: BOT 3010. An intensive survey of the morphology, evolution and taxonomy of the various groups of vascular plants, both living and extinct. The course will focus primarily on lower groups such as the ferns and gymnosperms but will conclude with an analysis of the origins and general features of the angiosperms.
GRADUATE COURSES

BOT 4434C MYCOLOGY (5)
PR: BOT 3010 or CI. A survey of the fungi with emphasis on their taxonomy, morphology, physiology and economic importance. Lec.-lab.

BOT 4503 PLANT PHYSIOLOGY (5)
PR: PCB 4023C; CR: PCB 4024C. Fundamental activities of plants; absorption, translocation, transpiration, metabolism, growth, and related phenomena. Lec.-lab.

BOT 4933 SEMINAR IN BOTANY (1)
PR: Senior or advanced junior standing and CI. May be repeated once. (S/U only.)

BILOGY-MICROBIOLOGY

APB 4053C APPLIED BACTERIOLOGY (5)
PR: MCB 3010C. A study of the applications of microbiology to industry, agriculture, medicine, and sanitary engineering. Lec.-lab.

MCB 3010C INTRODUCTION TO MICROBIOLOGY (5)
PR: BSC 2010C, BSC 2011C, BSC 2012; CHM 2045, CHM 2046, CHM 2047; 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, protozoa and lower fungi. The laboratory involves preparation of culture media, staining, pure culture methodology, isolation of microbes from nature, enumeration techniques, resistance to infectious disease.

MCB 4030L LABORATORY IN EXPERIMENTAL MICROBIOLOGY (3)
PR: MCB 3010C, CI; CR: MCB 4404. Course will consist of individually performed exercises to teach major techniques in quantitative, experimental microbiology with emphasis on biochemical and physiological examination of bacteria and viruses, their chemical composition, enzymatic, molecular and physical properties.

MCB 4115 DETERMINATIVE BACTERIOLOGY (4)
PR: CHM 3210, CHM 3210L, CHM 3211, CHM 3211L, CHM 3212, CHM 3212L, MCB 3010C. Survey of bacterial classification; detailed examinations of bacteria important to man in agriculture, in industry and as pathogens. Qtr. II.

MCB 4163L LABORATORY METHODS IN DIAGNOSTIC MICROBIOLOGY (3)
PR: MCB 4115 or CI. Laboratory procedures necessary to identify pathogenic and commonly encountered bacteria, fungi, and other parasites will be individually performed. These procedures will include determinations of morphology, physiological reactions, and immunological responses as appropriate.

MCB 4404 MICROBIAL PHYSIOLOGY (4)
PR: MCB 3010C, PCB 4023C 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.

MCB 4505C VIROLOGY (4)
PR: MCB 3010C 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.

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

GRADUATE COURSES

APB 5575C MEDICAL MYCOLOGY (5)
PR: MCB 3010C 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.

MCB 5115C ADVANCED BACTERIOLOGY (4)
PR: MCB 3010C. Ultrastructure, growth, metabolism, genetics and ecology of the bacteria and related procaryotes.

MCB 5206 PATHOGENIC MICROBIOLOGY (4)
PR: MCB 3010C. A comprehensive survey of pathogenic microbes responsible for disease in man and other animals. These

*Students will be required to pay travel expenses for field trips.
pathogens will be studied with respect to their morphology, cultivation, mechanisms of pathogenicity, infection, laboratory diagnosis, and epidemiology.

**MCB 5605 MICROBIAL ECOLOGY** (3)  
PR: MCB 3010C, CI. A study of the theory and methodology of the quantification of microbial processes in natural habitats with special emphasis on aquatic and terrestrial systems.

**MCB 5606 LABORATORY METHODS IN MICROBIAL ECOLOGY** (2)  
CR: MCB 5605 or CI. A study of the application of laboratory methods of microbiology to assess microbiological activities in natural systems in both qualitative and quantitative terms.

**MCB 5936 SELECTED TOPICS IN MICROBIOLOGY** (1-4)  
PR: Cl. Each topic is a course in directed study under supervision of a faculty member.

**MCB 6459 ADVANCED TOPICS IN CHEMICAL MICROBIOLOGY** (3)  
PR: MCB 4404, Biochemistry or CI. An in-depth study of metabolic and physiological phenomena associated with microorganisms, especially bacteria, including: growth, regulations, unique metabolic traits, morphogenesis, cell division, cell death and survival mechanisms.

**MCB 6919 INDEPENDENT STUDY** (var.)  
Independent study in which student must have a contract with an instructor. Repeatable. (S/U only.)

**MCB 6971 THESIS: MASTER'S** (var.)  
Repeatable. (S/U only.)

**PCB 6236 ADVANCED IMMUNOLOGY** (5)  
PR: CI. Discussion of the basic immune reaction, nature of antigenicity; basic immunological techniques and their use in biological research and the medical sciences.

**PCB 6606 BACTERIAL GENETICS** (3)  
PR: MCB 4404, PCB 3063 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.

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**Graduate Courses**

**ZOO 3713C COMPARATIVE VERTEBRATE ANATOMY** (6)  

**ZOO 4303C VERTEBRATE ZOOLOGY** (5)  

**ZOO 4503C ANIMAL SOCIAL BEHAVIOR** (5)  
PR: CI. An introduction to comparative animal behavior (Ethology), with emphasis on communication, social use of space, and behavioral evolution.

**ZOO 4583C PRIMATE SOCIAL BEHAVIOR** (4)  

**ZOO 4893 WILDLIFE AND FISH MANAGEMENT** (3)  
PR: BSC 2010C, BSC 2011C, BSC 2012, PCB 4043C. An introduction to the principles of wildlife and fisheries management. Certain methods and techniques utilized in the management of exploited animal species will be introduced. Designed primarily for students interested in the wildlife and fish management profession.

**ZOO 4932 SEMINAR IN ZOOLOGY** (1)  
PR: Upper level. May be repeated once. (S/U only.)

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**Undergraduate Courses**

**ENY 4004 INTRODUCTION TO ENTOMOLOGY** (4)  
PR: BSC 2010C, BSC 2011C, BSC 2012. An introduction to general aspects of insect morphology, development, and classification. The identification of local forms will be emphasized. Lec.-lab., Qtr. II (odd numbered years).

**PCB 5306C LIMNOLOGY** (5)  
PR: CI. An introduction to the physical, chemical, and biological nature of fresh-water environments. Lec.-lab., Qtr. III.

**PCB 5325C TERRESTRIAL ANIMAL ECOLOGY** (4)  
PR: PCB 4043C. Field and laboratory investigations of the basic principles of ecology as applied to terrestrial animals. Lec.-lab.

**PCB 5725C COMPARATIVE PHYSIOLOGY** (5)  
PR: PCB 4023C, PCB 4042C. The evolution of physiological mechanisms. Lec.-lab., Qtr. I.

**PCB 6376C PHYSIOLOGICAL ECOLOGY** (5)  
PR: CI. Effect of environmental factors on animal function at the cellular and organ system level with emphasis on control and mechanism. Lec.-lab.

**PCB 6756 COMPARATIVE METABOLISM** (3)  
PR: PCB 4023C, PCB 4024C, CHM 3210, CHM 3210L, CHM 3211, CHM 3211L, BCH 3033, or their equivalents. Some knowledge of Animal Phylogeny will be assumed. A presentation of various metabolic pathways found in invertebrate animals including specializations related to parasitism and facultative anaerobiosis.

**PCB 6776C PHYSIOLOGY OF MARINE ANIMALS** (5)  
PR: PCB 4023C, PCB 4024C. A study of the physiological mechanisms of animals in the marine environment. Lec.-lab.

**PCB 6816 COMPARATIVE ENDOCRINOLOGY** (4)  
PR: PCB 5725C or CI. An analysis of the similarities and differences between the hormonal mechanisms of mammals, other vertebrates, and invertebrates. Lecture only.

**ZOO 5235C PARASITOLOGY** (5)  
PR: BSC 2010C, BSC 2011C, BSC 2012. Fundamentals of animal parasitology and parasitism; the biology of selected animal parasites, including those of major importance to man. Lec.-lab., Qtr. II.

**ZOO 5285C BIOLOGY OF ECHINOERMS** (5)  
PR: PCB 4024C, ZOO 3203C. A study of the anatomy, physiology and ecology of echinoderms. Lec.-lab., Qtr. I (even numbered years).

**ZOO 5415C BIOLOGY OF THE AMPHIBIA** (5)  
PR: ZOO 3713C or ZOO 4303C and CI. Major aspects of am-
phian biology emphasizing fossil history, evolutionary morphology, sensory physiology, life history and reproductive behavior. Lec.-lab. Field trip Qtr. III (even numbered years).

ZOO 5425C BIOLOGY OF THE REPTILIA  (5)  
PR: ZOO 3713C or ZOO 4303C and CI. 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 5485C ICHTHYOLOGY  (5)  
PR: ZOO 3713C or ZOO 4303C or CI. Systematics of fishes, including major classification, comparative anatomy, embryology, and general distribution. Lec.-lab. (Also offered under Marine Science.)

ZOO 5755C MARINE ANIMAL ECOLOGY  (5)  
PR: PCB 4043C and ZOO 3203C. Investigation of energy flow, biogeochemical cycles, and community structure in marine environments. Lec.-lab.

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**Business Administration**


**Undergraduate Courses**

ACC 2001 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 2021 ELEMENTARY ACCOUNTING II  (3)  

ACC 3101 INTERMEDIATE ACCOUNTING I  (4)  
PR: ACC 3301 or CR in ACC 3301. Measurement theory and methodology underling income measurement and reporting of financial position. The study of cash, time value analysis, receivables, and inventories.

ACC 3121 INTERMEDIATE ACCOUNTING II  (4)  
PR: ACC 3101. 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 3141 INTERMEDIATE ACCOUNTING III  (4)  
PR: ACC 3121. 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 3301 ACCOUNTING FOR MANAGEMENT CONTROL  (3)  
PR: ACC 2021. Study of accounting from user's point of view.

Includes measurement theory, use of financial statements, and accounting measurement in planning and control.

ACC 4201 ADVANCED ACCOUNTING  (3)  
PR: ACC 3121: MAC 2242 or College Algebra. Partnerships, governmental accounting, and price-level changes.

ACC 4221 CONSOLIDATED FINANCIAL STATEMENTS  (4)  
PR: ACC 3121. Accounting for business combinations, preparation of consolidated financial statements, home office and branch operations, reporting by multinational companies and segments of a business enterprise.

ACC 4401 COST ACCOUNTING AND CONTROL I  (4)  
PR: GEB 3121, FIN 3403. Deals with relevant costs for decision making; standards and job order costing, flexible budgeting, direct and absorption costing, regression analysis, and decision models.

ACC 4421 COST ACCOUNTING AND CONTROL II  (4)  
PR: ACC 4401. A continuation of ACC 4401. The study of cost allocation, capital budgeting, inventory planning and control, joint products, process costing, performance measurement, and transfer pricing.

ACC 4501 FEDERAL TAXES  (4)  
PR: ACC 2021. An introduction to the federal income tax structure. Use of tax services and the concept of taxable income primarily applicable to individuals.

ACC 4521 FEDERAL TAXES  (4)  
PR: ACC 4501. Continued study of the federal income tax structure. Special topics and the concept of taxable income as it applies primarily to business enterprises.

ACC 4601 AUDITING  (4)  
PR: ACC 3121 and GEB 3121. Principles and procedures of internal and public auditing. The ethics, responsibilities, standards, and reports of professional auditing.

ACC 4730 ACCOUNTING INFORMATION SYSTEMS  (4)  
PR: ACC 3121, COC 3201. General systems theory, total systems concept, internal control problems, and computer based accounting systems.
ACC 4905 INDEPENDENT STUDY  (1-4)
PR: CI. Specialized independent study determined by the students' needs and interests. May be repeated up to 8 credit hours. (S/U only.)

ACC 4914 INDEPENDENT RESEARCH  (1-5)
PR: CI. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor. May be repeated up to 10 hours.

ACC 4934 SELECTED TOPICS IN ACCOUNTING  (1-5)
PR: CI. The course content will depend on student demand and instructor's interest.

GRADUATE COURSES

ACC 5031 ACCOUNTING CONCEPTS AND METHODOLOGY I  (3)
A study of basic accounting principles including the recording of transactions and the preparation and interpretation of financial statements. May not be taken for credit by business administration graduate students.

ACC 5051 ACCOUNTING CONCEPTS AND METHODOLOGY II  (3)
PR: ACC 5031. A continuation of ACC 5031. Consideration is given to budgeting and cost accounting. Emphasis is placed upon the analysis of financial condition and business operations through an understanding of accounting statements and reports. May not be taken by business administration graduate students.

ACC 5315 FINANCIAL/MANAGERIAL ACCOUNTING  (5)
This course is designed to provide students in the M.S. degree in Management, in Health Care and Urban Management sections, with a basic knowledge of financial and managerial accounting in both the public and private sectors. The course is non-technical in nature, and concentrates on the uses and limitations of accounting data for planning, control, and other decision-making activities.

ACC 5805 CONTEMPORARY ACCOUNTING THOUGHT  (4)
PR: Intermediate Accounting III or equivalent. An in-depth coverage of selected topics in accounting. Emphasis is placed on current significant developments that have taken place in the profession which the student should have for a well-rounded background in accounting but have not been exposed to in previous courses. Available to majors and non-majors.

ACC 5935 SELECTED TOPICS IN ACCOUNTING  (1-5)
PR: CI. To allow advanced undergraduate students and graduate students to research and study contemporary and emerging topics in the field. May be repeated up to 10 credit hours.

ACC 6412 MANAGEMENT ACCOUNTING AND CONTROL  (4)
PR: Financial Accounting for Managers. The relevancy and limitation of cost information in business decision making. Emphasis is oriented towards the role of cost accounting measurements in: (1) planning and controlling current operations; (2) special decisions and long-range planning; (3) inventory valuation and income determination. Not available for credit for graduate students in the Master of Accountancy program.

ACC 6451 MANAGEMENT COST ANALYSIS AND CONTROL  (3)
PR: 24 quarter hours of accounting or CI. Measurement, interpretation, planning, and control of costs by means of predetermined standards and variance analysis. Use of accounting and statistical information in preparing budgets and controlling operations.

ACC 6511 FEDERAL TAX RESEARCH AND PLANNING  (3)
PR: ACC 4501 or CI. A study of the development of tax law and its implication in business decisions. Tax planning and tax research are emphasized.

ACC 6691 ETHICS AND RESPONSIBILITIES IN PROFESSIONAL ACCOUNTANCY  (3)
PR: ACC 4601 or equivalent. The study of elements of public accounting practice, professional conduct, auditing principles and reporting standards. The relationship of the field of public accounting to federal and state agencies.

ACC 6745 SYSTEMS THEORY AND QUANTITATIVE APPLICATIONS  (3)
PR: ACC 4730 or equivalent. The design and operation of contemporary accounting systems including the relevance of data processing and statistical methods to the system of financial information and control.

ACC 6805 CONTEMPORARY ACCOUNTING THOUGHT  (3)
PR: ACC 6811 or CI. Concentrated study of current problems areas in the field of accounting.

ACC 6811 DEVELOPMENT OF ACCOUNTING THOUGHT  (3)
PR: 24 quarter hours in accounting or CI. A study and evaluation of the development and evolution of current account theory and measurement concepts. The definition of accounting objectives and goals and the development of measurement models.

ACC 6905 INDEPENDENT STUDY  (var.)
Independent Study in which student must have a contract with an instructor. Repeatable. (S/U only.)

ACC 6910 DIRECTED RESEARCH  (var.)
PR: GR. Master's level. Repeatable. (S/U only.)

ACC 6930 SELECTED TOPICS IN ACCOUNTING  (1-6)
PR: CC. The course content will depend on student demand and instructor's interest. May be repeated up to 6 hours.

Economics


UNDERGRADUATE COURSES

ECO 2013 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.

ECO 2023 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.

ECO 3101 INTERMEDIATE PRICE THEORY  (5)
PR: ECO 2013, ECO 2023. Advanced analysis of supply and demand as related to competition and monopoly; application of economic theory to product pricing and resource pricing.

ECO 3203 INTERMEDIATE INCOME AND MONETARY ANALYSIS  (5)
PR: ECO 2013, ECO 2023. An advanced exposition of the neo-Keynesian 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.
ECO 3401 BUSINESS FLUCTUATION AND ECONOMIC FORECASTING

ECO 3622 AMERICAN ECONOMIC HISTORY
The growth and evolution of American economic institutions from Colonial times to the present.

ECO 3703 INTERNATIONAL ECONOMICS

ECO 4213 MONETARY THEORY
PR: ECO 3101, ECO 3203. 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.

ECO 4264 THEORY OF ECONOMIC DYNAMICS
PR: ECO 3203. An examination of macroeconomic processes as they occur through time. The determination and characteristics of long run growth paths based upon both Keynesian and Neo-classical 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.

ECO 4303 HISTORY OF ECONOMIC THOUGHT
PR: ECO 2013, ECO 2023, ECO 3101, or CI. The development of the economic schools (Scholasticism, Mercantilism, Physiocratic, Classicism, Utopia Socialism, Anarchism, Marxism, Historicism, Marginalism, Neo-Classicism, Institutionalist, and Keynesianism) in connection with their philosophical and political convictions in relation to their times.

ECO 4323 MARXIST POLITICAL ECONOMY
PR: ECO 2013 and ECO 2023 or CI. An examination of the Marxian tradition and other "left" perspectives in economics. Application of Marxist economic theory to problems of advanced capitalist and socialist societies.

ECO 4401 INTRODUCTION TO MATHEMATICAL ECONOMICS
PR: ECO 2013, ECO 2023 and GEB 3121, MAC 2243 or CI. Economic processes expressed as equations and economic systems as mathematical models. Investigation of their static and dynamics properties by mathematical analysis and computer simulation.

ECO 4402 SELECTED TOPICS IN QUANTITATIVE ECONOMICS
PR: GEB 3121, MAC 2243 or CI. Analysis of relevant problems of social policy by application of economic criteria and econometric method. Survey of contemporary research.

ECO 4504 PUBLIC FINANCE
PR: ECO 3101. 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.

ECO 4723 INTERNATIONAL COMMERCIAL POLICIES
PR: ECO 3703. An advanced analysis of balance of payments equilibrating mechanisms and of international commercial policy.

ECO 4905 INDEPENDENT STUDY
PR: CI. Specialized independent study determined by the student's needs and interests. May be repeated up to 8 credit hours. (S/U only.)

ECO 4914 INDEPENDENT RESEARCH
PR: CI Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor. May be repeated up to 10 hours.

ECO 4935 SELECTED TOPICS IN ECONOMICS
PR: Senior standing and CI. Topics to be selected by the instructor or instructors on pertinent economic issues.

ECP 1001 CONTEMPORARY ECONOMIC PROBLEMS
An introduction to economics in the context of contemporary social issues. The problem of economic scarcity, the role of ethical value in economics, economic processes and the economic analysis of social issues.

ECP 3203 LABOR ECONOMICS
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.

ECP 3423 ECONOMICS OF PUBLIC UTILITIES

ECP 3433 ECONOMICS OF TRANSPORTATION
Functions of transporting agencies, rate structure of transportation companies, problems of state and federal regulations and coordination of transportation facilities.

ECP 3613 ECONOMICS OF THE URBAN ENVIRONMENT
PR: CI. Economic analysis of the phenomena of cities as well as urban social problems including poverty, discrimination, housing, transportation, pollution, crime and fiscal considerations.

ECP 3703 MANAGERIAL ECONOMICS

ECP 4003 BUSINESS-GOVERNMENT RELATIONSHIPS
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.

ECP 4323 COLLECTIVE BARGAINING AND PUBLIC POLICY
PR: Labor Economics or CI. The administration of labor management agreements, etc. The impact of the government role in collective bargaining and labor relations will be examined in light of current labor laws and judicial interpretations.

ECS 4003 COMPARATIVE ECONOMIC SYSTEMS
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.

ECS 4013 THEORY OF ECONOMIC DEVELOPMENT
PR: ECO 3203 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.

GEB 2111 BUSINESS AND ECONOMIC STATISTICS I
PR: MAC 2242. 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.

GEB 3121 BUSINESS AND ECONOMIC STATISTICS II (5)
PR: MAC 2242. College Algebra or equivalent and GEB 2111. 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.

GRADUATE COURSES

ECO 5062 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 Administration.

ECO 5063 MACROECONOMICS (3)
PR: ECO 5062. 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 the 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 Administration.

ECO 5404 ECONOMIC PROGRAMMING AND CONTROL (5)

ECO 5424 ECONOMETRICS (5)
PR: ECO 3101, ECO 3203, GEB 3121, 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.

ECO 6115 MICROECONOMICS (3)
PR: ECO 6716. 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 reading in theoretical and applied microeconomics will be emphasized.

ECO 6206 AGGREGATE ECONOMICS (3)
PR: ECO 6717. An analysis of the macroeconomic interrelationships determining the level of income, employment, prices, and interest rates over time and the impact of government policy upon these variables.

ECO 6216 MONETARY THEORY (5)
PR: ECO 6716, GEB 6717. 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.

ECO 6305 HISTORY OF ECONOMIC THOUGHT (5)
PR: ECO 6716. An intense analysis of the main currents of modern economic thought during the last one hundred years.

ECO 6414 MANAGERIAL STATISTICS (3)

ECO 6435 APPLIED FORECASTING (3)

ECO 6436 ADVANCED BUSINESS FLUCTUATION AND ECONOMIC FORECASTING (3)
PR: GEB 6717, GEB 6756. May be waived by instructor. Applications of statistical techniques to forecasting aggregate business activity, GNP and GNP components. Critical analysis of forecasting techniques and applications of forecasting methods to business decisions.

ECO 6506 PUBLIC FINANCE I (4)
PR: ECO 2013, ECO 2023. 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 and income distribution.

ECO 6507 PUBLIC FINANCE II (4)
PR: ECO 6506. Topics in public economics including cost functions for public goods, redistributive techniques, fiscal federalism, major issues in government expenditures, environmental policies, stabilization, growth and debt policy.

ECO 6906 INDEPENDENT STUDY (var.)
Independent study in which student must have a contract with an instructor. Repeatable. (S/U only.)

ECO 6916 RESEARCH METHODOLOGY (3)

ECO 6917 DIRECTED RESEARCH (var.)
PR: GR. Master's level. Repeatable. (S/U only.)

ECO 6936 SELECTED TOPICS IN ECONOMICS (1-6)
PR: Graduate standing and CI. The course content will depend on student demand and instructor's interest.

ECO 6971 THESIS: MASTER'S (var.)
Repeatable. (S/U only.)

ECP 5403 INDUSTRIAL ORGANIZATION I-STRUCTURE (4)
PR: ECO 2013 and ECO 2023, 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.

ECP 5404 INDUSTRIAL ORGANIZATION II-CONDUCT AND BEHAVIOR (4)
PR: Either ECO 3101 or GEB 6716 and ECP 5403. 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.

ECP 5614 URBAN ECONOMICS (4)
PR: ECO 2013, ECO 2023. The economics of urban areas including analysis of their growth and development as well as intraurban location patterns. Economic analysis at an advanced level of urban social problems.

ECP 6006 APPLIED ECONOMIC ANALYSIS (3)
PR: GEB 6716, GEB 6717. Application of micro and macro economic analysis to problems of policy and procedure in business and government.

ECP 6206 MANPOWER ECONOMICS SEMINAR (5)
PR: ECO 2013, ECO 2023. 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 under-employment.

**ECP 6230 LABOR RELATIONS LAW** (3)
A survey of the various legal constraints applicable to the employer-employee relationship. Included are such areas as collective bargaining, civil rights, and fair labor standards. (Also offered under Management)

**ECP 6705 ADVANCED MANAGERIAL ECONOMICS** (3)
PR: GEB 6716, GEB 6756. Advanced study of decision-making in households, firms and not-for-profit institutions. Topics cover demand, production and cost, organizational goals, efficiency vs. effectiveness, environmental influences on decision-making. Both problems of analysis and measurement are emphasized.

**Finance**


**UNDERGRADUATE COURSES**

**FIN 2100 PERSONAL FINANCE** (5)
Survey of the problems and techniques of family financial planning. Includes consumer credit, insurance, home ownership, and personal investing, with attention given to current economic and legal constraints. Not available for credit to upper level students who have been admitted to the College of Business Administration.

**FIN 2105 INTRODUCTION TO INVESTMENTS** (4)
Emphasizes the operations of the security markets in the U.S. and the risks and returns of alternative investment media. Designed for non-business administration students. Not available for credit to upper level students who have been admitted to the College of Business Administration.

**FIN 3233 MONEY AND BANKING** (4)
PR: ECO 2013. Examines the structure and operations of our monetary system, commercial banking, central banking, money, and capital markets, and provides an introduction to monetary theory and policy.

**FIN 3403 PRINCIPLES OF FINANCE** (5)
PR: ACC 3301 and ECO 2023. The study of the processes, the decision structures, and the institutional arrangements concerned with the utilization and acquisition of funds by a firm. The course will include the management of the asset structure and the liability structure of the firm under both certain and risky situations and considering the problems of time and the decision makers preferences. The financial decision process will include and recognize the international as well as domestic aspects of financial management.

**FIN 3604 INTERNATIONAL FINANCE** (5)
PR: ECO 2013 or CI. Factors affecting international business; assessment of risk; international managerial finance; institutions and instruments of international business finance.

**FIN 4303 FINANCIAL INSTITUTIONS** (4)
PR: FIN 3233. A study of financial institutions and their roles in the capital market in the savings allocation, investment, and financial decision making process.

**FIN 4414 ADVANCED CORPORATION FINANCE** (4)
PR: FIN 3403. An examination of the financial policies of corporations, with special reference to dividend policy, financial structure, capital expenditures, acquisitions, mergers, and reorganization.

**FIN 4443 FINANCIAL POLICIES AND STRATEGIES** (3)
PR: FIN 4414. Senior seminar for majors in finance. Quantitative and qualitative analysis of financial policies based on independent readings and empirical research.

**FIN 4504 PRINCIPLES OF INVESTMENTS** (4)
PR: ECO 2013 and FIN 3403. Survey of the risks and returns of investment media in relation to the investment objectives of individual and institutional investors. Includes an examination of the capital markets, information flows, and analytical techniques in terms of their impact upon the valuation process.

**FIN 4524 PORTFOLIO MANAGEMENT** (3)
PR: FIN 4504. Study of portfolio policies and strategies of individual and institutional investors. This course utilizes both quantitative and case study approaches to problem solving.

**FIN 4834 FEDERAL RESERVE SYSTEM AND MONETARY POLICY** (4)
PR: ECO 3303 or FIN 3233. An analysis of the Federal Reserve System, with special emphasis on the formulation and administration of monetary policy and on monetary theory.

**FIN 4905 INDEPENDENT STUDY** (1-4)
PR: CI. Specialized independent study determined by the students' needs and interests. May be repeated up to eight credit hours. (S/U only.)

**FIN 4915 INDEPENDENT RESEARCH** (1-5)
PR: CI. Individual study contract with instructor and department chairperson. The research project will be mutually determined by the student and instructor. May be repeated up to 10 hours.

**FIN 4934 SELECTED TOPICS IN FINANCE** (1-5)
PR: CI. Topics to be selected by instructor and department chairperson on pertinent Finance issues.

**REE 3040 PRINCIPLES OF REAL ESTATE** (5)
Economics of urban land utilization and the nature of property rights. Problems of urban development and the valuation of real property in terms of the structure and operations of the real estate market.

**REE 4204 REAL ESTATE FINANCE** (4)
PR: REE 4310. A comprehensive analysis of the institutional and legal framework of real estate financing together with an introduction to the financing techniques which are traditionally utilized to finance real estate. Includes methods of raising debt and equity funds. Analysis of real property for financing purposes is stressed in a decision-making context and how that decision affects the real estate investment. The course is not restricted to Finance majors.

**REE 4310 REAL ESTATE INVESTMENT ANALYSIS** (4)
PR: FIN 3403, REE 3040. A comprehensive study of the determinants of the market and financial feasibility of the real estate investment decision. The development of market and site analyses, theories of urban development patterns, and the role of taxation will be studied along with the application of analytical techniques for decision making. The course is not restricted to Finance majors.

**RMI 3010 PRINCIPLES OF INSURANCE** (5)
Analysis of insurable risks of both business and individuals. An examination of the characteristics of those areas of risk and uncertainty where the mechanisms of insurance are effective alternatives. The concept, contracts, and institutions involved in insurance are examined in relationship to the socio-economic environment.

**RMI 4110 LIFE, HEALTH, & DISABILITY INSURANCE** (5)
PR: GEB 3121, RMI 3010. The course will analyze the use of life, health, and disability insurance contracts as a method of dealing with the risks of death, sickness, and disability. It will also include an analysis of cost determination of the various types of coverage.

**RMI 4113 CASUALTY INSURANCE** (4)
PR: RMI 3010. A discussion/lecture course dealing with recognition of personal and business casualty risks, coverages which may be used in dealing with these risks, and understanding the underwriting, marketing, and social problems associated with these coverages. Topics include workmen's compensation, pub-
lic liability, auto liability, suretyship and crime insurances. Not limited to finance majors.

RMI 4210 PROPERTY INSURANCE (4) PR: RMI 3010. A discussion/lecture course dealing with recognition of personal and business property risks, coverages which may be used in dealing with these risks, and understanding the underwriting, marketing, and social problems associated with these coverages. Topics include commercial and residential fire insurance, inland marine and transportation coverages, and multi-peril contracts. Not limited to Finance majors.

GRADUATE COURSES

FIN 6246 ADVANCED MONEY AND CAPITAL MARKETS (3) PR: Macroeconomic Analysis or equivalent. The study of the role of financial markets in the economy. The course will investigate and analyze the effects and relationship between financial theory, financial institutions, and financial markets and their interactions and impacts on the economy. It includes the study of flow of funds, interest rate determination, and the pricing of capital assets.

FIN 6375 FINANCIAL PLANNING FOR HEALTH ORGANIZATIONS (5) PR: Financial/Managerial Accounting. An examination of the tools and techniques of financial management in the administration of Health Care organizations. Cannot be taken for credit by students that have taken GEB 6725.

FIN 6446 FINANCIAL POLICY (3) PR: Financial Management. A case study approach to financial policy and strategy with an emphasis on major financial decisions in the area of external financing, mergers, acquisitions, recapitalization, and reorganization.

FIN 6605 INTERNATIONAL FINANCIAL MANAGEMENT (4) PR: Financial Management or equivalent. The course provides a foundation for the understanding and appreciation of financial management of international business. The subject areas covered relate to: international finance, multinational business finance, and financial market theory.

FIN 6718 GOVERNMENTAL FINANCIAL PLANNING AND BUDGETING (5) PR: Basic understanding of accounting and CI. A thorough investigation of planning, budgeting, and control for government, including: Budgeting procedures and methods for services and capital improvements (e.g., zero base budgeting); estimating local revenues and expenditures; methods of financing capital facilities; debt financing and administration; measures of efficiency and effectiveness; and, management of cash.

FIN 6804 THEORY OF FINANCE (3) PR: Financial Management or CI. A systematic and rigorous course in the theory of finance. Topics will include the theory of choice and the allocation of financial resources, the theory of optimal investment decisions, and the theory of risk and uncertainty in financial decisions. It will also cover the theoretical concepts underlying financing decisions and the cost of capital.

FIN 6816 INVESTMENTS (3) PR: Financial Management. An examination of the risks and returns of alternative investment media within the framework of various valuation models. Special attention is given to the investment process and the criteria for investment decisions.

FIN 6906 INDEPENDENT STUDY (var.) Independent study in which students must have a contract with an instructor. Repeatable. (S/U only.)

FIN 6915 DIRECTED RESEARCH (var.) PR: GR. Master's level. Repeatable. (S/U only.)

FIN 6934 SELECTED TOPICS IN FINANCE (1-6) PR: Graduate standing and CI. A variable credit course depending upon the scope and magnitude of the work required. Includes special lecture series.

Foundations Courses in Business

GRADUATE COURSES

GEB 6705 FINANCIAL ACCOUNTING FOR MANAGERS (4) PR: Graduate standing. Study of (1) accounting concepts and standards applicable to presentation of financial information to interested users, (2) structure, uses and limitations of financial statements and (3) measurement systems related to income determination and asset valuation. Discussion of internal and external influences on accounting decisions.

GEB 6716 MICROECONOMIC ANALYSIS (4) PR: Graduate standing. To present theories of economic behavior in our modern market system and an appreciation of the role of economic organizations in achieving private and societal goals. More specifically, consumer behavior and demand analysis for business decisions, theories of production and cost, and the significance of market prices are developed. Special problems faced by business and not-for-profit organizations under different conditions and market structures are treated at length.

GEB 6717 MACROECONOMIC ANALYSIS (4) PR: GEB 6716. A study of the influence of aggregate demand and supply in the determination of output, employment, prices, wages, and interest rates. Also a treatment of inflation, growth, fluctuations, and the influences of world markets and the macroeconomic policies of government.

GEB 6725 FINANCIAL MANAGEMENT (4) PR: GEB 6705 or its equivalent. The study of processes, the decision structures, and the institutional arrangements concerned with the utilization and acquisition of funds by a firm. The course will include the management of the asset structure and the liability structure of the firm both certain and risky situations and considering the problems of time and the decision makers preferences. The financial decision processes will include and recognize the international as well as domestic aspects of financial management.

GEB 6745 MARKETING MANAGEMENT (4) PR: GEB 6716. A study of the problems and decisions confronting marketing managers, including an analysis of the social, technical, economic, legal, and political environment; and the development of strategic marketing plans. Includes topics on consumer and buyer behavior, market segmentation, marketing information systems, product selection and development, pricing policies, distribution, advertising and sales force decisions. Lec.-dis.

GEB 6756 STATISTICAL METHODS FOR MANAGEMENT (4) PR: Graduate standing; college algebra. A study of probability and statistics as applied to administrative problems of choice, estimation and prediction under conditions of uncertainty. Topics include: Basic probability concepts, measures of central tendency and dispersion, statistical decision theory, probability distributions, sampling and interval estimation, classical hypothesis testing, chi square tests, correlation, regression, and analysis of variance. Lec.-dis.

GEB 6757 QUANTITATIVE METHODS FOR OPERATIONS MANAGEMENT (4) PR: Graduate standing, college algebra. The study and application of management science techniques to business operations. Techniques include differential calculus, linear algebra, linear programming, queuing theory and simulation as applied to problems in resource allocation, scheduling, inventory control, and facility location. Lec.-dis.

GEB 6775 INFORMATION SYSTEMS FOR MANAGEMENT (4) PR: Statistical Methods for Management. A study of (1) the analysis and application of management information systems; (2) the impact of computers on decision making and organizational structure; and (3) the utilization of computer languages.
statistical packages and other program libraries for problem solving and research analysis. Interface with the computer will be an integral part of the course.

**MAN 6065 THE MANAGEMENT PROCESS (4)**

PR: Graduate standing
An examination of the theory and practice of management, including the study of goals and means, the functions of management, and the administrative process in general. A review of the beginning of modern management and the analysis of basic concepts of management will also be included.

**MAN 6715 SOCIAL, LEGAL AND POLITICAL ENVIRONMENT OF BUSINESS (3)**

PR: Graduate standing. A study of the influence of social, cultural, legal and political environment on institutional behavior, including the changing nature of the business system, the public policy process, corporate power, legitimacy and managerial autonomy, and organizational reactions to environmental forces.

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**General Business Administration**

**UNDERGRADUATE COURSES**

**BUL 2111 LAW AND THE INDIVIDUAL (5)**
A study of the nature, functions, sources, formulation, and administration of law with the special emphasis on the practical aspects of criminal, tort, estate, divorce, property, business, constitutional, and other areas of law. Not available for credit to students who have been admitted to the College of Business.

**BUL 3112 BUSINESS LAW I (5)**
The nature of legal institutions, essentials of binding contract, remedies granted in event of breach of contract, and rights acquired by assignment of contracts.

**BUL 3122 BUSINESS LAW II (5)**
PR: BUL 3112. Legal problems in marketing of goods, nature of property, sales of personal property, securing of credit granted, nature and use of negotiable instruments.

**BUL 3659 THE LAW OF BUSINESS ASSOCIATIONS (5)**
PR: BUL 3112. A study of the law of corporations, the law of partnerships, and the law of agency.

**COC 3201 COMPUTERS IN BUSINESS I (3)**
An introductory interdisciplinary examination of the impact of computers on all areas of business decision-making. Problems are reduced to schematic logic, programmed, and tested using the computer. Computer hardware, software, history, and terminology are introduced.

**GEB 3211 BUSINESS COMMUNICATIONS (4)**
Analysis and application of the principles of organizational behavior in letters, memorandums, and reports. Identification and use of inference and assumption, roleplaying, and conventions which affect interpersonal and organizational communications.

**GEB 3612 COMPUTERS IN BUSINESS II (5)**
PR: COC 3201. An advanced interdisciplinary examination of the impact of computer systems in the business enterprise. Concepts of data collection, information theory, business systems analysis, free maintenance, and update systems are developed.

**GEB 4901 INDEPENDENT STUDY (1-4)**
PR: CI. Specialized independent study determined by the students’ needs and interests. May be repeated up to eight credit hours. (S/U only.)

**GEB 4911 INDEPENDENT RESEARCH (1-5)**
PR: CI. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor. May be repeated up to 10 hours.

**GEB 4935 SELECTED TOPICS IN BUSINESS ADMINISTRATION (1-6)**
The content and organization of this course will vary according to the current interests of the faculty and needs of students.

**MAN 4720 SENIOR SEMINAR IN ADMINISTRATION (3)**
PR: Senior standing. The course is intended to provide a unifying, integrating, and coordinating opportunity to tie together concepts, principles, and skills learned separately in other, more specialized courses in Business Administration.

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**GRADUATE COURSES**

**GEB 6895 BUSINESS POLICY (4)**
PR: All MBA Foundation Courses. Advanced study of business decision-making processes under conditions of risk and uncertainty, including integrating analysis and policy formulation at the general management level. Lectures, readings, case analysis and experiential learning are included. This course must be taken toward the end of the program, preferably in the last quarter.

**GEB 6905 INDEPENDENT STUDY (var.)**
Independent study in which student must have a contract with an instructor. Repeatable. (S/U only.)

**GEB 6915 DIRECTED RESEARCH (var.)**
PR: GR. Master’s level. Repeatable (S/U only.)

**GEB 6971 THESIS: MASTER’S (var.)**
Repeatable (S/U only.)

**MAN 5806 ENTREPRENEURSHIP AND SMALL BUSINESS MANAGEMENT COUNSELING (2-4)**
Small business management consulting in an on-going firm. Field application of various aspects of business administration in analyzing strengths and weaknesses, development of recommendations for improvement, and initiation of steps to assist business principal in evaluation and implementation. Emphasis on developing management consulting skills and recognizing implications of small business owner-manager’s capabilities and attitudes for success in implementing recommendations.

**MAN 5925 CBA WORKSHOP (1-6)**
Professional applications workshop in various areas of finance, marketing, economics, accounting, management. May be repeated when subjects differ.

**MAN 6721 INTEGRATIVE SEMINAR (3)**
PR: CI. The integration of analysis and policy for the decision-making process in administration. This course should be taken at the end of a student’s program.

**QMB 6650 QUANTITATIVE METHODS II (3)**
PR: College Algebra, GEB 3121, or equivalents. Probability and sampling, Bayesian decision theory, and the design of experiments, as applied to administrative problems.

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**Management**


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**UNDERGRADUATE COURSES**

**MAN 3010 PRINCIPLES OF MANAGEMENT (5)**
Study of the fundamentals of management. It treats topics in organizational theory, organizational behavior and interpersonal communications which are relevant to effective management performance.

**MAN 3150 ORGANIZATIONAL BEHAVIOR ANALYSIS (4)**
The course covers the behavior and research literature relevant to organizational functioning. Topics include hierarchy and authority, the informal organization, structural variation in organizations, leadership and supervision, motivation, and communication and control processes. The course requires partici-
pation in elementary exercises in the management laboratory. Required course for Management majors.

MAN 3301 PERSONNEL MANAGEMENT (3)
A study of the major functions in personnel including manpower planning, recruiting, selection, performance evaluation, wage and salary administration, training and development. Focus is on the integration of government and organizational manpower programs.

MAN 3401 INDUSTRIAL RELATIONS (4)
A conceptualization of the administrative problems arising from unionization. Emphasis on the relationship between management and employee representatives in private and public employment, and on the historical and legal framework of industrial relations. Required course for Management majors.

MAN 3810 INTRODUCTION TO MANAGEMENT SCIENCE (4)
A survey of management science techniques and their application to problem solving and decision making. Required course for Management majors.

MAN 4120L MANAGERIAL BEHAVIORAL LABORATORY (3)
PR: Organizational Analysis or Cl. The development of first hand understanding of the personal, interpersonal, and intergroup factors involved in social interaction. A general knowledge of the literature in the field of organizational behavior and social psychology is assumed. Emphasis is on experimental exercises in a laboratory setting.

MAN 4125 LABORATORY IN THE RESOLUTION OF GROUP CONFLICT (3)
An application of conflict resolution theory to a variety of social and organizational settings, including ethnic and inter-racial conflict. The principles acquired are then applied to the resolution of conflict in industry. This course assumes a general understanding of interpersonal and group behavior. Three hours laboratory under instructor supervision.

MAN 4201 ADVANCED ORGANIZATIONAL BEHAVIORAL ANALYSIS (3)
PR: Organizational Analysis or Cl. Methods of analyzing complex organizational functioning and performance are studied using selected behavioral models. This course will develop a familiarity with the literature in the field of organizational behavior and its general implications for management.

MAN 4210 CHANGING ORGANIZATIONS (3)
PR: Organizational Analysis or Cl. Theory and research related to social-organizational change and resistance to change is considered along with its implications for the design of conditions and their differential effects on organizational climate. The unifying concept is the role of the Change Agent.

MAN 4410 LABOR RELATIONS LAW (3)
A survey of the various legal constraints applicable to labor-management relations. Includes practice in using library resources for discovering statutes, cases or administrative rulings. This course assumes a general understanding of the organizations of management and union, the role of each in collective bargaining, and traditional methods for resolving industrial conflict. One and one-half hours lecture, one and one half hours case analysis and research.

MAN 4430 SEMINAR IN NEGOTIATIONS AND ADMINISTRATION OF LABOR AGREEMENTS (3)
An application of industrial relations theory to cases provided by the instructor. Includes exercises in contract negotiation, administration of grievance settlement, and arbitration. This course assumes a general understanding of the organizations of management and union, the role of each in collective bargaining, and traditional methods of resolving industrial conflict. Three hours laboratory under supervision of instructor.

MAN 4504 OPERATIONS MANAGEMENT: A SYSTEMS APPROACH (3)
PR: Management Science or Cl. A systems approach to the study of effective operations management tools and concepts. Computerized approaches to problem solving are introduced and an emphasis is placed on interpretation of output for decision making purposes. A knowledge of the basic tools and techniques of management science is required.

MAN 4802 ENTREPRENEURSHIP AND SMALL BUSINESS MANAGEMENT (4)
PR: ACC 2001, ACC 2021, MAR 3023; or Cl. Study of the factors involved in starting and managing a small to medium-size business. Emphasis is on understanding and implementation of pre-business feasibility study, selection of business field and organization structure, and successful management of marketing, personnel, production, accounting, finance, and related areas.

MAN 4804 SMALL BUSINESS MANAGEMENT COUNSELING (4)
PR: MAN 4802 or Cl. Field application of various aspects of business administration in analyzing strengths and weaknesses of an on-going small business. Development of recommendations for improvement and initiation of steps to assist business principal in evaluation and implementation. Emphasis on development of management consult skills and recognizing implications of small business owner-manager's capabilities and attitudes for success in implementing recommendations.

MAN 4905 INDEPENDENT STUDY (1-4)
PR: Cl. Specialized independent study determined by the student's needs and interests. May be repeated up to 8 credit hours. (S/U only.)

MAN 4930 SELECTED TOPICS IN MANAGEMENT (1-5)
PR: Cl. Topics to be selected by instructor and department chairperson for pertinent Management issues.

MAN 4931 INDEPENDENT RESEARCH (1-5)
PR: Cl. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor. May be repeated up to 10 hours.

MAN 4933 INTEGRATIVE SEMINAR IN MANAGEMENT (3)
PR: One of the following group: MAN 3150, MAN 3401, MAN 3810 and two additional upper level Management courses, and senior standing; or Cl. A capstone course intended to integrate the concepts, generalizations, principles, and skills learned separately in previous, more specialized courses in Management and Administration. Emphasis, decision-making, action planning, and implementation.

QMB 4600 MANAGEMENT SCIENCE APPLICATIONS (3)
PR: MAN 3810 or Cl. A study of the application of management science models to typical organizational problems. Emphasis is on (1) problem formulation (2) data collection and (3) interpretation and implementation of solutions. A laboratory using decision science problems of organizations is a major part of this course. A knowledge of the basic tools and techniques of management science is required.

QMB 4654 MANAGEMENT SCIENCE MODELS (3)
PR: MAN 3810 or Cl. A study of the theoretical basis of various management science models. These include linear, integer, dynamic, quadratic, and geometric programming; plus, gradient methods and branch and bound. A knowledge of the basic tools and techniques of management science is required.

QMB 4703 SIMULATION AND MODELING TECHNIQUES (3)
PR: MAN 3810 or Cl. A study of manual and computer simulation techniques and their application to problem solving in management (behavioral and quantitative). Knowledge of a computer language and the basic tools and techniques of management science is advised.

GRADUATE COURSES

MAN 5714 URBAN MANAGEMENT (3)
The applicability of business management theories and practices to problem solving in the public sector. A formal theory of or-
MAN 6055 MANPOWER MANAGEMENT (3)  
A study of the major factors involved in the development of an effective manpower management strategy; including manpower planning, selection, organization and job design, performance of evaluation, career advancement, employer benefits, rights and compensation. Emphasis is on an open-system view recognizing the need to operate within the complex external legal and societal environment while reducing internal conflict.

MAN 6061 PLANNING, CONTROL AND HUMANISM IN MANAGEMENT (4)  
A study of an increasing dilemma which is central to the role of all those in supervisory or managerial roles—the conflict between the need to exercise increasingly efficient controls through behavior, planning and budgets and the need for more humanistic management. The dilemma will be considered in a framework of stages of organizational development showing how stages occur in a particular order, how control is managed at each stage and how the conflict between control and humanism decreases with progression. Methods for accomplishing more rapid organizational progression through stages will be presented.

MAN 6107 MANAGERIAL BEHAVIOR (3)  
A laboratory approach to the understanding of patterns of interpersonal and inter-group behavior which are significant for the managerial role. Topics include perception expectation, motivation, defenses, conformity—deviation, status, anxiety, behavior control, self development, leadership styles, efficient utilization of time, and a critical analysis of current procedures used for manager development.

MAN 6135 MANAGEMENT OF COMMUNICATIONS (3)  
The analysis, organization and presentation of verbal and written communications and reports. Students will select and define a problem area, construct an annotated bibliography in that area, develop a research design for collection and analysis of appropriate data, and write a report on the proposed program in a form acceptable to the organizational and academic community. This work should represent a first step in selecting and developing a thesis (MAN 6971).

MAN 6157 MANAGEMENT OF PROFESSIONALS (4)  
PR: The Management Process or CI. Organizational behavior of professional employees (e.g., engineers, nurses, accountants, scientists, teachers, etc.) is investigated through available theories and concepts. Concentration is placed on the manager's role, especially that of matching organizational demands with individual talents and expectations.

MAN 6206 ORGANIZATIONAL THEORY AND ITS IMPLICATIONS FOR THE MANAGER (1-3)  
The course covers the major theories of organization and a comparative analysis of the differential options these theories provide for managerial strategy. It deals with the design of managerial environments for accomplishing different goals, the research literature in this field and the implication of this research for prediction and design of environmental change.

MAN 6219 THE MANAGEMENT OF ORGANIZATIONAL CHANGE (1-3)  
An experiential learning course utilizing real data from profit and not-for-profit organizations. The course is designed to provide students with direct experience in the systematic planning, implementation and control of change. By actually collecting and analyzing real data each student develops an operationally viable model for the changes inevitable in any ongoing organization.

MAN 6405 LABOR RELATIONS LAW (3)  
A survey of the various legal constraints applicable to the employer-employee relationship. Included are such areas as collective bargaining, civil rights, and fair labor standards. (Also offered under Economics.)

MAN 6409 MANAGEMENT OF CONFLICT (3)  
A survey of the literature on social conflict with emphasis on the causes of conflict within and between various types of organizations. The course will examine and evaluate traditional, as well as innovative methods for conflict resolution. Particular attention is given to conflict and its resolution as perceived through the collective bargaining process.

MAN 6569 THE MANAGEMENT OF OPERATIONS (3)  
PR: GEB 6757. A study of the development of systematic planning and control systems at the operational level in organizations. Topics include, but are not limited to: quality control, materials management, cost control, work measurement and work flow, inventory management, production control, and project management and control.

MAN 6726 THE PRACTICE OF MANAGEMENT (1-4)  
The course offers the student the opportunity to focus on an overall organization and to gain an understanding of the interaction between various components which the manager must integrate—the economic, financial, social, political, and technological. The aim is to provide students with experience in integrative skills through organizational design, planning and control, communication and leadership. To be taken during the last two quarters of study; preferably the final quarter.

MAN 6851 SIMULATION OF ADMINISTRATIVE SYSTEMS (3)  
A study of manual and computer simulation techniques and their application to administrative problem solving. The course emphasizes: model design and construction; data collection and analysis; model testing and implementation problems. A computer language, such as GPSS or SIM-SCRIPT, is used for model construction.

MAN 6905 INDEPENDENT STUDY (var.)  
Independent study in which student must have a contract with an instructor. Repeatable. (S/U only.)

MAN 6911 DIRECTED RESEARCH (var.)  
PR: GR. Master's level. Repeatable. (S/U only.)

MAN 6930 SELECTED TOPICS (1-6)  
This course is designed to be taken either: in a tutorial format under the general guidance of a faculty member on some facet of management not regularly offered in a regular course; or, in conjunction with any regularly scheduled graduate course where a more in-depth study of the subject is mutually deemed to be beneficial to the student's program. Topics would include, but not be limited to: management of health care, managing governmental systems, managing educational systems, entrepreneurial management, managing not-for-profit organizations, managing motivation development. May be retaken for credit providing topic selected is different.

MAN 6971 THESIS: MASTER'S (var.)  
Repeatable. (S/U only.)

QMB 6651 QUANTITATIVE ANALYSIS OF MANAGEMENT DECISIONS (1-3)  
PR: GEB 6757. A study of the development and application of Operations Research tools for administrative problem solving. Using a decision science lab and case approach, the course emphasizes: systematic data collection for problem analysis; identification of appropriate tools for various types of problems; implementation difficulties; and, analysis and interpretation of results.

QMB 6691 COMPUTERS AND MANAGEMENT: THE EXECUTIVE VIEWPOINT (1-3)  
A study of the use and impact of computers in modern organizations. The course emphasizes: current practices and future trends; the extended use of computers for broader planning and decision making systems; the development of Data Based Management Systems and MIS; and, the behavioral problems associated with computerization. Students desiring "hands-on" computer experience may register for an additional special topics course to be taken concurrently with this course.
UNDERGRADUATE COURSES

MAR 3023 BASIC MARKETING (5)
PR: ACC 2001, ECO 2023; CR: ECO 2013 or CI. Survey of the marketing of goods and services within the economy. The integration of functional, commodity, and institutional approaches from the consumer and managerial viewpoints.

MAR 3153 RETAILING MANAGEMENT (3)
PR: MAR 3023. A comprehensive analysis of the retailing structure, institutions and environment. Includes pertinent management theories and practices in organizing, planning and controlling retail operations.

MAR 3303 PRINCIPLES OF ADVERTISING AND SALES PROMOTION (3)
PR: MAR 3023. A comprehensive coverage of advertising, stressing purposes, techniques, organization, research, and media selection including relationships with other marketing mix components. Consideration given to economic and social aspects of advertising and total promotional strategies.

MAR 3403 PRINCIPLES OF SALESMAINSHIP AND SALES MANAGEMENT (3)
PR: MAR 3023. Personal selling and sales management as basic elements in the marketing strategy of firms. Includes the scientific management of resources and the dynamics of interpersonal and small group behavior and decision processes.

MAR 3503 CONSUMER BEHAVIOR (3)
PR: MAR 3023; CR: MAR 3613 or CI. An investigation and application of the behavioral factors affecting consumer demand. Consideration given to industrial, governmental, and ultimate consumers.

MAR 3603 MARKETING MODELS AND MARKETING SYSTEMS (3)
PR: COC 3201, GEB 3121, MAR 4203. An investigation of the utility of formal, logical, mathematical, and other quantitative methods and models as these might be applied to marketing management.

MAR 3613 MARKETING RESEARCH (4)
PR: GEB 3121, MAR 3023. A study of research methods and techniques applicable to problem solving in marketing. Attention is also given to defining information needs, determining the value of information, interpreting and reporting information for use in marketing decision making.

MAR 4203 MARKETING INSTITUTIONS AND CHANNELS (4)
PR: MAR 3023. A detailed study of marketing channels as a functional area of marketing management responsibility and as a part of marketing strategy. Attention is given to wholesaling and retailing and their structural, dynamic interrelationships including distribution logistics.

MAR 4213 MARKETING LOGISTICS (3)
PR: COC 3201, GEB 3121, MAR 4203 or CI. Analysis of the logistics of marketing systems for firms engaged in the marketing of goods and services. Component parts of each system are studied and analytical tools are presented for selecting those alternatives which will attain the goals of the firm.

MAR 4243 INTERNATIONAL MARKETING (3)
PR: MAR 3023. A study of the procedures and problems associated with establishing marketing operations in foreign countries. The institutions, principles and methods involved in the solution of these business problems will be treated as well as effects of national differences on business practices.

MAR 4343 MANAGEMENT OF ADVERTISING AND SALES PROMOTION (3)
PR: MAR 3303, MAR 3503 or CI. Discussion and analysis of cases bearing on managerial aspects of advertising and sales promotion including research, budget determination, strategy, tactics, and evaluation of results.

MAR 4533 PUBLIC RELATIONS AND THE MARKETING PROCESS (3)
PR: MAR 3303, MAR 3503 or CI. Principles, practices, and problems in public relations as an integrated part of and supplement to marketing management responsibilities and decisions.

MAR 4453 INDUSTRIAL MARKETING (3)
PR: MAR 3403, MAR 4203 or CI. Problems of marketing industrial goods. Characteristics of markets, channels, industrial sales, promotional practices, research and marketing policies.

MAR 4504 SEMINAR IN APPLIED STUDIES IN MARKETING (3)
PR: MAR 3503 and three Marketing courses at the 4000 level and CI. In-depth discussion, formulation, application, and evaluation of advanced research techniques and practices as currently applied to facilitate marketing decisions.

MAR 4713 MARKETING MANAGEMENT PROBLEMS (4)
PR: MAR 3503, MAR 3613, and three other Marketing courses or CI. The integration of marketing knowledge applied to decision roles in managing the total marketing effort of firms, and coordination with other major functional areas on specific problems.

MAR 4903 INDEPENDENT RESEARCH (1-5)
PR: CI. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor. May be repeated up to 10 hours.

MAR 4905 INDEPENDENT STUDY (1-4)
PR: CI. Specialized independent study determined by the students' needs and interests. May be repeated up to 8 credit hours. (S/U only.)

MAR 4933 SELECTED TOPICS IN MARKETING (1-5)
PR: CI. Topics to be selected by instructor and department chairperson.

GRADUATE COURSES

MAR 6216 MARKETING CHANNELS AND PHYSICAL DISTRIBUTION MANAGEMENT (3)
PR: MAR 6506, MAR 6708 or CI. An analysis of the development of integrated distribution systems. Channel alternatives, including the institutions involved and physical flow, as a part of marketing strategy.

MAR 6346 SEMINAR IN PROMOTIONAL POLICY AND STRATEGY (3)
PR: MAR 6506 or CI. Analysis of theories and practices of advertising, selling and sales management, and sales promotion as they relate to the total marketing program of firms. Emphasis upon the coordination of promotional policy and strategy.

MAR 6506 BEHAVIORAL CONCEPTS IN MARKETING DECISION MAKING (3)
PR: MAR 6706 or CI. The application and techniques of the behavioral sciences to the understanding and improvement of the marketing process and decision making concerning consumer behavior.

MAR 6616 MARKETING RESEARCH AND INFORMATION SYSTEMS (3)
PR: MAR 6708, or CI. A study of the marketing research process, methods, and techniques and the need and applicability of information systems.

MAR 6706 ADVANCED MARKETING PROBLEMS (3)
PR: MAR 3023; MAR 6708; ECO 2013, ECO 2023 or ECO
MAR 6907 INDEPENDENT STUDY
(1-6)
Independent study in which student must have a contract with an instructor. Repeatable. (S/U only.)

MAR 6916 DIRECTED RESEARCH
(1-6)
PR: GR. Master's level. Repeatable. (S/U only.)

MAR 6936 SELECTED TOPICS IN MARKETING
(1-6)
PR: CC. The content and organization of this course will vary according to the interests of the faculty and students involved in any given term. Repeatable to a maximum of six hours.

MAR 6939 SEMINAR IN MARKETING
(3)
PR: CI. The study of contemporary marketing thought, advanced marketing concepts, and recent development in the field of marketing. Readings, discussions, and individual investigation.

CHEMISTRY


UNDERGRADUATE COURSES

BCH 3033 INTRODUCTORY BIOCHEMISTRY
(4)
PR: BCH 3211. Introduction to the chemistry and intermediary metabolism of biologically important substances. Lec. Qtr. I, II, III, IV.

BCH 3033L BASIC BIOCHEMISTRY LABORATORY
(3)
PR: BCH 3033. Practical work in determination and characterization of important biomolecules. Lec.-lab. Qtr. I, II, III, IV.

CHM 1015 FOUNDATIONS OF UNIVERSITY CHEMISTRY
(5)
A survey of modern chemistry designed particularly for those with a poor preparation in algebra and/or chemistry as a preliminary to CHM 2045. Lec. Qtr. I, II, III, IV.

CHM 2020 CURRENT ISSUES IN CHEMISTRY
(4)
A survey of the current important issues in which chemistry affects our lives; e.g., environment, drugs, cancer, warfare, etc. No credit for chemistry majors.

CHM 2045 GENERAL CHEMISTRY I
(3)
CHM 2045 students are expected to have performed well in the placement exam* or to have satisfactorily completed CHM 1015. Fundamentals of chemistry; mass and energy relationships in chemical changes, equilibrium, chemical kinetics, atomic and molecular structure, descriptive chemistry of selected elements. Lec-dis. Qtr. I, II, III, IV.

CHM 2045L GENERAL CHEMISTRY I LABORATORY
(1)
PR: CHM 2045. 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. May not be taken concurrently with CHM 2045. Qtr. I, II, III, IV.

CHM 2046 GENERAL CHEMISTRY II
(3)
PR: CHM 2045 or equivalent. Continuation of General Chemistry. Lec.-dis. Qtr. I, II, III, IV.

CHM 2046L GENERAL CHEMISTRY II LABORATORY
(1)
PR: CHM 2045L. Continuation of chemistry laboratory. CHM 2045L-CHM 2046L-HM 2047L. Continuation of Accelerated General Chemistry I. Entrance is by examination. CHM 2045C-CHM 2046-CHM 2047.

CHM 2047 GENERAL CHEMISTRY II
(3)
PR: CHM 2046 or equivalent. Continuation of General Chemistry. Lec-dis. Qtr. I, II, III, IV.

CHM 2047L GENERAL CHEMISTRY II LABORATORY
(1)
PR: CHM 2046L. Laboratory portion of General Chemistry II. Continuation of chemistry laboratory. May not be taken concurrently with CHM 2046. Qtr. I, II, III, IV.

CHM 2055C 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. CHM 2055C-CHM 2056C is equivalent to CHM 2045-CHM 2046-CHM 2047 and CHM 2045L-CHM 2046L-CHM 2047L. Lec.-lab.-dis. Qtr. I.

CHM 2056C ACCELERATED GENERAL CHEMISTRY II
(5)
PR: CHM 2055C. Continuation of Accelerated General Chemistry. Lec.-lab.-dis. Qtr. II.

CHM 3021 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, II, III. This course is offered only on WUSF-TV Channel 16 by the O.U. Program.

CHM 3120C ELEMENTARY ANALYTICAL CHEMISTRY
(5)
PR: CHM 2047, CHM 2047L or CHM 2056C. Fundamentals of gravimetric, volumetric, spectrophotometric analysis. Lec.-lab. Qtr. I, II, III, IV.

CHM 3210 ORGANIC CHEMISTRY I
(3)
PR: CHM 2047, CHM 2047L or CHM 2056C. Fundamental principles of organic chemistry. Lecture. Qtr. I, II, IV.

CHM 3210L ORGANIC CHEMISTRY LABORATORY
(2)
PR: CHM 3210. Laboratory portion of Organic Chemistry I. Introduction or organic laboratory principles and techniques. May not be taken concurrently with CHM 3210. Qtr. II, III, IV.

CHM 3211 ORGANIC CHEMISTRY II
(3)
PR: CHM 3210 or equivalent. Continuation of organic chemistry. Lecture. Qtr. I, II, III, IV.

CHM 3211L ORGANIC CHEMISTRY LABORATORY
(2)

* Placement examination for admission to CHM 2045 and CHM 2055C offered the first day of registration each quarter, during the summer FOCUS program, and is available during weeks of scheduled classes. Students should consult registration schedules or Chemistry office for time and place.
CHM 3212 ORGANIC CHEMISTRY III (3)
PR: CHM 3211 or equivalent. Continuation of organic chemistry. Lec. Qtr. I, II, III, IV.

CHM 3212L ORGANIC CHEMISTRY LABORATORY III (2)
PR: CHM 3211L. Continuation of organic chemistry laboratory. Qtr. I, II, IV.

CHM 3400 ELEMENTARY PHYSICAL CHEMISTRY (3)
PR: CHM 2047, CHM 2047L or CHM 2056C, MAC 2243, PHY 2052, PHY 2052L. Introduction to equilibrium properties of macroscopic system. Properties of solutions. Qtr. I, IV.

CHM 3401 ELEMENTARY PHYSICAL CHEMISTRY II (3)
PR: CHM 3400. Kinetic behavior of systems, macromolecular solutions, and colloidal dispersions, nuclear chemistry and spectroscopy. Qtr. II, III.

CHM 3402C ELEMENTARY PHYSICAL CHEMISTRY LABORATORY (2)
CR: CHM 3400 and/or CHM 3401. A physical chemistry laboratory with emphasis on modern techniques and instruments. Lec.-lab. Qtr. II, III.

CHM 3610C INTERMEDIATE INORGANIC CHEMISTRY (5)
PR: CHM 2047, CHM 2047L or CHM 2056C. Fundamental principles of inorganic chemistry. Lec.-lab. Qtr. I, II, III, IV.

CHM 4070 HISTORICAL PERSPECTIVES IN CHEMISTRY (4)
PR: CHM 2047; or senior standing, and CHM 3410. A study in depth of the historical and philosophical aspects of outstanding chemical discoveries and theories. Lec.-dis. Qtr. II.

CHM 4130C METHODS OF CHEMICAL INVESTIGATION I. ANALYTICAL-PHYSICAL (4)
PR: CHM 3120C, CHM 3121, CHM 3121L. CR: CHM 4410. Theory and applications of instrumental methods in chemical research with emphasis on electrochemical techniques. Lec.-lab. Qtr. I, II.

CHM 4131C METHODS OF CHEMICAL INVESTIGATION II. ANALYTICAL-PHYSICAL (4)
PR: CHM 4130C. Continuation of CHM 4130C. Emphasis on spectroscopic techniques. Lec.-lab. Qtr. II, III.

CHM 4132C METHODS OF CHEMICAL INVESTIGATION III. CHEMICAL SYSTEMS (4)
PR: CHM 4131C. Continuation of CHM 4131C. Emphasis on studies of chemical systems using a variety of techniques. Lec.-lab. Qtr. I, III.

CHM 4300 BASIC BIO-ORGANIC CHEMISTRY (4)
PR: CHM 3212 (or CHM 3211 and CHM 3200). Nature, structure, elucidation, synthesis and (in selected cases) organic chemical mechanisms of biochemical involvement of the major classes of organic compounds found in living systems. Lec. Qtr. I.

CHM 4410 PHYSICAL CHEMISTRY I (4)
PR: CHM 3120C and MAC 3283 or MAC 3413. CR: PHY 2052 or PHY 3042. Thermodynamics, the states of matter, solutions. Lec. Qtr. I, II.

CHM 4411 PHYSICAL CHEMISTRY II (4)
PR: CHM 4410. Introduction to quantum mechanics and molecular spectroscopy. Lec. Qtr. II, III.

CHM 4412 PHYSICAL CHEMISTRY III (4)

CHM 4610 ADVANCED INORGANIC CHEMISTRY (4)
PR: CHM 4410 or CHM 4410L. An advanced theoretical treatment of inorganic compounds. Lec. Qtr. III.

CHM 4905 INDEPENDENT STUDY (1-4)
PR: CHM 3211. Specialized independent study determined by the student's needs and interests. The written contract required by the College of Natural Sciences specifies the regulations governing independent study. May be repeated. (S/U only.)

CHM 4931 CHEMISTRY SEMINAR (1)
PR: Senior standing. Discussions of selected significant chemical topics of recent interest. (S/U only.) Qtr. II, III.

CHM 4932 SELECTED TOPICS IN CHEMISTRY (1-6)
PR: CHM 3200. The course content will depend on the interest of faculty members and student demand. Qtr. I-IV.

CHM 4970 UNDERGRADUATE RESEARCH (1-6)
PR: CHM 3200. (S/U only.) Qtr. I-IV.

CHS 4100C RADIOCHEMISTRY (4)
PR: CHM 3120. Theory and applications of natural and induced radioactivity. Emphasis on the production, properties, measurement, and uses of radioactive tracers. Lec.-lab. Qtr. I, II.

CHS 4300 FUNDAMENTALS OF CLINICAL CHEMISTRY (4)
PR: BCH 4070. Theoretical and practical aspects of the analysis of various body fluids, with emphasis on the medical significance. Clinical chemistry majors must take CHS 4301L concurrently. Lec. Qtr. I, III.

CHS 4301L CLINICAL LABORATORY (2)
PR: BCH 4032 and CHM 3120L. Laboratory experience in some of the most important clinical determinations. CHS 4300 must be taken concurrently. Lec.-lab. Qtr. I, III.

CHS 4302 CLINICAL CHEMISTRY PRACTICE (3-12)
PR: CHS 4301L. Laboratory practice in biochemical research with emphasis on modern techniques for use in biochemical research. Qtr. I-IV. (S/U only.)

CHS 4310C INSTRUMENTAL ANALYSIS (4)
PR: CHM 4412 or CHM 3412. Theory and practice of instrumental methods. Clinical Chemistry applications may be elected in the laboratory. Lec.-lab. Qtr. I, II, III, IV.

GRADUATE COURSES

BCH 5065 BIOCHEMISTRY CORE COURSE (4)
PR: Either CHM 3212, CHM 3212L, and CHM 3400 or BCH 4410 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 under-graduates. Lec. Qtr. I.

BCH 5100L TECHNIQUES IN BIOCHEMISTRY (2)
PR: BCH 5065 or BCH 6066. Biochemistry laboratory with emphasis on modern techniques for use in biochemical research. Qtr. III.

BCH 6066 GENERAL BIOCHEMISTRY I (4)
PR: BCH 5065 or CHM 3400. 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.

BCH 6067 GENERAL BIOCHEMISTRY II (4)
PR: BCH 6066. Continuation of General Biochemistry I. Lec. Qtr. II.

BCH 6068 GENERAL BIOCHEMISTRY III (4)
PR: BCH 6067. Continuation of General Biochemistry II. Lec. Qtr. III.

BCH 6506 ADVANCED BIOCHEMISTRY I. ENZYMES (4)
PR: BCH 6068 or CHM 3212. A study of biochemical systems with emphasis on enzymes. Lec. Qtr. I.

BCH 6706 ADVANCED BIOCHEMISTRY II. BIOORGANIC MECHANISMS (4)
PR: BCH 6068 or CHM 3212. A study of biochemical systems with emphasis on mechanisms of biological reaction. Lec. Qtr. III.

BCH 6746 ADVANCED BIOCHEMISTRY III. BIOPHYSICAL CHEMISTRY (4)
PR: BCH 6068 or CHM 3212. A study of biochemical systems with emphasis on physical methods of experimentation and interpretation. Lec. Qtr. I.

CHM 5225 INTERMEDIATE ORGANIC CHEMISTRY (4)
PR: CHM 3212, CHM 3212L or equivalent. A study of stereo-
chemistry, spectroscopy, theories of bonding, acid-base chemistry, and their application to the understanding of organic reactions. Lec. Qtr. III.

CHM 5425 APPLICATIONS IN PHYSICAL CHEMISTRY (4)
PR: CHM 4412. Applications of chemical theory to chemical systems with emphasis on chemical kinetics and molecular spectroscopy. Lec. Qtr. II.

CHM 5430 CHEMICAL THERMODYNAMICS (4)
PR: CHM 4412 or Cl. The applications of thermodynamic theory to the study of chemical systems with emphasis on the energetics of reactions and chemical equilibria. Lec. Qtr. III.

CHM 5621 PRINCIPLES OF INORGANIC CHEMISTRY (4)
PR: CHM 4411 or Cl. Chemical forces, reactivity, periodicity, and literature in inorganic chemistry; basic core course. Lec. Qtr. I.

CHM 5931 SELECTED TOPICS IN CHEMISTRY (1-6)
PR: Cl. The following courses are representative of those that are taught under this title: Natural Products, Stereochemistry, Reactive Intermediates, Photochemistry, Instrumental Electronics, Advanced Lab Techniques, Heterocyclic Chemistry, etc.

CHM 6150 ADVANCED ANALYTICAL CHEMISTRY (4)
PR: Cl. 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 6153 ELECTROCHEMISTRY (4)
PR: Cl. Introduction to the theory of ionic solutions and electrode processes. Theory and applications and electrochemical measurements. Lec. Qtr. III.

CHM 6250 ADVANCED ORGANIC CHEMISTRY I. SYNTHESIS (4)

CHM 6260 ADVANCED ORGANIC CHEMISTRY II. PHYSICAL-ORGANIC (4)

CHM 6280 ADVANCED ORGANIC CHEMISTRY III. NATURAL PRODUCTS (4)
PR: CHM 5225 or Cl. A study of any of several of the following topics: terpenes, steroids, vitamins, alkaloids, porphyrins, puarine, and antibiotics. Qtr. III.

CHM 6380 ADVANCED ORGANIC CHEMISTRY IV (4)
PR: CHM 5225. The emphasis will vary from year to year.

CHM 6440 CHEMICAL KINETICS (4)
PR: Cl. Theory and methods for the study of reaction rates and the elucidation of reaction mechanisms. Lec. Qtr. II.

CHM 6460 STATISTICAL THERMODYNAMICS (4)
PR: Cl. Application of statistical mechanics to thermodynamics, the relation of molecular structure to thermodynamic properties. Lec.

CHM 6480 QUANTUM CHEMISTRY (4)
PR: Cl. Introduction to elementary quantum mechanism. Atomic structure and spectra. Lec. Qtr. II.

CHM 6625 CHEMISTRY OF THE LESS FAMILIAR ELEMENTS (4)
PR: Cl. An integrated treatment of the conceptual and factual aspects of the traditionally less familiar elements, including noblegas elements, unfamiliar non-metals, alkali and alkaline-earth metals and the transition elements. Lec. Qtr. III.

CHM 6650 STRUCTURAL INORGANIC CHEMISTRY (4)
PR: CHM 5621 or Cl. 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. III.

CHM 6907 INDEPENDENT STUDY (var.)
Independent study in which student must have a contract with an instructor. Repeatable. (S/U only.)

CHM 6935 GRADUATE SEMINARS IN CHEMISTRY (1)
PR: Admission to graduate program in chemistry. Required every quarter (when offered) for all students enrolled in chemistry graduate program. Requires participation in and attendance at the weekly departmental seminar. Must be repeated. (S/U only.)

CHM 6936 CHEMISTRY COLLOQUIUM (1)
PR: Admission to graduate program in Chemistry. Frequent (usually weekly) small-group analysis of current developments. May be repeated up to a cumulative total of 10 hours. (S/U only.)

CHM 6938 SELECTED TOPICS IN CHEMISTRY (1-9)
PR: Cl. The following titles are representative of those that are taught under this title: Symmetry and Group Theory, Photochemical Kinetics, Quantum Mechanical Calculations, Advanced Chemical Thermodynamics, Reaction Mechanisms, Advanced Instrumentation, Separations and Characterizations, Spectroscopy, etc.

CHM 6939 CURRENT TOPICS IN CHEMISTRY (1)
PR: Admission to graduate program in chemistry. Required every quarter (when offered) for all students enrolled in chemistry graduate program. Requires participation in and contribution to weekly lecture series in a particular division (analytical, biochemistry, inorganic, organic or physical). Up to 4 credit hours of CHM 6939 may be used to satisfy the 6000 level structured course requirement. Must be repeated. (S/U only.)

CHM 6946 GRADUATE INSTRUCTION METHODS (1-5)
Special course to be used primarily for the training of graduate teaching assistants. Variable credit, repeatable. Limited to a cumulative total of 5 credits per student. (S/U only.)

CHM 6947 GRADUATE RESEARCH METHODS (1-5)
Special course to be used primarily for the training of graduate research assistants. Variable credit, repeatable. Limited to a cumulative total of 5 credits per student. (S/U only.)

CHM 6971 THESIS: MASTER'S (var.)
Repeatable. (S/U only.)

CHM 6973 DIRECTED RESEARCH (var.)
PR: GR. Master's level. Repeatable. (S/U only.)

CHM 7820 DIRECTED RESEARCH (var.)
PR: GR. Ph.D. level. Repeatable. (S/U only.)

CHM 7980 DISSERTATION: DOCTORAL (var.)
PR: Must be admitted to Doctoral Candidacy. Repeatable. (S/U only.)

OCC 6061 MARINE CHEMISTRY (4)
PR: OCC 5050 or Cl. Chemical and physical properties of sea water, 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.

COMMUNICATION

of communication in its symbolic, aesthetic, historical, critical, and pragmatic dimensions.

COM 3122 INTERVIEW COMMUNICATION (4)
A study of communication theory relative to interview situations with emphasis on the employment interview, appraisal interview, and persuasive interview.

COM 3131 TECHNICAL COMMUNICATION (4)
Investigation and application of methodology and effective technical communication of effective oral presentation of technical reports.

COM 4110 SPEECH COMMUNICATION FOR BUSINESS AND THE PROFESSIONS (4)
Identification of Speech Communication situations specific to business and the professions. Analysis of variables related to communication objectives and preparation of oral presentations in the form of informational reports, conference management, persuasive communications, interviews, and public hearings.

COM 4120 INTRODUCTION TO COMMUNICATION THEORY IN ORGANIZATIONS (4)
A study of communication variables and systems affecting organizational effectiveness.

COM 4942 COMMUNICATION INTERN SEMINAR (4)
PR: Communication major and minimum of 40 hours in major. The Communication Intern Seminar provides students with an opportunity to put into practice concepts and skills acquired in their study of communication. Weekly seminar sessions augment intern experience. Application for seminar must be submitted one quarter prior to seminar offering.

ESL 1383 SPEECH COMMUNICATION FOR FOREIGN STUDENTS I (4)
A special course for students learning English as a second language. Intensive study and drill in American English pronunciation and listening comprehension. May be taken in conjunction with ESL 1422—English for Foreign Students.*

ESL 1384 SPEECH COMMUNICATION FOR FOREIGN STUDENTS II (4)
PR: ESL 1383 or CI. Intensive study and drill in American English pronunciation and listening comprehension. Emphasis on diction and speaking skills.

LIN 2200 SPEECH IMPROVEMENT AND PHONETICS (4)
Designed to improve vocal quality and expressiveness, articulation, and pronunciation, and to give instruction and practice in using the International Phonetic Alphabet for speech improvement.

LIN 4130 INTRODUCTION TO LINGUISTICS (4)
Introduction to the basic principles of linguistic science: phonological and grammatical analysis and description; language change and genetic relationships.

LIN 3801 LANGUAGE AND MEANING (4)
A survey introduction for non-specialists to the basic principles of semantics and the way language conveys ideas. This course is also available on WUSF/TV Channel 16 by the O.U. Program.

LIN 4040 DESCRIPTIVE LINGUISTICS (4)
PR: LIN 3010, LIN 4370 or CI. Introduction to the basic techniques of formalizing linguistic descriptions through elementary phonological, morphological, and syntactic data solution-problems drawn from a variety of languages. Both taxonomic and generative analysis and descriptions will be developed and compared.

LIN 4377 LANGUAGE TYPES OF THE WORLD (4)
An introduction to linguistic typology consisting in a systematic comparison of characteristic representatives of the various language types, such as Vietnamese, Malay, Hungarian, Swahili, Sanskrit, Hebrew, and others. No knowledge of any of these languages on the part of the student is presumed.

LIN 4600 LANGUAGE AND SOCIETY (4)
PR: LIN 3010 or LIN 4370. An analysis of the interrelation of a language and the structure of the society using it. The linguistic behavior patterns characteristic of particular social, political, economic, educational, and racial groups. Problems in communication between strata.

LIN 4701 PSYCHOLINGUISTICS (4)
PR: LIN 3010 or LIN 4370. The nature of linguistic structure and its correlates in behavior and perception. Examination of the hypotheses of Whorf, Chomsky, and others.

LIN 4710 LANGUAGE AND COMMUNICATION: ACQUISITION AND DEVELOPMENT (4)
PR: LIN 3010. A survey of current research and theory in the processes of normal acquisition and development of language and communication in children. The acquisition and development of phonology, syntax, semantics, pragmatics, and non-verbal communication and the role of language in general cognitive development.

LIN 4903 DIRECTED READING (3-5)
PR: CI. Readings in special topics. Must be arranged prior to registration.

LIN 4930 SELECTED TOPICS (3-5)
PR: CI. Course content depends upon student's needs and instructor's interest and may range over the entire field of linguistics.

ORI 2008 ORAL INTERPRETATION AS COMMUNICATION ART (4)
A survey of the theories in the oral interpretation of literature, as it correlates with the field of communication. No credit toward the Communication major.

ORI 2020 ORAL INTERPRETATION REPERTORY (4)
Problems in choice of materials, audience situations, adaptation. Aesthetic, psychological, educational sociological aspects of program planning. Collection, adaptation, rehearsal, presentation of literature. Does not count as credit toward the Communication major. May be repeated up to 8 credit hours.

ORI 3000 FUNDAMENTALS OF ORAL READING (4)
Designed to develop proficiency in the understanding and oral communication of literary and other written materials.

ORI 3920 ISSUES AND INTERPRETATION (2)
The study of literature through analysis of printed textual materials and of the visual-aural textual performance of them. May be repeated.

ORI 3950 ORAL INTERPRETATION PERFORMANCE (2)
PR: ORI 3000 or CI. The study, rehearsal, and performance of literature for Readers Theatre and Chamber Theatre productions. May be repeated (maximum total 6 hours).

ORI 4120 ORAL INTERPRETATION OF POETRY (4)
PR: ORI 3000 or CI. Critical appreciation of lyric and narrative poetry and communication of that appreciation to audience. Study of poetic theory and prosodic techniques.

ORI 4140 ORAL INTERPRETATION OF DRAMATIC LITERATURE (4)
PR: ORI 3000 or CI. Critical appreciation and Oral Interpretation of special textual materials which are inherently dramatic in nature and poetry, narrative prose, drama, biography, and history.

ORI 4220 ORAL INTERPRETATION OF BIBLICAL LITERATURE (4)
PR: ORI 3000 or CI. A critical interpretation and oral presentation of selected Books of the Old Testament.

ORI 4310 INTRODUCTION TO READERS' THEATRE (4)
PR: ORI 3000 or CI. Designed to introduce the student to and give him experience in various forms of group approaches to oral interpretation.

SPC 2023 FUNDAMENTALS OF SPEECH COMMUNICATION (5)
The nature and basic principles of speech; emphasis on improving speaking and listening skills common to all forms of oral
communications through a variety of experiences in public discourse.

SPC 3140 INTRODUCTION TO SPEECH SCIENCE (4)
PR: LIN 2200 or CI. Communication models are analyzed. Emphasis on quantifiable parameters of effective speaking.

SPC 3210 COMMUNICATION THEORY (4)
PR: Junior standing or CI. The study of source, message, and receiver variables in human communications; communication settings: descriptive and predictive models of communication; speech communication as a process.

SPC 3301 INTERPERSONAL COMMUNICATION (4)
PR: Junior standing or CI. A study of interpersonal communication in informally structured settings with emphasis on the understanding, description, and analysis of human communication.

SPC 3410 PARLIAMENTARY PROCEDURES (3)
Principles of parliamentary procedure and practice in conducting and participating in meetings governed by parliamentary rules.

SPC 3441 GROUP COMMUNICATION (4)
PR: Junior standing or CI. A survey of theory and experimental research in group communication. Group discussions and communication exercises to increase awareness of the dynamics of human communication in small group settings.

SPC 3513 ARGUMENTATION AND DEBATE (4)
PR: Junior standing or CI. Study of principles of argumentation as applied in oral discourse, analysis of evidence and modes of reasoning. Practice in debate preparation and delivery.

SPC 3594 FORENSICS (2)
Study, library research, practice in forensics. Application of the principles of rhetoric to the current debate and discussion topics. May be repeated (maximum of 6 hours).

SPC 3601 PUBLIC SPEAKING (4)
Study of selected public addresses as aids in speaking extemporaneously and from manuscript. The relationship between public speaking and public policy formulation.

SPC 3633 RHETORIC OF CONFRONTATION (4)
PR: Junior standing or CI. The study of rhetorical strategies and tactics of agitation and control in confrontation situations.

SPC 3641 NAZI PROPAGANDA (4)
Study of communication behavior in the Nazi movement in Germany and America: Emphasis on communication concepts, principal communicators (Hitler, Goebbels, Streicher, and Rockwell) and use of media.

SPC 3651 CURRENT ISSUES AND RHETORIC (2)
Analysis of significant current speakers and issues. May be repeated.

SPC 3653 POPULAR FORMS OF PUBLIC COMMUNICATION (4)
PR: Junior standing or CI. Analysis of public communication with emphasis on various presentational forms.

SPC 3900 DIRECTED READINGS (1-5)
PR: Junior standing and CI.

SPC 3905 UNDERGRADUATE RESEARCH (1-5)
PR: Junior standing and CI. Individual investigations and faculty supervision.

SPC 3930 SELECTED TOPICS (1-5)
PR: Junior standing and CI.

SPC 4640 THE RHETORIC OF AMERICAN DEMAGOGUES (4)
An analysis of the communication of such 20th Century American political leaders as: Bilbo, Agnew, McCarthy, Wallace, Nixon, and Malcolm X.

SPC 4680 HISTORY AND CRITICISM OF PUBLIC ADDRESS (4)
PR: SPC 3601 or CI. The principles of rhetorical criticism applied to selected great speeches of Western Civilization.

SPC 4900 DIRECTED READINGS (1-5)
PR: Senior standing and CI.

SPC 4905 UNDERGRADUATE RESEARCH (1-5)
PR: Senior standing and CI. Individual investigations with faculty supervision.

SPC 4906 INDEPENDENT STUDY (1-5)
PR: CI. Specialized independent study determined by the students' needs and interests. May be repeated for credit. (S/U only)

SPC 4930 SELECTED TOPICS (1-5)
PR: Senior standing and CI.

SPC 4932 SENIOR SEMINAR IN SPEECH COMMUNICATION (4)
PR: Senior standing. Speech Communication major. Exploration of selected topics of current significance to the several areas of speech communication through group discussion and research.

GRADUATE COURSES

COM 6001 INTRODUCTION TO GRADUATE STUDY IN COMMUNICATION (4)
Required of all M. A. candidates. An introduction to the aims and methodologies of the graduate discipline of communication: its relationship to the adjacent arts and sciences; bibliographical resources; methods of research; and a brief survey of the historical development of the field with emphasis upon current issues in theory, research, and practice.

COM 6121 COMMUNICATION THEORY IN ORGANIZATIONS (4)
A study of communication theory and behavior within organizational settings: role of communication, communication climates, communication networks, leadership.

COM 6312 EXPERIMENTAL RESEARCH IN ORAL COMMUNICATION (4)
Critical examination of research design, procedures, and reporting of experimental studies in small group communication and persuasive discourse.

LIN 5231 COMMUNICATION SCIENCE: THEORY AND PRACTICUM (4)
PR: LIN 2200 or CI. Intensified instruction in neuroanatomy of oral-nasal cavities, ear, pharyngeal, laryngeal, and thoracic areas. Includes topics in phonological theory such as feature composition and markedness. Practice in IPA and identification of segments through Sona-Graph work.

LIN 5245 EXPERIMENTAL PHONETICS (4)
PR: LIN 2200 or CI. Intensified training in auditory discrimination of the sounds of American English. Detailed use of research findings, instruments, and methodologies in the laboratory study of normal speech. Development of phonetic skills of discrimination and reproduction of speech sounds.

LIN 6110 DIRECTED RESEARCH (var.)
PR: GR. Master's level. Repeatable. (S/U only.)

LIN 6117 HISTORY OF LINGUISTIC THOUGHT (4)
Survey of the development of language study in the West from antiquity to the present: Classical and medieval theories of language; origins of traditional grammar; rationalist linguistic theory and philosophical grammar, and an examination of the origin of contemporary linguistic controversies.

LIN 6128 HISTORICAL LINGUISTICS (4)
An advanced survey of the principles and methodology of historical linguistics.

LIN 6139 TOPICS IN THEORETICAL LINGUISTICS (4)
Offerings will include current issues in any area of linguistic theory.

LIN 6146 COMPARATIVE LINGUISTICS (4)
The principles and methodology of comparative linguistics, focusing upon a major Indo-European subfamily, such as Romance, Germanic, or Balto-Slavic.
LIN 6233 ADVANCED PHONETICS (4)  
PR: LIN 5231 or equivalent. Intensified training in close phonetic transcription. Work on dialects, intonation, distinctive feature theory and acoustic phonetics.

LIN 6240 PHONOLOGICAL DESCRIPTION (4)  
Analysis of the phonological component of a grammar, its role and formal structures. The generative model is compared to taxonomic descriptions. Theory and data-solution problems.

LIN 6377 THE STRUCTURE OF A SPECIFIC LANGUAGE (4)  
A linguistic examination of the phonological, morphological, and syntactic structures of both common and uncommon languages, such as Arabic, German, Mikasuki, Seneca, Swahili, and Russian, etc. No prior knowledge of uncommonly-taught or unwritten languages is presumed on the part of the student (e.g., Mikasuki, Seneca, Swahili). However, when the course focuses upon a regularly-taught major world language (e.g., French, German, Russian, Spanish, etc.), an elementary knowledge of that language will be presumed on the part of the student. May be repeated up to ten credit hours with change in content/title.

LIN 6380 SYNTACTIC DESCRIPTION (4)  
Analysis of syntactic descriptions of various languages through data-solution problems in co-occurrence relations, agreement, permutation, conjoining, and embedding. Feature grammars and other models are discussed.

LIN 6405 CONTRASTIVE ANALYSIS (4)  
PR: LIN 4377. A systematic comparison and contrast of the phonological, morphological, and syntactic characteristics of contemporary American English with corresponding structures in a selected number of foreign languages which the ESL teacher is likely to encounter both in the U.S. and abroad. Typical languages or language groups include Spanish (Romance), Semitic (Arabic & Hebrew), Chinese, Japanese, and others. No knowledge of these languages on the part of the student is presumed. Emphasis upon practical pedagogical strategies for overcoming potential sources of interference for the ESL learner without regard to theoretical considerations.

LIN 6407 APPLIED LINGUISTICS (4)  
Analysis of the phonological, morphological and syntactic features of English as a basis for linguistic application to problems of English language acquisition by non-native speakers.

LIN 6425 FORMAL STYLISTICS (4)  
Studies in the relationship between the development of language study and literary criticism; developments in modern linguistic theory and their application to problems of aesthetics, literary structure, and style.

LIN 6435 FIELD METHODS (4)  
PR: LIN 4040 and LIN 5231. An introduction to the techniques of gathering language data in the field and to make an analysis of such data. Native informants are brought on campus to replicate the field experience; students will become familiar with equipment and tools used by linguists in the field.

LIN 6601 SOCIOLINGUISTICS (4)  
Detailed analysis of the phenomenon of language variation with emphasis upon the research methodology of socio-linguistics and the implications of its finding for current linguistic theory.

LIN 6715 LANGUAGE ACQUISITION (4)  
PR: LIN 3010, LIN 4370 or Cl. A survey of current research and theory in the processes of normal language acquisition and development.

LIN 6810 SEMIOTICS (4)  
PR: Cl. Introduction to kinesics and paralinguistics; the linguist structure of gesture, proxemics, and other significant areas of nonverbal communication and signaling behavior.

LIN 6820 STUDIES IN SEMANTICS (4)  
Selected problems in the area meaning and the relationship between linguistic structure and cognition. Mappings of presupposition, kinship fields, emotive concepts, and other problems are surveyed. Theories such as Fodor-Katz-Chomsky, Ross-Lakoff-McCawley, and others are contrasted.

LIN 6908 INDEPENDENT STUDY (var.)  
Independent study in which student must have a contract with an instructor. Repeatable. (S/U only.)

LIN 6932 SELECTED TOPICS (3-5)  
Content will depend upon instructor's interests and student's needs. Such topics as computational and mathematical linguistics, biolinguistics, dialectology and linguistic geography, and pidgins and creoles may be treated, as well as the study of the structures of languages not ordinarily taught.

LIN 6940 GRADUATE INSTRUCTION METHODS (1-5)  
Special course to be used primarily for the training of graduate teaching assistants. Variable credit, repeatable. Limited to a cumulative total of 5 credits per student. (S/U only.)

LIN 6971 THESIS: MASTER'S (var.)  
Repeatable: (S/U only.)

ORI 5145 ORAL INTERPRETATION OF DRAMATIC LITERATURE II (4)  
PR: ORI 4140. A study of selected pre-modern dramas with special emphasis on problems of interpretation for oral performance.

ORI 5210 ORAL INTERPRETATION OF CHILDREN'S LITERATURE (4)  
PR: ORI 3000 or Cl. A study of the theories and practice in the oral interpretation of poetry and narrative fiction for children with special emphasis on classical and modern literature.

ORI 6146 ORAL INTERPRETATION OF THE PLAYS OF SHAKESPEARE (4)  
PR: ORI 3000 or Cl. A study of selected plays of Shakespeare from the point of view of the oral interpreter.

ORI 6450 LITERARY ADAPTATION FOR ORAL INTERPRETATION (4)  
Composition and adaptation of literary materials for oral presentation. An investigation of approaches to various genres: poetry, fiction, and non-fiction.

ORI 6410 HISTORY AND THEORIES OF ORAL INTERPRETATION (4)  
A study of the history, critical writings, uses, and developments of the art of oral interpretation, with analysis of the principles and practices.

PHI 6226 LANGUAGE AND NATURE (4)  
A study of the development of language as an instrument for ordering human consciousness in terms of European ideas of Nature, with special emphasis upon the dialectic, relational, and popular modalities of conceptual representation.

PHI 6228 LANGUAGE AND LIMIT (4)  
Introduction to the principles of the logic of natural languages including semantic analysis of logical relations between selected syntactic structures (active/passive, raising, case relations, etc.); logical dominance in semantic structure; application of logic to questions of linguistic meta-theory.

SED 6943 GRADUATE INSTRUCTION METHODS (1-5)  
Special course, to be used primarily for the training of graduate teaching assistants. Variable credit, repeatable. Limited to a cumulative total of 5 credits per student. (S/U only.)

SPC 5151 SPEECH BEHAVIOR AND PROCESS (4)  
PR: Upperclass standing. Study of the theories of the simple and complex acoustical phenomenon of speech; intensive analysis of the stimulus-feedback variable of speech.

SPC 5903 DIRECTED READINGS (1-5)  
PR: Senior or graduate standing and Cl.

SPC 5912 RESEARCH (1-5)  
PR: Senior or graduate standing and Cl.

SPC 5933 SELECTED TOPICS (1-5)  
PR: Senior or graduate standing and Cl.

SPC 6149 COMMUNICATION: ANALYSIS AND MEASUREMENT (4)  
A study of selected modes of communication. Includes analysis of communication symbolism, and presents the theory and ap-
application of selected instruments for measuring and producing speech.

**SPC 6190 SEMINAR IN SPEECH SCIENCE** (4)
PR: LIN 5245. To provide graduate students with an opportunity to interact with faculty and other students for the purpose of developing an in-depth understanding of a selected sub-area of Speech Science.

**SPC 6231 RHETORICAL THEORY** (4)
Historical development of rhetorical theory from Plato to contemporary theorists with emphasis upon the evolution of trends and concepts in rhetorical theory.

**SPC 6442 THEORY AND RESEARCH IN SMALL GROUP COMMUNICATION** (4)
PR: SPC 3441. Study of contemporary theories and research relating to communication in small group settings.

**SPC 6515 THEORIES OF ARGUMENT** (4)
An examination of argumentative theory through the medium of selected reading in the works of major theorists past and present. In addition, selected examples from the argumentative persuasion of each historical period will be examined and analyzed for the purpose of correlating theory with practice.

**SPC 6545 PERSUASION** (4)
PR: SPC 3513. Study of contemporary theories and research in persuasion.

**SPC 6610 HISTORY AND CRITICISM OF AMERICAN PUBLIC ADDRESS** (4)
Criticism of selected speeches and speakers of American public address, studied against a background of political, social, and intellectual issues.

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**COMMUNICOLOGY**


**UNDERGRADUATE COURSES**

**LIN 3260 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.

**SPA 2001 SURVEY OF COMMUNICATION DISORDERS** (3)
A general survey course concerning the nature and prevention of disorders of communication.

**SPA 3020 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.

**SPA 3080 INTRODUCTION TO RESEARCH PROCEDURES IN COMMUNICOLOGY** (6)
Perspective 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.

**SPA 3101 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.

**SPA 3110 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.

**SPA 4050 INTRODUCTION TO SPEECH PATHOLOGY AND AUDIOLOGY PRACTICUM** (1-12)
Observation and participation in speech pathology and audiology practicum in the University clinical laboratory.

**SPA 4333 BASIC MANUAL COMMUNICATION** (3)
An introduction to the American Sign Language (ASL) as used among the adult deaf community. Discussion of ASL and its linguistic features as well as an introduction to other manual communication systems and philosophy with demonstrations. Students will acquire the skill to read receptively at least 600 signs and to use those signs expressively. Demonstrations of sign production will be provided with practice periods and an opportunity for interaction with the local deaf community will be afforded the student.

**SPA 4363 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.

**SPA 4930 DIRECTED READINGS** (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.

**GRADUATE COURSES**

**SPA 5002 THE SCIENCE OF COMMUNICATION DISORDERS** (6)
PR: SPA 3020 or SPA 3110 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.

SPA 5131 SPEECH PATHOLOGY Instrumentation (6)
PR: CI. Calibration, usage and specific applications of specialized instruments available in dealing with speech and language disorders. Includes: recording, sonograph, audofeedback, video equipment, behavior measuring devices.

SPA 5132 AUDIOLOGY Instrumentation (6)
PR: CI. 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.

SPA 5201 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.

SPA 5210 COMMUNICATION DISORDERS: Voice (4)
PR: CI. A comprehensive study of the medical and physical aspects of voice disorders. Primary emphasis is on therapeutic management.

SPA 5222 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.

SPA 5303 AUDIOLOGY: Hearing Science (6)
PR: Admittance 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, preschool, 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.

SPA 5312 AUDIOLOGY: Speech Audiology (6)
PR: SPA 5303 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 clinical setting.

SPA 5402 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.

SPA 5550 METHODS FOR ORAL COMMUNICATION DISORDERS (6)
PR: SPA 5552 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.

SPA 5552 EVALUATION OF ORAL COMMUNICATION DISORDERS (6)
PR: Admittance to the Program or CI. The administration, evaluation, and reporting of diagnostic tests and procedures used in the assessment of speech and language disorders.

SPA 5557 SPEECH PATHOLOGY AND AUDIOLOGY Practicum (1-12)
PR: CI. Participation in speech pathology and audiology prac- ticum in the University clinical laboratory and selected field settings.

SPA 5600 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.

SPA 5930 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.

SPA 6231 CEREBRAL PALSY (4)
PR: CI. A study of the medical, physical, occupational, speech, language, and hearing problems of the cerebral palsied. Therapy techniques are reviewed and evaluated.

SPA 6245 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.

SPA 6305 CHILD AUDIOLOGY (4)

SPA 6307 SPECIAL AUDITORY TESTS (4)
PR: SPA 5312 or CI. History, development, rationale and techniques for administering hearing tests to determine site of lesion, including those requiring special instrumentation. The detection and clinical management of pseudohyposis including the use of objective audiometry.

SPA 6322 TECHNIQUES OF AUDITORY TRAINING AND SPEECHREADING (6)
PR: CI. A careful analysis of the visual and auditory sense modalities as input systems used to facilitate communication in the hearing impaired. Particular attention is given to theories and models which explain the interrelationship of the two modalities. Methods and techniques employed in the habilitation of both modalities for the hearing impaired will be completely delineated.

SPA 6332 COMMUNICATIVE SKILLS FOR THE HEARING IMPAIRED (6)
PR: SPA 3020, SPA 3110, SPA 4365. Application and evaluation of techniques for teaching symbolic functioning to children with hearing impairments. Consideration of developmental and remedial aspects of reading.

SPA 6335 ADVANCED MANUAL COMMUNICATION AND BASIC INTERPRETING (3)
PR: SPA 4333 or equivalent and CI. A continuation of basic course which expands students signing skills and presents a thorough exposition of sign systems aimed at signing in an English language context — Seeing Essential English (SEE I), Signing Exact English (SEE II), Linguistics of Visual English (LVE), and Signed English. Those systems will be compared and contrasted with demonstrations. Interpreting for deaf individuals will be introduced. The introduction will include a discussion of the Interpreter's Code of Ethics and interpreting in different situations. Opportunity for practice of skills. May be repeated once.

SPA 6345 HEARING DISORDERS (4)
PR: SPA 6307 or CI. The compilation and interpretation of hearing test data for diagnosing hearing impairment. Investigation of medical and surgical techniques for the treatment of hearing loss, coordinating information for planning the treatment and rehabilitation of the hearing impaired, including the involvement of other professionals.

SPA 6354 HEARING CONSERVATION (4)
PR: SPA 5312 or CI. A comprehensive study of all aspects of hearing conservation especially those relating to the detection
and prevention of hearing loss in both children and adult populations. Special attention is given to problems encountered by industry.

**SPA 6410 APHASIA**  
PR: CI. A consideration of the neurological and psychological aspects of aphasia as they relate to communication disorders. Specific language therapy approaches are discussed and evaluated.

**SPA 6423 LANGUAGE FOR THE HEARING IMPAIRED**  
PR: SPA 3020, SPA 3110, SPA 4363 or CI. Techniques and materials of teaching language to children with auditory disorders. Evaluation and analysis of contemporary methods.

**SPA 6505 PRACTICUM**  
PR: CI. Participation in speech pathology and audiology practicum in the University clinical laboratory and selected field settings.

**COORDINATING STAFF:** G. F. Lentz, E. V. Hess, L. J. Berman, B. J. Franklin, C. W. Jarman.

**UNDERGRADUATE COURSES**

**COE 1940** COOPERATIVE EDUCATION, 1ST TRAINING PERIOD  
PR: 45 hours of academic credit, acceptance in Cooperative Education Program. (S/U only.)

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

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

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

**CRIMINAL JUSTICE**

**CCJ 3280** LEGAL FOUNDATIONS OF CRIMINAL JUSTICE  
PR: CCJ 3020, POS 2041 or CI. Content of this course examines the effects upon the criminal justice system of the freedoms of habeas corpus, bills of attainder 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.

**CCJ 3610** CHARACTERISTICS OF THE OFFENDER  
PR: Junior standing plus CCJ 3620 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 (e.g., adult, juvenile, victimless), 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.)

**CCJ 3620** NATURE OF CRIME  
PR: CCJ 3020. 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.

**CCJ 4110** THEORY AND PRACTICE OF LAW ENFORCEMENT  
PR: Junior standing plus CCJ 3280 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

**SPA 6825** RESEARCH PROCEDURES IN SPEECH PATHOLOGY AND AUDIOLOGY  
PR: CI. Advanced research and experimental design techniques employed in clinical and laboratory settings in speech pathology and audiology. Introduction to research technologies: review of stylistic considerations in research writing.

**SPA 6906** INDEPENDENT STUDY  
Independent study in which students must have a contract with an instructor. Repeatable. (S/U only.)

**SPA 6910** DIRECTED RESEARCH  
PR: GR. Master's level. Repeatable. (S/U only.)

**SPA 6930** SELECTED TOPICS  
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.

**SPA 6971** THESIS: MASTER'S  
Repeatable. (S/U only.)

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

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

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

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

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

**COE 4949** COOPERATIVE EDUCATION, 10TH TRAINING PERIOD  
PR: COE 4948. (S/U only.)
to the roles of law enforcement officers. Attention will be given to the new experimental programs and techniques.

**CCJ 4130 THE LAW ENFORCEMENT OFFICER AND THE COMMUNITY** (4)
PR: Junior standing plus CCJ 4110 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.

**CCJ 4330 THE PROBATION AND PAROLE PROCESS** (5)
PR: Junior standing plus CCJ 4360 or CI. The concepts of probation and parole will be thoroughly explored and related to actual and potential treatment situations.

**CCJ 4340 INDIVIDUAL AND GROUP PROCESSES IN CORRECTIONAL TREATMENT I** (4)
PR: Senior standing, CCJ 4540, and CI. Designed to introduce the student to theories and methods underlying treatment modalities currently employed in corrections.

**CCJ 4341 INDIVIDUAL AND GROUP PROCESSES IN CORRECTIONAL TREATMENT II** (4)
PR: Senior standing plus CCJ 4340. The student will be introduced to practical applications within a correctional setting involving both individual and group situations.

**CCJ 4360 THEORY AND PRACTICE OF CORRECTIONS** (4)
PR: Junior standing plus CCJ 3620 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.

**CCJ 4540 JUVENILE CORRECTIONS** (5)
PR: Junior standing plus CCJ 4540 or CI. Provides an in-depth 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.

**CCJ 4604 ABNORMAL BEHAVIOR AND CRIMINALITY** (4)
PR: CCJ 3620, CCJ 3610 (4 hours), or CI. This course will provide a systematic introduction to the relationship between mental illness and criminality. Attention will be given to psychiatric labeling of deviant behavior and its implications for the handling of the criminal offender who may be diagnosed as "mentally ill".

**CCJ 4700 RESEARCH METHODS IN CRIMINAL JUSTICE** (4)
PR: Junior standing plus CCJ 3020 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 STA 3122, Social Science Statistics, GEB 2111, Business and Economic Statistics I, or STA 3023, Introductory Statistics I.

**CCJ 4900 DIRECTED READINGS** (1-5)
PR: CI. This course is specifically designed to enable advanced students the opportunity to do in-depth independent work in the area of criminal justice. Each student will be under the close supervision of a faculty member of the program. No more than five hours of CCJ 4900, CCJ 4910 or any combination of the two will be accepted toward the minimum number of hours required for the major.

**CCJ 4910 DIRECTED RESEARCH** (1-5)
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. No more than five hours of CCJ 4900, CCJ 4910 or any combination of the two will be accepted toward the minimum number for the major.

**NOTE:** CCJ 4900 & CCJ 4910. (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) CCJ courses must have been completed satisfactorily prior to enrollment, (c) first consideration will be given to Criminal Justice majors, and (d) individual faculty members may add additional requirements at their discretion.

**CCJ 4934 SEMINAR IN CRIMINAL JUSTICE** (3-5)
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.)

**CCJ 4940 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. See requirements for the B.A. degree in Criminal Justice for the number of hours required. (S/U only.)

**GRADUATE COURSES**

**CCJ 6135 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.

**CCJ 6285 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.

**CCJ 6345 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 with 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.

**CCJ 6405 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.

**CCJ 6455 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.

**CCJ 6466 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.

**CCJ 6475 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, for-
matting, form design and control, data organization costs. May be repeated up to 6 hours.

CCJ 6605 THEORIES OF DEVIANCY (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.

CCJ 6705 INTRODUCTION TO RESEARCH AND EVALUATION IN CRIMINAL JUSTICE (4)
PR: CCJ 4700 or equivalent. An introduction to research, evaluation, statistics, data management, and measurement 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. CCJ 6705 must be completed at least one quarter prior to beginning work on the thesis (CCJ 6971).

CCJ 6709 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.

CCJ 6725 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.

CCJ 6726 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.

CCJ 6910 DIRECTED RESEARCH (var.)
PR: GR. Master's level. Repeatable. A maximum of five hours may be counted toward the minimum number of hours required by the department for the master's degree. (S/U only.)

CCJ 6920 PRO SEMINAR IN CRIMINAL JUSTICE (1-10)
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 sub-

CCJ 6930 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.

CCJ 6933 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.

CCJ 6935 TOPICS IN CRIMINAL JUSTICE (3-6)
PR: Graduate standing in the Criminal Justice Program. The field of criminal justice is characterized by a wide variety of issues and controversies that are of topical concern. This seminar provides a forum for analyzing and discussing these topics as their importance and the accumulation of data warrants. Classes in the criminal justice literature may be included among the topics for treatment in this course. May be repeated with different subject matter.

CCJ 6946 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.)

CCJ 6947 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 full-time 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.)

CCJ 6971 THESIS: MASTER'S (var.)
PR: CCJ 6705. Repeatable. A maximum of nine hours may be counted toward the minimum number of hours required for the Master's degree. (S/U only.)

*DAA 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.

DANCE

Chairperson: W. G. Hug (Interim); Professor: W. G. Hug; Associate Professor: C. Robinson; Assistant Professors: R. J. Sias, M. Starbuck; Lecturer: G. Schreiner.

UNDERGRADUATE COURSES

DAA 2160 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.

DAA 2200 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.

DAA 2700 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.

DAA 3161 INTERMEDIATE MODERN (4)
PR: Admission by audition. Continuation of DAA 2160. Further emphasis on style and phrasing. Work in projecting mood and quality by dancing and rehearsing in more advanced student choreography, leading to performance. Rehearsal hours to be arranged. May be repeated.

DAA 3201 INTERMEDIATE BALLET (4)
PR: Admission by audition. Continuation of DAA 2200. 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 concerts and performances. Rehearsal hours to be arranged. May be repeated.

DAA 3220 BALLET VARIATIONS (1-3)
PR: DAA 3201. This course introduces fundamental exercises for the development of pointe technique. Material covered may
also be pas de deux, character, and variations. Must be repeated for a total of 6 hours by majors in ballet concentration. May be repeated.

DAA 3502 JAZZ DANCE (2) PR: DAA 3161 or DAA 3201 or CI. 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.

DAA 3701 CHOREOGRAPHY II (3) PR: DAA 2700 or CI. Preparation of studies in rhythm, dynamics, form and motivation, culminating in a solo. May be repeated.

DAA 4162 ADVANCED MODERN (5) PR: Admission by audition. Continuation of DAA 3161 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 styles 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 15 hours by the student concentrating in Modern Dance. May be repeated.

DAA 4202 ADVANCED BALLET (5) PR: Admission by audition. Continuation of DAA 3201. 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 15 hours by the student concentrating in Ballet. May be repeated.

DAA 4702 CHOREOGRAPHY III (3) PR: DAA 3701 or CI. Work directed toward duets and group dances. The students will submit choreographic ideas for instructor's approval, then proceed with rehearsals. The best dances will be performed and fully produced under supervision of student choreographers. Lec.-lab., reading. May be repeated.

DAA 4703 CHOREOGRAPHY IV (3) PR: DAA 4702. The student will prepare studies based on free form, minimal art, and chance methods. Lec.-lab., reading. May be repeated.

DAN 3100 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 3100 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 3110 WORLD HISTORY OF DANCE (3) Study of the development of dance from its inception through the Middle Ages. Reading, lecture.

DAN 3603 MUSIC FOR DANCE (3) Development of practical music skills in relation to dance. Emphasis on rhythm and the relationship of music forms to dance. May be repeated up to 6 credit hours.

DAN 3710 REPERTORY (1) The development and performance of solo and/or group dances. Open to all University students by audition. May be repeated.

DAN 4120 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.


DAN 4170 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 4905 DIRECTED READING (3) PR: CI and CC. Readings in topic of special interest to the student. Selection of topic and materials must be agreed upon and appropriate credit must be assigned prior to registration. A contract with all necessary signatures is required for registration. May be repeated for credit for different topics only.

DAN 4906 DIRECTED STUDY (1-6) PR: CC. Independent studies in the various areas of Dance. Course of study and credits must be assigned prior to registration. May be repeated.

DAN 4930 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.

ECONOMICS—see Business Administration

EDUCATION

Art Education

UNDERGRADUATE COURSES

ARE 3044 EXPERIENTIAL BASIS IN ART EDUCATION
PR: Admission to College of Education. Designed to help the individual student discover and develop meanings and values in art and education with emphasis on communicative skills, both verbal and visual. Focus will be on the individual and potential alternatives in the teaching of art.

ARE 3354 ART TEACHING STRATEGY AND MEDIA WORKSHOP I
PR: Admission to College of Education and ARE 3044. A combination of theory, philosophy and practice in both public and private learning centers to provide the student with a variety of teaching concepts and media exploration in art education and to further enable the student to understand stages of young people, three to eighteen.

ARE 4112 ART MEDIA FOR CHILDREN
An in-depth study of arts and craft media for children. Emphasis will be placed on innovative use of new materials.

ARE 4260 SEMINAR IN ART EDUCATION ADMINISTRATION
PR: Admission to College of Education and ARE 3044. The concepts and areas of skill essential to successful practice in art education management. To include understanding of how art programs are funded, art facility planning, art curriculum development, art exhibition techniques, public relations promotion and supply and equipment requirements.

ARE 4411 EXPERIMENTAL FILMMAKING FOR CHILDREN
A study of basic experimental film techniques and laboratory experiences with children in the public schools, community centers, and non-school arts programs.

ARE 4440 ART TEACHING STRATEGIES AND MEDIA WORKSHOP II
PR: Admission to College of Education and ARE 3044. Media and the learning process as a means of self-expression will be explored. Media experience in sound exploration, visual exploration through photographic arts, cinematography and video-television systems. Exploration of local business and industrial technology for developing experimental media forms. Designing of teaching strategies for creative media experiences as well as skills in media criticism to include application at elementary and secondary levels.

ART 4443 CRAFTS WORKSHOP IN ART EDUCATION
PR: Admission to College of Education and ARE 3044. The study of processes and media involved in the expression of individual ideas through crafts. Emphasis placed on crafts in a contemporary society with skills in metals, weaving, fibers, and ceramics and their application in a public school curriculum.

ARE 4642 URBAN ENVIRONMENT ARTS WORKSHOP
PR: Admission to College of Education and ARE 3044. Identification, exploration, and experimentation with unique urban spaces and populations as potential new environments for teaching and learning in arts.

GRADUATE COURSES

ARE 6262 ADMINISTRATION AND SUPERVISION OF ART EDUCATION
(4) Principles of administration and supervision of art programs in the school.

ARE 6706 RESEARCH SEMINAR IN ART PROGRAM
(4) PR: ARE 6844 or CI. Literature and research in art education. Various approaches to problem solving and evaluation with emphasis on individual research.

ARE 6844 HISTORICAL AND PHILOSOPHICAL FOUNDATION OF ART EDUCATION
(4) Past and contemporary philosophies and practices in art education.

ARE 6944 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 program, planned workshop and research.

Curriculum

UNDERGRADUATE COURSES

EDG 1300 INTRODUCTION TO TEACHING
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.)

EDG 4200 CURRICULUM AND INSTRUCTION
PR: EDF 3214 and EDF 3604, and admission to a teacher education program. Structure and purposes of curriculum organization with special emphasis on the quality of curriculum. Students enrolled in EDG 4200 are required to spend six hours a week in public schools as pre-interns in addition to regular class hours.

EDG 4901 DIRECTED READINGS
May be repeated for a total of 4 quarter hours.

EDG 4905 INDEPENDENT STUDY
PR: CI. Specialized independent study determined by the students’ needs and interests. May be repeated when subjects vary. (S/U only.)

EDG 4909 DIRECTED STUDY
PR: Senior standing. To extend competency in teaching field. Offered only as a scheduled class.

EDG 4910 INDIVIDUAL RESEARCH
PR: Senior standing and consent of program coordinator.

EDG 4936 SENIOR SEMINAR IN EDUCATION
PR: Senior standing. Synthesis of teacher candidate’s courses in complete college program. Required concurrently with internship.

EDG 4940 INTERNSHIP
(1-12) One full quarter of internship in a public or private school. Intern takes Senior Seminar in Education concurrently. In special programs where the intern experience is distributed over two or more quarters, students will be registered for credit which accumulates from 9 to 12 quarter hours. (S/U only.)

GRADUATE COURSES

EDA 6061 PRINCIPLES OF EDUCATIONAL ADMINISTRATION
(5) Educational administration as a profession. Consideration is given to organization, control, and support of the educational system.

EDA 6106 ADMINISTRATIVE ANALYSIS AND CHANGE
(4) A competency based course on the application of function analysis, the Critical Incident technique and the Delphi tech-
nique to the identification, assignment, and evaluation of administrative tasks within selected organizational settings.

EDA 6232 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.

EDA 6242 SCHOOL FINANCE (4)
PR: EDA 6061 or CI. Support of public education by local, state, federal sources, with emphasis on Florida; foundation program models; introduction to educational budgeting.

EDA 6243 SCHOOL FISCAL RESOURCE ALLOCATION (4)
PR: CI. Concepts and practices in allocation and accountability of financial resources in the schools. The use of systems concepts in school budgeting, including prioritizing of alternatives, PPBS and zero-based budget techniques, school-based management allocation models. Also available in workshop version. Available to majors and non-majors.

EDA 6262 PLANNING EDUCATIONAL FACILITIES (4)
PR: CI. Study of problems in the planning, construction, and utilization of educational facilities. Visitation and/or evaluation of selected school plants.

EDA 6910 DIRECTED RESEARCH (var.)
PR: GR. Master's level. Repeatable. (S/U only.)

EDA 6931 CASE STUDIES IN SCHOOL ADMINISTRATION (4)
PR: Consent of the program and/or EDA 6061. Case studies presented are designed to help prospective administrators think through various administrative problems, identify feasible solutions, and critically examine the decisions that are made. The skill of decision making is an integral focus of the course.

EDA 6945 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.

EDE 5391 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.

EDG 5691 CURRICULUM AND INSTRUCTION: ELEMENTARY OR SECONDARY (5)
Curriculum scope, sequence and interrelationships, with a critical evaluation of current trends.

EDG 5925 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.)

EDG 6205 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.

EDG 6251 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.

EDG 6906 INDEPENDENT STUDY (var.)
Independent study in which students must have a contract with an instructor. Repeatable. (S/U only.)

EDG 6931 SELECTED TOPICS IN EDUCATION (1-5)
PR: Graduate Standing and CI. Each topic is a course under the supervision of a faculty member. The title and content will vary according to the topic.

EDG 6947 INTERNSHIP (1-9)
PR: CI. Open to graduate degree candidates only. Supervised teaching at the secondary or junior college level as appropriate. (S/U only.)

EDG 6971 THESIS: MASTERS/EDUCATION SPECIALIST (var.)
For students in M.A. and Ed.S. programs requiring a thesis. This project is a culminating, integrating experience which aims at relating theory to practice. Repeatable. (S/U only.)

EDG 7910 DIRECTED RESEARCH (var.)
PR: GR. Ph.D. level. Repeatable. (S/U only.)

EDG 7931 SELECTED TOPICS (1-5)
PR: CC. Selected topics in advanced Education. May be repeated for credit to a maximum of 15 hours.

EDG 7937 GRADUATE SEMINAR (1-5)
PR: CC. Seminar in advanced Education. May be repeated for credit to a maximum of 15 hours.

EDG 7980 DISSERTATION: DOCTORAL (var.)
PR: Must be admitted to Doctoral Candidacy. Repeatable. (S/U only.)

EDS 6050 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.

EDS 6239 PROBLEMS IN SUPERVISION : SECONDARY (4)
PR: Consent of the program and/or EDS 6050. The analysis of instructional problems in schools. Emphasis of the course is directed to supervisory tasks, case studies, and the application of problem solving techniques and strategies.

ESE 6306 SUBJECT SPECIALIZATION PLANNING SECONDARY (4)
Individually planned course in a secondary school subject area for in-service teachers.

LAE 5131 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.

LAE 5137 CURRICULUM EVALUATION IN SECONDARY ENGLISH (4)
PR: Certification in English or Mass Communications. Examination of new evaluation policies and procedures relating to curriculum in English in the secondary school.

Elementary Education

UNDERGRADUATE COURSES

ARE 4313 ART FOR THE CHILD (4)
PR: Admission to College of Education. Art and the intellectual, creative, emotional, and esthetic growth of children.

EDE 4301 TEACHING METHODS IN THE ELEMENTARY SCHOOL (4)
PR: Admission to the College of Education. Suggested corequisite: EDG 4200. Process of teaching elementary school subjects. To be taken quarter prior to internship. Six hours per week as pre-intern in public schools required.

EEC 2001 INTRODUCTION TO EARLY CHILDHOOD EDUCATION (4)
An overview of early childhood education with emphasis on its historical development, current theories, and practices.

EEC 4203 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.

**EEC 4303 CREATIVE EXPERIENCES IN EARLY CHILDHOOD EDUCATION**

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.

**EEC 4706 LANGUAGE AND LEARNING IN EARLY CHILDHOOD**

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.

**HLP 4460 HEALTH AND PHYSICAL EDUCATION FOR THE CHILD**

PR: Admission to the College of Education. A study of the importance of movement competency and its contribution to the development of a positive self-concept in children; content and methodology for developing appropriate movement experiences for children; content and methodology for teaching elementary health science.

**LAE 4314 LANGUAGE ARTS FOR THE CHILD**

PR: Admission to College of Education. Speaking, writing, reading, and listening experiences of children and ways these skills are developed for individual creative expression.

**LAE 4414 LITERATURE FOR THE CHILD**

PR: Admission to College of Education. History and development of children's literature. Study of bibliographic sources, criteria and techniques for selection and use.

**MAE 4310 TEACHING ELEMENTARY SCHOOL MATHEMATICS I**

PR: Admission to College of Education, Number Systems, Basic Algebraic Concepts, Informal Geometry, or equivalent, and a passing score on the College of Education Test of Mathematical Competencies. Methods for teaching number ideas, computational skills, and mathematical reasoning.

**MAE 4311 TEACHING ELEMENTARY SCHOOL MATHEMATICS II**

PR: MAE 4310. Methods for teaching informal geometry, measurement, and probability and statistics.

**MAE 4545 DIAGNOSIS AND TREATMENT OF LEARNING DISABILITIES IN SCHOOL MATHEMATICS**

PR: MAE 4310 or equivalent. Presentation and analysis of teaching methods and models appropriate for use with students experiencing learning disabilities in mathematics; supervised conduct of a case study.

**MUE 4313 MUSIC FOR THE CHILD: SKILLS**

PR: Admission to College of Education. Voice production, music reading, creative composition and some instrumental experiences. School song materials used to support this work.

**MUE 4315 MUSIC FOR THE CHILD: METHODS**

PR: Admission to College of Education & MUE 4313. Music Literature and teaching aids for children including singing, rhythmic, creative, instrumental and listening experiences and their presentation.

**RED 4310 READING FOR THE CHILD**

PR: Admission to College of Education. Prereading, word recognition, comprehension and basic study skills and various reading approaches and reading interests; in-school work required.

**SCE 4310 SCIENCE FOR THE CHILD**

PR: Admission to College of Education and completion of General Distribution Requirement in the Natural Science area. Techniques and materials for teaching science in the elementary school.

**SSE 4313 SOCIAL STUDIES FOR THE CHILD**

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.

**GRADUATE COURSES**

**ARE 6358 ART FOR THE ELEMENTARY SCHOOL TEACHER**

PR: Admission to College of Education. Exploration of various materials and techniques in relationship to current theories about art and the intellectual, creative, emotional and esthetic growth of children.

**EDE 6305 CREATIVE TEACHING IN THE ELEMENTARY SCHOOL**

Creative processes in the teaching of visual arts, music, dance, and drama to elementary school pupils.

**EDG 6935 SEMINAR IN CURRICULUM RESEARCH**

PR: EDF 6481. Critical evaluation of current research and curriculum literature, design and analysis of individual research topics leading to satisfaction of research requirements.

**EDS 6930 PROBLEMS IN SUPERVISION**

PR: EDF 6481 or equivalent and EDS 6050. Problems in supervising for curriculum improvement within the elementary school.

**EEC 5406 SOCIAL GROWTH IN CHILDHOOD**

PR: Admission to College of Education. A study of the principal factors which influence the social development of young children with particular emphasis upon those cultural influences which affect both child development and the educational programs for the young child.

**EEC 5705 DEVELOPMENTAL PROCESSES IN EARLY CHILDHOOD**

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.

**ECC 5926 WORKSHOP IN EARLY CHILDHOOD EDUCATION**

PR: Admission to College of Education. Individual problems and innovations related to methods and materials of instruction in the early childhood grades.

**EED 6261 ADVANCED PROGRAMS IN EARLY CHILDHOOD EDUCATION**

PR: EDF 6431, EEC 4203 or Cl. A study of innovative curriculum designs in Early Childhood Education, with emphasis given to related research.

**EED 6405 HOME-SCHOOL-COMMUNITY INTERACTION IN EARLY CHILDHOOD EDUCATION**

PR: EDF 6431, EEC 4203 or Cl. An intensive study of the roles of parents, teacher aides, and community agencies involved in the education of the young child.

**LAE 5325 TEACHING METHODS IN THE MIDDLE SCHOOL—ENGLISH LANGUAGE ARTS**

PR: Cl. Analysis of nature and communication needs of students in grades 5-8 with emphasis on laboratory methods of teaching language.

**LAE 6301 LANGUAGE LEARNING IN CHILDHOOD**

PR: Graduate standing in the College of Education. The study of research which has been used to assess the language behavior of normal children. Attention will also be given to the application of selected research methodology to understanding linguistic behavior of children.

**LAE 6415 LITERATURE AND THE LEARNER**

This course is designed to acquaint adults with the nature, scope and uses of literature for instructional, information and recreational purposes. The implication of current theory, significant research and issues in literature study will be investigated and examined as they relate to the learner.
LAE 6616 TRENDS IN LANGUAGE ARTS
INSTRUCTION (4)
PR: LAE 4314 and LAE 4414. Advanced materials and processes of instruction in elementary school language arts programs.

LAE 6617 THEORIES AND PATTERNS OF ADVANCED LANGUAGE ARTS INSTRUCTION (4)
PR: LAE 6616 or equivalent. This course is organized to present new research findings and theories relating to language patterns and contemporary programs designed for teaching the language arts.

LAE 6746 APPLICATIONS OF THEORIES TO THE DEVELOPMENT OF LANGUAGE ARTS PROGRAMS (4)
PR: LAE 6616 or equivalent. LAE 6617. This course is designed to apply research findings and theories for developing and organizing instructional improvement of the language arts.

MAE 6116 CURRENT TRENDS IN ELEMENTARY MATHEMATICS EDUCATION (4)
PR: MAE 4310 or equivalent. Philosophy, content and process of qualitative instruction in modern mathematics in elementary school programs.

MAE 6548 ADVANCED DIAGNOSIS AND TREATMENT OF LEARNING DISABILITIES IN SCHOOL MATHEMATICS (4)
PR: MAE 4310 or equivalent. Study of the symptoms, etiologies and consequences of children's learning disabilities in mathematics; study and guided application of theoretical models used in diagnosis and treatment; supervised conduct of a case study.

MAE 6549 ADVANCED PRACTICUM IN DIAGNOSIS AND TREATMENT OF LEARNING DISABILITIES IN SCHOOL MATHEMATICS (1-8)
PR: MAE 6548. Supervised conduct of a case study with a student experiencing learning difficulties in mathematics. Procedures used and reporting practice employed developed in MAE 6548 reviewed and extended.

RED 6116 FOUNDATIONS OF ELEMENTARY READING INSTRUCTION (4)
PR: RED 4310 or equivalent course. Study of approaches, materials, and procedures in Elementary Reading instruction, with emphasis on pertinent research. Not for undergraduate nor to be used as a first course in Reading.

SCE 6616 TRENDS IN SCIENCE INSTRUCTION (4)
PR: SCE 4310. 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.

SSE 6617 TRENDS IN SOCIAL STUDIES INSTRUCTION (4)
PR: SSE 4313. Crucial concepts drawn from the social sciences. Analysis of the problems approach. Students will select an area of independent study on an advanced level.

English Education

UNDERGRADUATE COURSES

EDG 4451 EDUCATION THROUGH DRAMA (4)
A study of the dramatic process as intrinsic in human development, this course is designed to enrich the education of pre-service teachers by providing training in the use of creative drama and related forms of improvised drama in the classroom.

EDG 4452 THEATRE FOR PRE-SECONDARY SCHOOLS: THE PRODUCTION PROCESS (4)
Experiential study of the play production process as it applies to theatre for school audiences. Students will produce a play to be performed the following quarter. Each student will participate in decision-making aspects of production from play selection through dress rehearsal. Students are expected to perform the play during the following quarter as a project of EDG 4453. May be repeated for elective credit two times; once for major credit.

EDG 4453 THEATRE FOR PRE-SECONDARY SCHOOLS: THE PERFORMANCE PROCESS (4)
PR: Completion of EDG 4452 in the quarter immediately preceding this course or permission of the instructor. An experiential study of the artistic process of performing for various school audiences and the practice of conducting in-class workshops related to the performance. Techniques of preparing pre-performance and post-performance teacher guidelines and workshop materials will be studied. May be repeated for elective two times; once for major credit.

LA E 4335 METHODS OF TEACHING ENGLISH—LITERATURE AND READING (4)
CR: EDG 4200, LAE 4335, and LAE 4642 are typically taken concurrently. A survey of materials available to adolescent readers plus an overview of organizational strategies for teaching literature and reading.

LA E 4530 READING SKILLS IN ENGLISH EDUCATION (2)
PR: RED 4360 or CI. Methods of dealing with reading problems and application of general reading concepts in English Education. Required of all undergraduate majors in English Education.

LA E 4642 CURRENT TEACHING OF ENGLISH LANGUAGE AND MEDIA (4)
PR: Acceptance into College of Education.
CR: EDG 4200, LAE 4335, and LAE 4642 are typically taken concurrently. Methods of teaching language and media. Includes current findings on teaching usage, dialect, grammar, and semantics, as well as approaches to media in English.

GRADUATE COURSES

EDG 6455 EDUCATION THROUGH ADVANCED DRAMA (4)
Theories and methods of teaching creative drama and related forms of improvised drama and playmaking with supervised teaching of creative dramatics in a school environment.

LA E 5932 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 adviser.

LA E 6336 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.

LA E 6637 CURRENT TRENDS IN SECONDARY ENGLISH EDUCATION (4)
Curricular patterns and instructional practices in secondary English.

LA E 6644 CURRENT TEACHING OF THE ENGLISH LANGUAGE (4)
Application of recent techniques of language study to classroom teaching of English, especially in relation to current textbooks.

Exceptional Child Education

UNDERGRADUATE COURSES

EED 4011 BEHAVIOR DISORDERS IN THE SCHOOLS (4)
PR: EDF 3214, EEX 3010, 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.

**EED 4321 EDUCATIONAL PROGRAMMING FOR CHILDREN AND YOUTH WITH BEHAVIOR DISORDERS** *(5)*


**EED 4941 UNDERGRADUATE SUPERVISED PRACTICUM IN BEHAVIOR DISORDERS** *(4)*

PR: Acceptance in the undergraduate program for Emotional Disturbance. Exceptional Children and Youth and Behavior Disorders in the Schools may be taken concurrently. Supervised undergraduate practicum experiences with children and youth with behavior disorders. A one hour per week seminar is required concurrent with practicum. May be repeated up to 12 hours.

**EEX 3010 EXCEPTIONAL CHILDREN AND YOUTH** *(4)*


**EEX 4221 EDUCATIONAL ASSESSMENT OF EXCEPTIONAL CHILDREN** *(4)*

PR: EDF 3214, EEX 3010, EMR 3011 or EED 4011 or ELD 4011 and an Exceptional Child Education major. Introduction to and familiarization with formal and informal techniques used to measure and evaluate all exceptional children. The interpretation of information so derived for utilization in educational programming and individualization of instruction. Lec-lab.

**EGI 3011 INTRODUCTION TO GIFTED CHILDREN** *(4)*

PR: Junior class standing. Diagnosis, characteristics, and educational provision of the gifted and talented.

**EGI 3941 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.

**ELD 4011 THEORIES IN SPECIFIC LEARNING DISABILITIES** *(4)*

PR: EEX 3010. Characteristics, needs and abilities of children with specific learning disabilities. Focus on theories, issues, trends, and philosophy of problems for such children.

**ELD 4110 SKILLS IN DIAGNOSIS AND INSTRUCTION FOR CHILDREN WITH SPECIFIC LEARNING DISABILITIES** *(4)*

PR: Theories in Specific Learning Disabilities and a Specific Learning Disabilities major.

**ELD 4944 UNDERGRADUATE SUPERVISED PRACTICUM IN SPECIFIC LEARNING DISABILITIES** *(6)*

PR: EEX 3010, ELD 4011, ELD 4110 and major in Specific Learning Disabilities. Supervised practicum experiences in classes for children with specific learning disabilities. Practicum experiences are provided on the Tampa Campus in the Specific Learning Disabilities Clinic.

**EMR 3011 INTRODUCTION TO MENTAL RETARDATION** *(4)*

PR: EEX 3010. Introduction to the classification, diagnosis, characteristics, and treatment of the mentally retarded.

**EMR 3800 UNDERGRADUATE SUPERVISED PRACTICUM IN MENTAL RETARDATION** *(2-6)*

PR: EMR 3011 and major in Mental Retardation. Supervised Practicum experiences in the educational, social and vocational programming for mentally retarded individuals. A one hour per week seminar is required concurrently. May be repeated up to 6 credit hours.

**EMR 4310 PROCEDURES AND MATERIALS FOR ELEMENTARY AGE EDUCABLE MENTALLY RETARDED CHILDREN** *(4)*

PR: EMR 3011 and an Exceptional Child Education major. Special class organization, curriculum development, procedures and materials for elementary age educable mentally retarded children.

**EMR 4313 PROCEDURES AND MATERIALS FOR SECONDARY AGE EDUCABLE MENTALLY RETARDED YOUTH AND ADULTS** *(4)*

PR: EMR 3011 and Exceptional Child Education major. Special class organization, curriculum development, procedures and materials for secondary age educable mentally retarded youth and adults.

**EMR 4321 EDUCATIONAL PROCEDURES FOR THE TRAINABLE MENTALLY RETARDED** *(4)*

PR: EMR 3011 and an Exceptional Child Education major. Special class organization, curriculum development, methods and techniques of teaching the trainable retarded.

**GRADUATE COURSES**

**EDG 5734 THE CULTURALLY DISADVANTAGED AND THE SCHOOLS** *(4)*

Characteristics and needs of the culturally disadvantaged and their implications for educational programming.

**EDG 6946 FIELD WORK WITH POTENTIALLY HANDICAPPED (CULTURALLY DISADVANTAGED)** *(1-9)*

Teaching and participation in activities related to teaching disadvantaged young children. (N-3)

**EED 6201 EDUCATIONAL IMPLICATIONS OF PATHOLOGICALLY DISTURBED CHILDREN AND YOUTH** *(4)*

CR: EED 4011 may be taken concurrently. In-depth survey of mild, moderate and severe behavioral pathologies of children and youth. Includes such topics as autism, schizophrenia, and other neurotic and psychotic disorders. Guided exploration of exemplary services and methodologies.

**EED 6211 EDUCATIONAL PROGRAMMING FOR EMOTIONALLY DISTURBED CHILDREN** *(4)*

PR: Acceptance in Master's Degree Program in Emotional Disturbance, EED 6201, EED 6221, EEX 6201. Advanced methods and materials in planning and implementing appropriate educational interventions with disturbed students.

**EED 6221 MANAGEMENT METHODS AND TECHNIQUES FOR DISTURBED CHILDREN IN AN EDUCATIONAL SETTING** *(4)*

PR: EDF 6217 or EED 6201, graduate standing. Management methods with disturbed children in an ongoing educational setting. Includes behavior modification, reality therapy, psychodynamic interventions, and humanistic approaches. Basic evaluation techniques of intervention strategies, including Precision Teaching, are covered. Practical applications are stressed.

**EED 6222 PROCEDURES FOR EDUCATING DISTURBED ADOLESCENTS AND YOUTH** *(4)*

PR: EDF 5136, EED 6201, EED 6221. Procedures in implementing educational programs for the disturbed adolescent including community resource utilization, educational programming, advocacy, and alternative programs.

**EED 6943 SUPERVISED PRACTICUM IN EMOTIONAL DISTURBANCE** *(1-14)*

PR: EED 6201 may be taken concurrently, and acceptance in Master's Degree Program in Emotional Disturbance. Supervised graduate practicum experiences with emotionally disturbed children. A one hour per week seminar is required concurrent with practicum.

**EEX 6201 PSYCHO-EDUCATIONAL APPRAISAL OF EXCEPTIONAL CHILDREN** *(4)*

PR: EEX 3010 or EEX 6936, EDF 6431, EEX 4221. Educational
planning for exceptional children based on diagnostic information. Includes both lectures and practicum experiences in evaluative and instructional techniques for exceptional children.

EEX 6303 ADVANCED EDUCATIONAL PROCEDURES FOR THE MENTALLY RETARDED (4-8)
PR: EMR 4310 or EMR 4321. Specific curriculum and methodological problems in teaching the retarded.

EEX 6511 ADMINISTRATION OF EXCEPTIONAL CHILD PROGRAMS (4)
PR: CI. Procedure which local, state, and national administrators may use to implement services for exceptional children.

EEX 6732 GUIDANCE AND COUNSELING OF EXCEPTIONAL CHILDREN AND THEIR PARENTS (5)
PR: EEX 6936 and CI. 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.

EEX 6934 CURRENT TRENDS AND ISSUES IN THE EDUCATION OF EXCEPTIONAL CHILDREN (4)
Survey of current trends and issues related to the education of exceptional children.

EEX 6936 SEMINAR IN EXCEPTIONAL CHILD EDUCATION (4)
A critical survey of the literature related to the psychological, sociological, and education problems of exceptional children.

EEX 7203 EDUCATIONAL IMPLICATIONS OF PSYCHOSOCIAL ASPECTS OF EXCEPTIONAL CHILDREN (1-8)
PR: CI. 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.

EEX 7301 SELECTED TOPICS IN EXCEPTIONAL CHILD EDUCATION (1-12)
PR: EEX 7341 or CI. Identification and specifications 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.

EEX 7341 RESEARCH STUDIES AND THEIR IMPLICATIONS IN THE EDUCATION OF EXCEPTIONAL CHILDREN (5)
PR: EDF 6431, EDF 6481 or equivalent CI. This 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.

EEX 7741 PHILosophY AND PROCESS IN THE PREPARATION OF SPECIALISTS IN EXCEPTIONAL CHILD EDUCATION (4)
PR: Admission in 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.

EEX 7841 FIELDWORK WITH EXCEPTIONAL CHILDREN (1-8)
PR: CI. 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.

EEX 7911 SPECIALIZED STUDY IN: MENTAL RETARDATION, EMOTIONAL DISTURBANCE, SPECIFIC LEARNING DISABILITIES, AND GIFTED EDUCATION (1-12)
PR: CI. 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.

EEX 7930 SEMINARS IN EXCEPTIONAL CHILD EDUCATION (1-10)
PR: Preliminary Admission to the Graduate Program and CI. Seminar Topics will vary to include neuropsychological mechanisms, current trends, issues, and curriculum development in Special Education. May be repeated for a maximum of 10 hours.

EGI 5051 NATURE AND NEEDS OF THE GIFTED (4)
Characteristics and educational needs of gifted children and youth.

EGI 5232 EDUCATIONAL PROCEDURES FOR THE GIFTED (4)
PR: EGI 5051 or CI. Curriculum adjustments, methods and techniques, classroom organization necessary for teaching the gifted.

EGI 5942 SUPERVISED PRACTICUM FOR THE GIFTED (1-14)
Planned supervised participation in activities related to specific areas of the gifted.

EGI 6936 SEMINAR IN EDUCATION OF THE GIFTED: RECENT RESEARCH (4)
A critical survey of the literature related to the psychological and educational problems of gifted children.

EGI 6937 SEMINAR IN EDUCATION OF THE GIFTED: PROGRAMS (4)
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.

ELD 6115 ADVANCED ASSESSMENT AND PROCEDURES FOR SPECIFIC LEARNING DISABLED YOUNGSTERS (4)
PR: CI. Concepts related to the assessment and teaching of specific learning disabled children.

ELD 6141 CURRENT TRENDS AND ISSUES RELATED TO EDUCATING SPECIFIC LEARNING DISABILITIES CHILDREN (4)
PR: CI. Trends and issues related to educating children with specific learning disabilities.

EMR 5012 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.

EMR 5803 GRADUATE SUPERVISED PRACTICUM IN MENTAL RETARDATION (1-14)
Supervised graduate practicum encompassing teaching and supervising experiences in public school classes for the mentally retarded.

EMR 6932 BIOLOGICAL ASPECTS OF MENTAL RETARDATION (4)
PR: EMR 3011 or CI. The contribution of biological factors towards the causation of mental deficiency; implications for casefinding, care, and education.

EMR 6934 SOCIOLOGICAL AND EDUCATIONAL ASPECTS OF MENTAL RETARDATION (4)
PR: EEX 3010 or EEX 6936. Evaluation of relevant literature.

EPH 5051 EDUCATIONAL PROBLEMS OF THE PHYSICALLY HANDICAPPED (4)
PR: EEX 3010 or CI. Introduction to the educational, psychological and social problems of the physically disabled child in the public schools.

EPH 5321 TEACHING THE CEREBRAL PALSYED CHILD (4)
PR: EEX 3010 or CI. Introduction to the educational, psychosocial and personal problems of the physically disabled child in the public schools.
EDF 4801 WOMEN AND THE EDUCATIONAL PROCESS
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 under Women's Studies.)

GRADUATE COURSES
EDF 5136 ADOLESCENCE
A study of the educational, intellectual, personality, physical, social and vocational factors in adolescence.

EDF 5285 PROGRAMMED INSTRUCTION AND TEACHING MACHINES
Principles for programming in the several academic subjects.

EDF 5672 AMERICAN DEMOCRACY AND PUBLIC EDUCATION
Interdependence of the public school and democracy in the United States and the responsibility of the school in fostering and strengthening basic democratic principles.

EDF 6120 CHILD DEVELOPMENT
PR: EDF 6211 or CI. Educational, emotional, hereditary, intellectual, social and physical factors influencing child growth and development.

EDF 6143 MEASUREMENT OF INDIVIDUAL INTELLIGENCE
PR: EDF 3214 or EDF 6431 or equivalent and a course in educational measurement or statistics. Administration and interpretation of individual measures of intelligence.

EDF 6211 PSYCHOLOGICAL FOUNDATIONS OF EDUCATION
Selected topics in psychology of human development and learning.

EDF 6213 BIOLOGICAL BASES FOR LEARNING AND BEHAVIOR
PR: One course in Educational Psychology. A study of human biological development and its influence upon learning and behavior.

EDF 6215 PRINCIPLES OF LEARNING
A consideration of several theories of learning and related research studies in regard to classroom application.

EDF 6217 BEHAVIOR THEORY AND CLASSROOM LEARNING
PR: EDF 6215 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.

EDF 6354 THEORIES OF PERSONALITY FOR SCHOOL PERSONNEL
A comparative and integrated study of personality development according to major psychological theories. Application of the theoretical constructs to education and guidance.

EDF 6431 FOUNDATIONS OF MEASUREMENT
Fundamental descriptive statistics, basic measurement concepts, role of measurement in education, construction of teacher-made tests and interpretation of standardized tests.

EDF 6481 FOUNDATIONS OF EDUCATIONAL RESEARCH
PR: EDF 6431. Major types of educational research, with emphasis upon understanding the experimental method.
EDF 6517 HISTORICAL FOUNDATIONS OF AMERICAN EDUCATION (4)
Historical and comparative problems in American education which are relevant to contemporary issues.

EDF 6544 PHILOSOPHICAL FOUNDATIONS OF AMERICAN EDUCATION (4)
Major philosophies of education which are relevant to an understanding of contemporary educational issues.

EDF 6606 SOCIO-ECONOMIC FOUNDATIONS OF AMERICAN EDUCATION (4)
Significant socio-economic factors as they relate to major problems facing American education.

EDF 6712 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 6805 WOMEN AND EDUCATION (4)
Course is designed to enable public school personnel, teachers, counselors, administrators and other professionals, to identify those aspects of public education which perpetuate sex role stereotyping. Emphasis will be placed on the law and formal and informal affirmative action activities can be employed to correct sexism in schools.

EDF 6860 SCHOOLS AND THE FUTURE (4)
PR: Admission to a College of Education Master's Program or CI. An examination of recent and current estimates of future demands upon and roles for schools. Topics include advantages and limitations of various techniques employed in futuristics, particularly as applied to schools; primary social forces affecting schools; probable emergence of new social forces and demands; probable diminution of past and present social forces and demands; the dynamics of social change and effects of various institutions such as schools; the differing effects of various paradigms employed as models for estimating alternative school futures; analysis of seminal documents describing future scenarios for schools; and the development of alternative future scenarios for schools from course materials.

EDF 6938 SELECTED TOPICS (2-4)
PR: CI. Exploration and demonstration of knowledge in an area of special interest to the student and/or in an area for which the student needs to demonstrate a higher level of competence. Defined to fit the needs of each student.

EDF 6944 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.

EDF 7586 CLASSICS IN EDUCATIONAL RESEARCH (4)
PR: Graduate standing; EDF 6517, EDF 6544, or EDF 6606 or CI. An examination of the context, methodology, and impact of significant research studies in education. Topics will include studies of the Herbartians, J.M. Rice, E.L. Thorndike, G.S. Hall, L.P. Ayers, Willard Waller, the Reading Studies, the Eight Year Study, and School Surveys.

EDF 7610 SCHOOL REFORM (4)
PR: Graduate standing; EDF 6517, EDF 6544, or EDF 6606 or CI. An examination of the history, background, sources, dynamics, and effects of attempts at school reform. Topics will include role of individuals, foundations, legislation, demography, politics, media, and technology as they relate to reform aims and strategies; distinctions between short-term planning for change and the preparation of long-term future strategies.

EDF 7649 ANALYSIS OF EDUCATIONAL ISSUES (4)
PR: Graduate standing; EDF 6517, EDF 6544 or CI, or EDF 6606. An examination and analysis of selected critical issues in public schooling in terms of their axiological, historical, and socio-cultural bases. Includes such topics as: problems of curriculum reform, influence of legislation and court ruling on school teaching and administration, teachers' organizations and problems of educational support. Emphasis will be placed on ways of conceptualizing and evaluating problems and issues.

EDF 7655 ORGANIZATION DEVELOPMENT IN EDUCATIONAL INSTITUTIONS (4)
PR: Graduate standing; EDF 6517, EDF 6544 or CI, or EDF 6606. The application of social and behavioral science theory to the developmental problems of schools and school systems. Topics include: theory of organization development, concepts of systems analysis, action research techniques, intervention and change concepts and strategies, consultant-client relationships, organization problem diagnosis and solution, plus a survey of resources available for organization development.

EDF 7682 EDUCATION IN METROPOLITAN AREAS (4)
PR: Graduate standing; EDF 6517, EDF 6544, or CI, or EDF 6606. Examination of the school as a formal, socializing institution in relationship to the residential populations found within the metropolitan structure with specific reference to methodologies useful for educational planning. Topics will include an identification of the metropolitan concept; an analysis of metropolitan concepts; an analysis of metropolitan forms, functions, and dynamics; a study of socio-economic structure and ethnic composition of residential populations; and a discussion of the school as a metropolitan institution interacting with a spectrum of socio-economic and ethnic groups.

**Guidance**

**UNDERGRADUATE COURSES**

EGC 4001 INTRODUCTION TO GUIDANCE (5)
PR: Upper level standing. An introduction to the role and function of guidance, school psychology, social work and other personnel services from kindergarten through junior college.

EGC 4053 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.

**GRADUATE COURSES**

EGC 5034 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.

EGC 5105 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.

EGC 6005 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.

EGC 6225 APPRAISAL PROCEDURES IN GUIDANCE (5)
PR: EDF 6431, EGC 6005. 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.

EGC 6305 THE INFORMATION SERVICE IN GUIDANCE (4)
PR: EGC 6005. Occupational structure in the United States;
sources and uses of educational, occupational, social and personal information; collecting, classifying and communicating such information.

EGC 6435  COUNSELING THEORIES AND PRACTICES  (5)
PR: EDF 6354 and EGC 6005, CI. Nature of the counseling process with emphasis on some theoretical approaches and practical techniques.

EGC 6464  THE COUNSELING SERVICE IN GUIDANCE IN ELEMENTARY SCHOOLS  (5)
PR: EDF 6354 and EGC 6005. Counterpart of EGC 6435 for prospective secondary school counselors. Counseling viewed as communications through media appropriate to children.

EGC 6506  GROUP PROCEDURES IN GUIDANCE IN ELEMENTARY SCHOOLS  (3)
PR: EGC 6005 and EGC 6464. Counterpart of EGC 6507 for prospective secondary school counselors. Use of groups in the counseling and guidance of children and in working with parents and teachers.

EGC 6507  GROUP PROCEDURES IN GUIDANCE IN SECONDARY SCHOOLS  (3)
PR: EGC 6005 and EGC 6435. Group interaction and values of group activity for guidance purposes. Methods and techniques for working with groups.

EGC 6625  ORGANIZATION AND ADMINISTRATION OF GUIDANCE SERVICES IN ELEMENTARY SCHOOLS  (3)
PR: EGC 6005. 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.

EGC 6830  PRACTICUM IN ELEMENTARY GUIDANCE COUNSELING AND CONSULTING  (6)
PR: CC. This course is the counterpart of EGC 6835 for prospective secondary school counselors. 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.)

EGC 6835  PRACTICUM IN SECONDARY SCHOOL GUIDANCE COUNSELING  (6)
PR: CC. Final course in guidance program. Supervised practice in working with individuals in counseling relationship. (S/U only.)

EGC 6905  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.)

EGC 6935  SEMINAR IN GUIDANCE  (1-3)
PR or CR: EGC 6005, CI. Significant issues in the field of guidance; topics for discussion will vary according to needs and interests of students. May be repeated for credit for a maximum of 6 hours. (S/U only.)

Health Education

UNDERGRADUATE COURSES

HES 2000  CONTEMPORARY HEALTH SCIENCE  (4)
A comprehensive approach to health concerns and problems in contemporary society, including methods of assessing individual health needs. (S/U only.)

HES 3120  STRUCTURE AND FUNCTION OF THE HUMAN BODY  (6)
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.)

HES 3140  HEALTH EDUCATION AND RELATED HEALTH SCIENCE CONTENT: CHILDREN  (4)
PR: Admission to the Health Education Program or CI. Programs, curriculum, health services, and health education related to health needs and interests of children. (S/U only.)

HES 3141  HEALTH EDUCATION AND RELATED HEALTH SCIENCE CONTENT: PUBESCENCE  (4)
PR: Admission to the Health Education Program or CI. Programs, curriculum, health services, and health education related to health needs and interest of pubescence. (S/U only.)

HES 3244  HEALTH COUNSELING  (4)
PR: Admission to the Health Education Program or CI. A study and application of theory and methods of health counseling. (S/U only.)

HES 3300  PROCESSES AND PROGRAMS IN HEALTH EDUCATION  (3)
PR: Admission to the Health Education Program or CI. Survey of programs in Health Education in the schools and community. Processes in programs and curriculum development will also be emphasized. (S/U only.)

HES 3510  CONSUMER HEALTH  (4)
PR: Admission to the Health Education Program or CI. An investigation of advertising and consumer practices in relation to health care. (S/U only.)

HES 3730  HEALTH ASSESSMENT LABORATORY  (3)
PR: Admission to the program or CI. Observation, screening and assessment of common health problems and introduction to resources for health education. Lec.-lab. (S/U only.)

HES 4142  HEALTH EDUCATION AND RELATED HEALTH SCIENCE CONTENT: ADOLESCENTS AND YOUNG ADULTS  (4)
PR: Admission to the Health Education Program or CI. A study of health needs, programs, services, an health content areas of adolescents and young adults. (S/U only.)

HES 4143  HEALTH EDUCATION AND RELATED HEALTH SCIENCE CONTENT: ADULTS  (4)
PR: Admission to the Health Education Program or CI. A study of health needs, services, and health educaton programs focusing on adults, including the aging. (S/U only.)

HES 4276  HEALTH CARE DELIVERY SYSTEMS  (4)
PR: Admission to the the Health Education Program or CI. An investigative study and evaluation of health care delivery systems in the U.S. and other countries. (S/U only.)

HES 4722  CURRENT PROBLEMS IN HEALTH  (4)
PR: Admission to the Health Education Program or CI. An investigation of current health problems, programs, and research methods. (S/U only.)

HES 4940  INTERNSHIP IN HEALTH EDUCATION (1-12)
PR: Admission to the Health Education Program. Supervised internship in the schools with scheduled seminars. (S/U only.)

HES 4943  SEMINAR AND FIELD EXPERIENCE: ADULT HEALTH  (5)
PR: Admission to the Health Education Program. Supervised field experiences in adult health programs in schools and the community. (S/U only.)

HES 4944  SEMINAR AND FIELD EXPERIENCE: CURRENT HEALTH PROBLEMS  (5)
PR: Admission to the Health Education Program. Supervised field experience in selected health program. (S/U only.)

GRADUATE COURSE

HES 5328C  HEALTH PROBLEMS OF SCHOOL AGE POPULATION  (4)
A study of health problems and needs of school age students including a health status screening laboratory.
Humanities Education

UNDERGRADUATE COURSE

LIS 5315 INSTRUCTIONAL GRAPHICS (4)
Curricular patterns, materials, and instructional practices in the teaching of humanities.

Junior College

GRADUATE COURSES

EDH 6061 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 6938 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, Media, and Information Studies

UNDERGRADUATE COURSES

LIS 2001 USE OF THE LIBRARY (2)
An introduction to the resources of the University of South Florida Library. Emphasis will be placed on library materials germane to the course work of the undergraduate (S/U only.)

LIS 4301 INTRODUCTION TO AV EQUIPMENT AND PRODUCTION (4)
Knowledge of essential communication hardware, including running maintenance. Simple production of materials. Organization and use of materials and equipment.

GRADUATE COURSES

COP 6242 COMPUTER PROGRAMMING FOR LIBRARIES AND INFORMATION CENTERS (4)
Programming of library-oriented computer applications using the PL/C programming language. Emphasis on programming of library technical services operations and information retrieval and dissemination systems.

LIS 5315 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.

LIS 5321 PREPARING SINGLE CONCEPT FILMS (4)
PR: CI. Techniques and procedures in the preparation of educational films. Ascertaining concepts, script writing, graphics, lighting, filming, editing.

LIS 5333 TELEVISION IN THE SCHOOL (4)
Utilization of open and closed circuit broadcasting in the instructional process.

LIS 5404 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.

LIS 6110 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.

LIS 6111 HISTORY OF CHILDREN'S LITERATURE (5)
Historical bibliographical survey of imaginative and informational literature for children.

LIS 6119 CONTEMPORARY PUBLISHING AND PRINTING (4)
PR: LIS 6520. 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.

LIS 6202 TECHNIQUES FOR TEACHING UTILIZATION OF LIBRARIES AND MEDIA CENTERS (4)
Methods pertinent to work with users in all types of libraries.

LIS 6203 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.

LIS 6225 STORYTELLING (4)
PR: CI or LIS 6586. Building storytelling programs for school and public libraries or other educational institutions. Analysis of historical aspects, material suitable for use and audience reaction.

LIS 6260 INFORMATION SCIENCE IN LIBRARIANSHIP (4)
Historical overview of the emergence of information science as a discipline. The fundamental concepts of information retrieval systems and subsystems, related information technologies, and their applications to the field of librarianship.

LIS 6262 LIBRARY SYSTEMS PLANNING (4)
Application of systems planning and data processing technology to library files. Emphasis on analysis of selected library subsystems.

LIS 6263 SEMINAR IN LIBRARY AUTOMATION (4)
PR: LIS 6260. Seminar in library automation. Representative library automation projects and networks will be studied.

LIS 6271 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.

LIS 6312 PREPARING INSTRUCTIONAL MEDIA (4)
Fundamentals of preparing and using audiovisuals as they relate to the communication process.

LIS 6409 INTRODUCTION TO LIBRARY ADMINISTRATION (4)
Behavioral approach to planning, organizing, staffing and controlling libraries as organizations; identification of administrative principles, theories, and problems of all types of libraries; critical examination of methods of administration supporting library functions, programs, and services; fiscal and legal responsibilities of libraries.

LIS 6428 AUDIOVISUAL ADMINISTRATION (5)
PR: LIS 6312 and LIS 6508 or CI. Audiovisual administrative practices in school systems and junior colleges.

LIS 6432 SEMINAR IN ACADEMIC LIBRARIES (4)
PR: LIS 6409. 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.

LIS 6445 SEMINAR IN PUBLIC LIBRARIES (4)
PR: LIS 6409. Identification of problems and critical examination of methods in administrative areas of technical, children,
and adult services, fiscal, and legal responsibilities, staff organization and supervision in public libraries.

LIS 6455  THE ORGANIZATION AND ADMINISTRATION OF THE SCHOOL MEDIA CENTER
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.

LIS 6463  LIBRARY NETWORKS AND SYSTEMS
PR: LIS 6409 or LIS 6425 or LIS 6455. Development of library networks at the local, state, regional, and national levels with consideration of organization, administration, services, funding and legislation. Includes public library systems and networks, intrastate interlibrary cooperative networks, state library agencies and statewide library development; interstate cooperation, and the role of federal agencies in library development.

LIS 6472  SEMINAR IN SPECIAL LIBRARIES
PR: LIS 6409. 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.

LIS 6473  LAW LIBRARIANSHIP
PR: LIS 6608, LIS 6735, or CI. Course designed to give students an understanding of all aspects of law librarianship, including selection, acquisition, organization, and use of information resources of the law researcher. Emphasis on books, microforms, and computerized legal systems used for legal research, and on work products of lawyers.

LIS 6506  AUDIOVISUAL UTILIZATION
Examination (and utilization) of non-print media. Characteristics of media equipment and paradigms of use.

LIS 6507  FOUNDATIONS OF EDUCATIONAL TECHNOLOGY
Traces historical development and the application of educational technology to school media services.

LIS 6508  THE CURRICULUM AND INSTRUCTIONAL TECHNOLOGY
Effective utilization of instructional materials as they relate to specific areas of the curriculum in elementary and high school programs.

LIS 6520  SELECTION OF LIBRARY MATERIALS
Bibliographical sources, evaluative criteria for books and principles of book selection for libraries.

LIS 6572  BOOKS AND RELATED MATERIALS FOR YOUNG ADULTS
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.

LIS 6586  MATERIALS FOR CHILDREN
Examination of materials for all institutions in which children are served: school media centers, public libraries, kindergartens, etc. Stress on selection aids, reviewing techniques, utilization.

LIS 6605  ADVANCED INFORMATION SOURCES AND SERVICES
PR: LIS 6608. Reference materials in the humanities, social sciences, science, and technology.

LIS 6608  BASIC INFORMATION SOURCES AND SERVICES
An in-depth examination of the basic sources of information in the general library; discussion of bibliographic 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.

LIS 6609  AUTOMATED INFORMATION SOURCES AND SERVICES
PR: Basic Information Sources and Services, Information Science in Librarianship or CI. Principles of on-line searching and characteristics of machine-readable bibliographic data bases. Includes two credit hours of laboratory providing hands-on searching experience. (S/U only.)

LIS 6610  INFORMATION SOURCES AND SERVICES IN THE HUMANITIES
PR: LIS 6608 or CI. 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.

LIS 6620  INFORMATION SOURCES AND SERVICES IN THE SOCIAL SCIENCES
PR: LIS 6608 or CI. 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.

LIS 6630  INFORMATION SOURCES AND SERVICES IN SCIENCE AND TECHNOLOGY
PR: LIS 6608 or CI. Study of representative reference sources in pure and applied sciences with equal attention given to typical problems encountered in scientific and technological reference service.

LIS 6633  NON-TRADITIONAL SCIENTIFIC INFORMATION MANAGEMENT
PR: LIS 6630 or CI. Explores alternatives to traditional systems of handling biological, pharmaceutical, medical, toxicological, environmental, as well as chemical information. Selected systems not based on words are studied. Topics include fragmentation schemes, connectivity tables, linear notations, and other new developments such as substructure searching, screening devices, direct input and composite systems.

LIS 6651  BOOKS AND RELATED MATERIALS OF LATIN AMERICAN COUNTRIES SUITABLE FOR CHILDREN AND YOUNG PEOPLE
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.

LIS 6661  GOVERNMENT DOCUMENTS
The nature of state, federal, United Nations, and international documents, their reference and research value; the techniques of acquisition, organization and reference use.

LIS 6724  CLASSIFICATION AND CATALOGING OF SERIALS AND NON-BOOK MATERIALS

LIS 6735  TECHNICAL SERVICES IN LIBRARIES
Principles of general library practice in technical services operations. Emphasis on descriptive cataloging and use of unabridged Dewey Decimal Classification.

LIS 6745  ADVANCED CATALOGING
PR: LIS 6735. Introduction to L.C. Classification System; changing policies and procedures in cataloging; and analysis of system.

LIS 6906  INDEPENDENT STUDY
PR: 20 hours earned in program and consent of adviser.

LIS 6946  SUPERVISED FIELD WORK
PR: CI. A minimum of 80 hours of supervised experience in an approved cooperating library, media center, or other approved agency during the student's last quarter of studies. This includes practice work, seminar sessions, individual conferences, and a final report interpreting and evaluating the field experience.
EDF 7407 STATISTICAL ANALYSIS FOR EDUCATIONAL RESEARCH I
PR: Cl. Theory of and application of descriptive statistical procedures to problems in educational research: symbolism of data and statistical operations; tabulation and depiction of data; measures of central tendency and variability. Introduction to probability: Binomial distribution; the normal probability distribution. Inferential statistics theory and application: t tests; confidence interval estimation; introduction to analysis of variance theory. Coordinated use of computer as data processing resource.

EDF 7408 STATISTICAL ANALYSIS FOR EDUCATIONAL RESEARCH II
PR: EDF 7407 or Cl. Theory and application of inferential statistical procedures to problems in educational research; one-way analysis of variance; factorial analysis of variance; and multiple comparison procedures. Simple regression and correlation, and appropriate tests of significance Non-parametric statistical inference. Coordinated use of computer as a data processing resource.

EDF 7409 STATISTICAL ANALYSIS FOR EDUCATIONAL RESEARCH III
PR: EDF 7408 or Cl. Theory of and application of experimental design and linear modeling to problems in educational research. Multiple correlation and regression — a specific technique and a general approach to statistical inference (analysis of variance and co-variance). Elements of matrix algebra. Coordinated use of computer as a data processing resource.

EDF 7437 ADVANCED MEASUREMENT I
PR: EDF 7407 or equivalent and EDF 6431 or equivalent. A first advanced graduate course in the nature and theory of measurement. Alternative statistical theories of measurement. Logical, empirical, and statistical models of measurement processes. Measurement scales and levels of measurement. Reliability of educational measurement. Critique of commercially available instruments for measurement in education.

EDF 7438 ADVANCED MEASUREMENT II

EDF 7469 CRITICAL ISSUES IN EDUCATIONAL MEASUREMENT AND EVALUATION
A consideration of major issues relevant to the theory and application of measurement and evaluation. Topics include: culture-fair testing, accountability, normative vs. criterion measures and socio-political issues.

EDF 7484 STATISTICAL ANALYSIS FOR EDUCATIONAL RESEARCH IV
PR: EDF 7409 or Cl. Fundamentals and applications of the following multivariate statistical procedures to problems in educational research: Commonality analysis, path analysis, factor analysis, canonical variate analysis, discriminant analysis. Use of packaged computer programs with various multivariate analysis procedures.

EDF 7485 EVALUATION IN EDUCATION: THEORY AND PRACTICE
PR: EDF 7408, EDF 7493 or Cl. Application of evaluation theory and practice to the systematic study of problems and programs in education. Review and synthesis of students' prior knowledge. Update of most recent developments in evaluation. Development of a defensible, coherent approach to evaluation. Formal application of evaluation approach to an educational problem or program.

EDF 7488 APPLICATION OF COMPUTER LANGUAGE AND PROCEDURES IN EDUCATION
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.

EDF 7493 RESEARCH-BASED PLANNING EVALUATION AND DEVELOPMENT IN EDUCATION
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.

EDF 7494 A BASIS FOR PLANNING AND DEVELOPMENT IN EDUCATION

EDF 7490 PRACTICUM IN EDUCATIONAL PLANNING, EVALUATION, AND DEVELOPMENT (1-12)
PR: EDF 7407, EDF 7408, EDF 7409, EDF 7493. Supervised practicum in which the student assumes major responsibility for a significant planning, evaluation, or development activity. May be repeated up to 12 credit hours. (S/U only.)

Music Education

MUE 2420 THEORETICAL BASES OF MUSIC EDUCATION
The course is designed to investigate music education practices in the schools. It provides the student with experiences and information early in his academic career which will enable him to determine his commitment to professional music education.

MUE 3411 CHORAL MATERIALS PRACTICUM
PR: Cl. 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 six credit hours.

MUE 3413 BAND MATERIALS PRACTICUM
PR: Cl. 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 six credit hours.

MUE 3414 ORCHESTRAL MATERIALS PRACTICUM
PR: Cl. 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 three credit hours.

MUE 4050 FOUNDATION OF INSTRUMENTAL MUSIC
PR: Cl. Junior standing. Introduction to the foundations of instrumental music instruction in the elementary and middle school.

MUE 4130 CLASSROOM MUSIC IN THE SECONDARY SCHOOL
PR: Cl. Development and implementation of methods and techniques for teaching music to the student not participating in secondary school music performing groups.

MUE 4314 MUSIC IN THE ELEMENTARY SCHOOL
A study of principles, techniques, materials, and activities as they relate to a comprehensive music curriculum in Grades K-6.

MUE 4331 CHORAL METHODS IN THE SECONDARY SCHOOL
PR: Cl. Junior standing. Development and implementation of
methods and techniques for teaching secondary school choral music.

MUE 4332 INSTRUMENTAL MUSIC IN THE SECONDARY SCHOOL (4)
PR: CI, Junior standing. Development and implementation of methods and techniques for teaching secondary school instrumental music.

MUE 4480 BAND PAGAENTRY (2)
This course is designed as an elective offering for instrumental music majors who expect to direct band activities in a secondary school. It will provide the student with skills in creating half-time shows, an integral part of the band teacher's responsibilities.

GRADUATE COURSES

MUE 6189 MUSIC SUPERVISION AND ADMINISTRATION (3)
The music curriculum in relation to the total school program; staff and budgetary needs.

MUE 6416 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.

MUE 6417 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.

MUE 6640 CURRENT TRENDS IN SCHOOL MUSIC (4)
PR: Graduate Standing. New materials, equipment, techniques of teaching and recent historical trends applicable to Music programs K-12. Noting both similarities and unique characteristics in vocal and instrumental curriculum practices in music programs K-12.

MUE 6780 TECHNIQUES OF RESEARCH IN MUSIC EDUCATION (4)
Professional bibliography and individual research projects.

Natural Science - Mathematics Education

UNDERGRADUATE COURSES

CAP 4100 COMPUTING DEVICES IN THE EDUCATIONAL PROCESS (3)
PR: CI. This course will explore the use of mincalculators, programmable calculators, and microcomputers. Characteristics of computing devices, flow charting, programming, classroom management techniques, teaching materials, and applications will be discussed.

MAE 4320 TEACHING JUNIOR HIGH SCHOOL MATHEMATICS (4)
PR: 24 quarter hours of mathematics or CC. Techniques and materials of instruction in junior high school mathematics.

MAE 4330 TEACHING SENIOR HIGH SCHOOL MATHEMATICS (4)
PR: EDG 4200 or CR in EDG 4200 and admission to teacher education program in mathematics. Techniques and materials of instruction in mathematics.

MAE 4885 INTERPRETING MATHEMATICAL SYMBOLISM (2)
PR: Reading in Secondary Content Areas, Teaching Senior High School Mathematics, or CR in Teaching Senior High School Mathematics. Methods of teaching students to read the language of mathematics.

SCE 4305 COMMUNICATION SKILLS IN THE SCIENCE CLASSROOM (2)
PR: RED 4360 or CR in RED 4360. Reading and communicat-
Physical Education for Teachers

UNDERGRADUATE COURSES

HES 2400 FIRST AID (3)
Meets the American Red Cross certification requirements in standard and advanced first aid.

LEI 4007 COMMUNITY RECREATION (4)
Introduction to recreational outlets in the community and the administrative problems confronting recreational playground leaders and directors of community recreational programs. Offered on Independent Study basis only.

†PEL 4942C SEMINAR AND FIELD EXPERIENCE IN PHYSICAL EDUCATION (5)
PR: PET 3944C. A three course experience involving supervised teaching experiences at the secondary school level. On-campus seminars emphasize development of junior and senior high school students; the influences of various teaching styles on the learning process; the process of individualization; structuring meaningful learning experiences in the psychomotor, cognitive, and affective domains.

†PEP 3205C MOVEMENT EDUCATION THEORY AND APPLICATION III (3)
The application of principles of space, time, force, and flow of human movement to the development of children through gymnastics. The biomechanical aspects of performance are also analyzed. Open to program majors only.

†PEQ 3101C AQUATICS (3)
PR: Red Cross beginning swimmer's skills, or equivalent. 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.

†PET 3001C INDIVIDUAL ASSESSMENT (2)
A personal evaluation of various factors related to the effective teaching of physical education. An individual profile that can be used for counseling purposes will be the final product of this course.

†PET 3372 HUMAN KINETICS II (4)
PR: PET 3381C and PET 3001C. The structure and function of the nervous, skeletal, and muscular systems of the human body as they contribute to efficient movement; deviations in either structure or function in these systems and the role of exercise in rehabilitation.

†PET 3377C HUMAN KINETICS III (4)
PR: PET 3372. 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.

†PET 3381C HUMAN KINETICS I (4)
The development and integration of the neuromuscular and 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.

†PET 3434C MOVEMENT EDUCATION THEORY AND APPLICATION I (3)
A two course sequence emphasizing movement experiences appropriate for elementary school children. The philosophy, objectives, and analytical framework of movement education are studied relative to basic movement competence. Principles of space, time, force, and flow of human movement are applied to the development of children through basic movement and manipulative skills leading to gymnastics, dance, and sports-related activities.

†PET 3435C MOVEMENT EDUCATION THEORY AND APPLICATION II (3)
A two-course sequence emphasizing movement experiences appropriate for elementary school children. The philosophy, objectives, and analytical framework of movement education are studied relative to basic movement competence. Principles of space, time, force, and flow of human movement are applied to the development of children through basic movement and manipulative skills leading to gymnastics, dance, and sports-related activities.

†PET 3942C SEMINAR AND FIELD EXPERIENCE IN PHYSICAL EDUCATION (6)
Students spend approximately two hours a day at an elementary school teaching physical education and assisting in the classroom. Emphasis is placed on understanding the primary aged child and effective ways of setting the teacher-learning environment. (S/U only.)

†PET 3943C SEMINAR AND FIELD EXPERIENCE IN PHYSICAL EDUCATION (6)
PR: PET 3942C. Elementary school physical education teaching experiences are provided for students with added focus on the upper elementary grades. Seminars emphasize planning and teaching methodology. Health and recreation as they relate to elementary school children are studied.

†PET 3944C SEMINAR AND INTERNSHIP IN PHYSICAL EDUCATION (5)
PR: PET 3943C. Physical education teaching experience is provided at various grade levels. Seminars are concerned with organization, evaluation, and extra-class activities. Individual teaching is analyzed and programmed.

PET 4302 PRINCIPLES AND ISSUES IN COACHING (5)
The application of principles from philosophy, psychology, sociology, and physiology to competitive athletics and coaching.

†PET 4364C APPLIED HUMAN KINETICS I (4)
PR: PET 3377C. A three course sequence which stresses the biomechanical analysis of movement, principles of psychomotor learning and teaching competencies in dance, and the skills and strategies common to a number of individual and team sports.

†PET 4365C APPLIED HUMAN KINETICS II (4)
PR: PET 4346C. A three course sequence which stresses the biomechanical analysis of movement, principles of psychomotor learning and teaching competencies in dance, and the skills and strategies common to a number of individual and team sports.

†PET 4366C APPLIED HUMAN KINETICS III (4)
A three course sequence which stresses the biomechanical analysis of movement, principles of psychomotor learning and teaching competencies in dance, and the skills and strategies common to a number of individual and team sports.

†PET 4943C SEMINAR AND INTERNSHIP IN PHYSICAL EDUCATION (5)
PR: PET 3944C. A three course experience involving supervised teaching experiences at the secondary school level. On-campus seminars emphasize development of junior and senior high school students; the influence of various teaching styles on the learning process; the process of individualization; structuring meaningful learning experiences in the psychomotor, cognitive, and affective domains.

†PET 4944C SEMINAR AND INTERNSHIP IN PHYSICAL EDUCATION (5)
PR: PET 3944C. A three course experience involving supervised teaching experiences at the secondary school level. On-campus seminars emphasize development of junior and senior high school students; the influence of various teaching styles on the learning process; the process of individualization; structuring meaningful learning experiences in the psychomotor, cognitive, and affective domains.

GRADUATE COURSES

PET 6051C PROFESSIONAL ASSESSMENT (4)
Selected readings of current trends in physical education; discussion of philosophies of teaching; and individual appraisal of knowledge, values, attitudes, and professional competencies.

†Enrollment in these courses requires admission to the Physical Education Program.
PET 6205 SOCIO-PSYCHOLOGICAL ASPECTS OF HUMAN MOVEMENT
(4)
Involves the psychological and sociological implications of movement to historical and contemporary man. Emphasis on psychomotor learning, movement behavior, physical self-concept, role of movement in society and values and attitudes held toward movement.

PET 6296 SPECIALIZED STUDY IN SOCIO-PSYCHOLOGICAL ASPECTS OF HUMAN MOVEMENT: (SUBJECT)
(1-4)
Will provide in-depth study in specific areas related to sociological and psychological principles of human movement.

PET 6345C BIO-KINETICS OF HUMAN MOVEMENT
(4)
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 cardiorespiratory systems.

PET 6396C SPECIALIZED STUDY IN BIO-KINETICS OF HUMAN MOVEMENT: (SUBJECT)
(1-4)
Will provide in-depth study in specific areas related to neurological, physiological, and mechanical principles of human movement.

PET 6425 CURRICULUM AND INSTRUCTIONAL PROCESS IN PHYSICAL EDUCATION
(4)
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.

PET 6496 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.

PET 6645, 6646 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.

PET 6901L 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.

Reading Education

UNDERGRADUATE COURSES
RED 4337 READING IN THE SECONDARY SCHOOL
PR: CI. Basic course in Reading for Secondary school personnel. Work with a student is required.

RED 4360 READING IN SECONDARY CONTENT AREAS
PR: CI and other content area PR or CR. Provides basic instruction on phonics, word recognition, readability, interests, corrective procedures, reading behaviors, comprehension, etc. Offered only in conjunction with special content reading courses.

RED 4515 CORRECTIVE READING FOR THE CHILD
PR: RED 4310 or equivalent. Procedures for meeting individual differences through diagnosis of needs, differentiated instruction, selective use of materials, and classroom organization.

GRADUATE COURSES
RED 6247 CURRICULUM AND SUPERVISION
PROBLEMS IN READING
PR: EDF 6431, RED 6116, RED 6546, RED 6548, and CI. Planing and administering programs and preparation as consultants in reading. Intensive work on individual project required.

RED 6365 READING IN SECONDARY AND HIGHER EDUCATION
PR: CI and graduate standing; RED 4310, RED 4337 or RED 4360. The course is designed for graduate students and in-service teachers with appropriate B.A. degrees, who need and/or desire more knowledge beyond an introductory level about reading at the Secondary (7-12) and higher (Community College, University) levels. Students study reading as it applies to their discipline and their level. A research paper is required. Not for undergraduates nor to be used as first course in Reading.

RED 6516 CORRECTIVE READING IN THE CLASSROOM
PR: RED 4310 or equivalent. Use of diagnostic and prescriptive procedures with individual and group reading instruction.

RED 6546 DIAGNOSIS OF READING DISABILITIES
PR: EDF 6431, RED 6116. Causes of reading disability; techniques and materials in diagnosis of reading problems, including telephone and audiometer screening. Diagnoses of reading disabilities are required.

RED 6548 TECHNIQUES OF REMEDIAL READING
PR: EDF 6431, RED 6116, and RED 6546. Materials and methods in remediation of moderate to severe reading disability cases. Supervised individual tutoring and in-depth evaluation and use of materials.

RED 6747 SURVEY OF READING RESEARCH
PR: EDF 6431, RED 6116, RED 6546, CI. This course will address topics related to the location of research information, to the reading and evaluation of research, and to the identification and understanding of important studies. May be repeated up to 4 hours.

RED 6748 PROJECT IN READING RESEARCH
PR: EDF 6431, RED 6116, RED 6546, CI. This course continues the study of research in reading and culminates in a written paper reviewing the research in specific area. May be repeated up to 6 hours.

RED 6838 PRACTICUM IN READING
PR: EDF 6431, RED 6116, RED 6546, RED 6747, CI. This course provides the student with the opportunity to engage in a reading instruction setting, providing experience in classroom management, planning, teaching, and evaluation of reading instruction.

RED 7048 READING AS A SYMBOLIC PROCESS
PR: RED 6116 or RED 6365. Advanced graduate standing in Reading/Language Arts or CI. Examination and understanding of the relationship of the various perceptual, learning, affective, and cognitive processes to the acquisition of reading competencies.

RED 7848 ADVANCED CLINICAL PRACTICUM READING
PR: EDF 6143, RED 6546, RED 6548, RED 6838, and Advanced Graduate standing in Reading/Language Arts. Clinical diagnosis and remediation of severe reading disability cases with emphasis on multi-disciplinary approach. Supervision of master students in the RED 6546, RED 6548, RED 6838 sequence. May be repeated for a maximum of 8 hours.

RED 7938 ADVANCED GRADUATE SEMINAR IN READING/LANGUAGE ARTS
Discussion and evaluation of current issues and research in Reading/Language Arts and related fields. Must be repeated for six quarter hours. Required for each Ph.D. student. (Topics differ each quarter.)
Social Science Education

UNDERGRADUATE COURSES

FLE 4164 FOUNDATIONS OF BILINGUAL EDUCATION (3)
PR: Demonstrated proficiency in two languages, one of which must be English. An introduction to Bilingual Education which provides an analysis of the national and state laws relating to bilingual/ bicultural education programs which meet the educational and language development needs of minority group students who are of limited English speaking ability. Emphasis is placed on teaching situations in bilingual education programs.

SSE 4333 TEACHING METHODS IN SECONDARY SCHOOL - SOCIAL STUDIES (4)
PR: EDG 4200 or CR in EDG 4200. Techniques and materials of instruction in social studies.

SSE 4640 COMMUNICATION SKILLS IN THE SOCIAL STUDIES (2)
PR: CI. Communication Skills in the Social Studies. Methods of dealing with reading problems in social studies. This course and RED 4360 satisfy the state certification requirement pertaining to secondary reading. (S/U only.)

GRADUATE COURSES

SSE 5324 TEACHING METHODS IN THE MIDDLE SCHOOL - SOCIAL STUDIES (4)
PR: CI. Techniques of instruction in Middle School Social Studies.

SSE 5354 CRITIQUE OF SELECTED SOCIAL SCIENCE EDUCATION LITERATURE (4)
PR: Major in Secondary Social Science or CI. An investigation into various selected readings in Social Science Education literature.

SSE 5545 EVALUATION AND IMPLEMENTATION OF MEDIA IN SOCIAL STUDIES (4)
PR: CI. Techniques of evaluating and using various media in the Social Studies.

SSE 5647 INSTRUCTIONAL PROBLEMS AND STRATEGIES IN SOCIAL STUDIES: ELEMENTARY, MIDDLE, OR SECONDARY SCHOOL (4)
PR: Admission to Secondary Social Science or CI. Investigation of problems confronted when teaching Social Studies in the elementary, middle, or secondary school.

SSE 6117 ELEMENTARY SOCIAL STUDIES CURRICULUM (4)
PR: Admission to College of Education or CI. Evaluation of past and present curriculum in Elementary Social Studies.

SSE 6133 SECONDARY SOCIAL SCIENCE CURRICULUM (4)
PR: Admission to College of Education or CI. Evaluation of past and present curriculum in Secondary Social Science.

SSE 6636 CURRENT TRENDS IN SECONDARY SOCIAL STUDIES (4)
PR: SSE 4333 or equivalent or CI. Curricular patterns and instructional practices in secondary social studies.

SSE 6795 REVIEW OF RESEARCH IN SOCIAL SCIENCE EDUCATION (4)
PR: EDF 3430 or EDF 6431. Graduate Students in Education, or CI. Investigation into and an evaluation of the research in Social Science Education.

SSE 6939 SEMINAR IN SOCIAL SCIENCE EDUCATION (1-4)
PR: EDF 3430 or EDF 6431, or CI. To increase general technological knowledge of graduate students in Social Science Education.

Speech Communication-English Education

UNDERGRADUATE COURSES

SED 4371 DIRECTING SPEECH ACTIVITIES IN THE SECONDARY SCHOOL (5)
PR: 15 hours of speech communication courses or CI. Coaching and directing cocurricular activities in discussion, debate, oratory, theatre, oral interpretation, and extemporaneous speaking. Planning and supervision of tournaments, contests, and festivals. Observations required.

SED 4374 READING IN SPEECH COMMUNICATION INSTRUCTION (2)
PR: RED 4360 or in conjunction with this course. Strategies and materials for teaching oral and silent reading in speech and theatre classes at the secondary school level.

GRADUATE COURSES

SED 6070 SEMINAR IN THE HISTORY OF SPEECH COMMUNICATION IN EDUCATION (5)
PR: CI. Studies in selected courses, critical writings, and research which have contributed to the development of speech communication as an academic discipline.

SED 6670 CURRENT TRENDS IN TEACHING SPEECH COMMUNICATION (5)
PR: CI. Curricular patterns; preparation of personnel; instructional materials, facilities and practices used in teaching speech communication.

Vocational and Adult Education

UNDERGRADUATE COURSES

ADE 4360 METHODS OF TEACHING: ADULT EDUCATION (4)
Methods, techniques, and materials for instruction. This course will specialize in Diversified Cooperative Training.

ADE 4361 SPECIAL TEACHING METHODS: ADULT EDUCATION (4)
Methods, techniques, and materials for skill development.

ADE 4945 SUPERVISED FIELD EXPERIENCE: ADULT EDUCATION (1-3)
PR: CI. Planned supervised functions in the area of specialization and co-ordinated with selected schools, government, offices, social agencies, businesses and industries on site.

BTE 3363 BUSINESS AND OFFICE MACHINES (4)
PR: Basic Typewriting. Instruction and practice on selected business and office machines to acquaint students with capabilities and limitations of the machines.

BTE 3365 ADMINISTRATIVE OFFICE MANAGEMENT (4)
Functions of the business office to include systems and procedures, communications, records management, office employee behavior, controlling the work of the office, and principles of office organization. Also includes the methodology necessary for teaching these areas in either separate courses or integrated block programs.

BTE 4360 METHODS OF TEACHING: BUSINESS EDUCATION (4)
PR: Introduction to Computers I or equivalent. Satisfactory competencies in Office Administration Concentration, or CI. Methods, techniques, and materials for instruction. This course will specialize in Diversified Cooperative Training.

BTE 4364 SPECIAL TEACHING METHODS: BUSINESS EDUCATION (5)
PR: Speech Improvement and Phonetics, satisfactory competencies in Office Technology Concentration, or CI. Methods, techniques, and materials for skill development.
BTE 4369 OFFICE OCCUPATIONS PROCEDURES (4)
PR: Successful completion of all basic competency exams required by the program area, or consent of program coordinator. This course is designed to integrate learnings from preceding business and office education courses.

BTE 4948 FIELD-BASED SEMINAR IN BUSINESS EDUCATION (3)
CR: BTE 4360 and BTE 4364. A seminar and supervised field experience providing orientation to the broad field of business education in public middle or senior high schools. It is specifically designed to be preparatory for the internship which occurs the following term in the same setting. The ten-hour weekly field experience is programmed to provide full exposure to the responsibilities of the cooperating classroom teacher. (S/U only.)

DEC 4174 ORGANIZATION AND COORDINATION OF COOPERATIVE PROGRAMS (4)
A study of the purposes and processes used to organize, plan, direct, control, and evaluate cooperative programs.

DEC 4362 SPECIAL TEACHING METHODS: DISTRIBUTIVE EDUCATION (4)
Methods, techniques, and materials for skill development.

DEC 4382 METHODS OF TEACHING: DISTRIBUTIVE EDUCATION (4)
Methods, techniques, and materials for instruction. This course will specialize in Diversified Cooperative Training.

DEC 4941 SUPERVISED FIELD EXPERIENCE: DISTRIBUTIVE EDUCATION (1-8)
PR: CI. Planned supervised functions in the area of specialization and co-ordinated with selected schools, government offices, social agencies, businesses and industries on site.

EVT 3063 THE TEACHER IN THE WORLD OF WORK (4)
A study of educational efforts in preparing people for work, the relationship of a job to man's life style, and the concept of education as a lifelong process. (S/U only.)

EVT 4061C TEACHING IN INDUSTRIAL-TECHNICAL EDUCATION (1-4)
An orientation to teaching in Industrial-Technical Education programs. Included is the instructor's roles and responsibilities concerning students, the school and the community, the organization of vocational education in Florida, school and district rules, teacher liability, school laws and professionalism. Open to majors and non-majors. May be repeated up to a total of 4 credit hours.

EVT 4065 PRINCIPLES OF ADULT AND VOCATIONAL EDUCATION (4)
An overview of current policies and principles to include their historical, sociological, and philosophical bases out of which principles of adult and vocational education have been accepted and implemented.

EVT 4064C PROFESSIONAL DEVELOPMENT IN INDUSTRIAL TECHNICAL EDUCATION (1-4)
Designed to aid the Industrial-Technical Education instructor in developing and carrying out a plan for personal professional development. Competencies include keeping up to date in the teaching profession, maintaining technical competence, displaying a professional philosophy on the job, serving the school and community and others. Open to majors and non-majors. May be repeated up to a total of 4 credit hours.

EVT 4263 ORGANIZATION AND MANAGEMENT OF VOCATIONAL STUDENT ORGANIZATIONS (4)
Designed to give the preservice or inservice vocational instructor an understanding of the rationale for and the role of the student vocational organization. The course aids the instructor in mastering specific professional competencies needed to organize, establish, administer and evaluate the student vocational organization as an integral part of the vocational education program in industrial, business, distributive, cooperative and other program areas.

EVT 4363 METHODS OF TEACHING: DIVERSIFIED COOPERATIVE TRAINING (4)
Methods, techniques, and materials for instruction. This course specializes in Diversified Cooperative Training.

EVT 4364 METHODS OF TEACHING: INDUSTRIAL-TECHNICAL EDUCATION (4)
Methods, techniques, and materials for instruction. This course will specialize in Diversified Cooperative Training.

EVT 4365 SPECIAL TEACHING METHODS: INDUSTRIAL-TECHNICAL EDUCATION (4)
Methods, techniques, and materials for skill development.

EVT 4540 READING SKILLS IN ADULT AND VOCATIONAL EDUCATION (2)
PR: RED 4360, or CR in RED 4360. Students will study reading and communication skills as they relate to their particular content areas in Adult and Vocational-Technical Education. This course, along with RED 4360, satisfies State certification requirement pertaining to secondary reading.

EVT 4815 FACILITY DESIGN AND MANAGEMENT (4)
Design and develop instructional facility floor plans consistent with modern and efficient methods of instruction as well as evaluate existing classrooms, laboratories, and shops. The management of equipment, furniture, tools, and supplies and the legal restrictions they relate to effective student learning.

EVT 4945 SUPERVISED FIELD EXPERIENCE: BUSINESS EDUCATION (1-8)
PR: CI. Planned supervised functions in the area of specialization and co-ordinated with selected schools, government offices, social agencies, businesses and industries on site.

EVT 4946 SUPERVISED FIELD EXPERIENCE: INDUSTRIAL-TECHNICAL EDUCATION (1-8)
PR: CI. Planned supervised functions in the area of specialization and coordinated with selected schools, government offices, social agencies, businesses and industries on site.

GRADUATE COURSES

ADE 5160 PROGRAM MANAGEMENT: ADULT EDUCATION (4)
Organization, co-ordination, and budgeting of adult, cooperative, and special programs.

ADE 5161 CURRICULUM CONSTRUCTION: ADULT EDUCATION (4)
Curriculum scope, the process of planning and organizing instructional programs with emphasis on task analysis and process evaluation.

ADE 5385 THE ADULT LEARNER (4)
PR: EDF 3214 or equivalent. Physiological and psychological changes in individuals throughout the adult life span and the implications which these changes have in learning capabilities of adults. A review of recent research on adult learning is also emphasized.

ADE 6197 ADULT BASIC EDUCATION (4)
An overview of adult basic education with emphasis on current issues and problems of curriculum and instruction in program development for culturally different adults.

ADE 6380 ADMINISTRATION OF LOCAL PROGRAMS: ADULT EDUCATION (4)
A study of the organization, selection of personnel, assignment of duties and responsibilities, and establishment of policies and procedures to accomplish the objectives of the local program within the federal, state, and local requirements.

ADE 6387 SUPERVISION OF LOCAL PROGRAMS: ADULT EDUCATION (4)
PR: CI. A study of the factors involved in the supervision of instruction including plans for teacher education, improvement of instruction, coordination of activities, and personnel relations.
ADE 6946 PRACTICUM: ADULT EDUCATION (4-8)
A problem-centered field study in the local community, school, government, office, social agency, business or industry.

BTE 5171 CURRICULUM CONSTRUCTION: BUSINESS EDUCATION (4)
Curriculum scope, the process of planning and organizing instructional programs with emphasis in task analysis and process evaluation.

BTE 5245 PROGRAM MANAGEMENT: BUSINESS EDUCATION (4)
Organization, co-ordination, and budgeting of adult, cooperative, and special programs.

BTE 6385 IMPROVEMENTS OF METHODS OF TYPEWRITING INSTRUCTION (4)
PR: EDF 6431 and EDF 6481 or CI. This course contains a research-based study of the philosophy and psychology of the teaching of typewriting. It also examines the status of typewriting in the public schools, postsecondary schools, and business organizational settings. Techniques for developing specialized instructional materials, in accordance with psychomotor principles of learning, are included. Action research projects are pursued. The course is available for majors and qualified non-majors. It may also be available for credit and non-credit workshops and seminars.

BTE 6386 THEORIES OF BASIC BUSINESS & ACCOUNTING INSTRUCTION (4)
PR: Methods of Teaching or equivalent, EDF 6481 or CI. This course contains a research-based study of theory and methodology in teaching basic business and accounting subjects. The course is available to majors and non-majors and for credit and non-credit workshops and seminars.

BTE 6387 RESEARCH IMPLICATIONS FOR SHORTHAND PEDAGOGY (4)
PR: Special Teaching Methods, EDF 6481 or CI. This course contains a research-based study of theory and methodology in teaching shorthand instruction. It also compares various shorthand systems. Techniques for applying psychological principles of learning to shorthand instruction are included. Action research projects are pursued. The course is available for majors and non-majors and for credit and non-credit workshops and seminars.

BTE 6944 PRACTICUM: BUSINESS EDUCATION (4-8)
A problem-centered field study in the local community, school, government, office, social agency, business or industry.

DEC 5185 CURRICULUM CONSTRUCTION: DISTRIBUTIVE EDUCATION (4)
Curriculum scope, the process of planning and organizing instructional programs with emphasis on task analysis and process evaluation.

DEC 5245 PROGRAM MANAGEMENT: DISTRIBUTIVE EDUCATION (4)
Organization, coordination, and budgeting of adult, cooperative, and special programs.

DEC 6945 PRACTICUM: DISTRIBUTIVE EDUCATION (4-8)
A problem-centered field study in the local community, school, government, office, social agency, business or industry.

EIV 5315 PROGRAM MANAGEMENT: DIVERSIFIED COOPERATIVE TRAINING (4)
Organization, coordination, and budgeting of adult, cooperative, and special programs.

EVT 5176 CURRICULUM CONSTRUCTION: INDUSTRIAL-TECHNICAL EDUCATION (4)
Curriculum scope, the process of planning and organizing instructional programs with emphasis on task analysis and process evaluation.

EVT 5190 SCHOOL-COMMUNITY DEVELOPMENT (4)
An approach to identifying, assessing, and analyzing individual, institutional, and community needs, for the purpose of cooperative program planning, community involvement, and public support.

EVT 5280 OCCUPATIONAL SAFETY AND HEALTH (OSHA) (4)
Planning and organizing safety and health course content to be included in occupational education programs in Florida. Content to be identified in and selected from Federal Registers, Department of Labor, Occupational Safety and Health Standards.

EVT 5367 PREPARATION AND DEVELOPMENT FOR TEACHING (4)
The development of selected instructional materials, use of new educational media, performance evaluation instruments, and counseling techniques.

EVT 5817 PROGRAM MANAGEMENT: INDUSTRIAL-TECHNICAL EDUCATION (4)
Organization, co-ordination, and budgeting of adult, cooperative, and special programs.

EVT 6191 PLACEMENT OF THE SEVERELY HANDICAPPED (4)
A study of the purposes, methods, processes, and programs used to plan, implement and operate a Vocational Rehabilitation Cooperative School Counseling Program.

EVT 6300 INDIVIDUALIZED INSTRUCTION (4)
Attention is given to individualized instruction to include the special needs student, the slow learner, and the more capable student.

EVT 6385 ADMINISTRATION OF LOCAL PROGRAMS: VOCATIONAL EDUCATION (4)
A study of the organization, selection of personnel, assignment of duties and responsibilities, and establishment of policies and procedures to accomplish the objectives of the local program within the federal, state, and local requirements.

EVT 6386 SUPERVISION OF LOCAL PROGRAMS: VOCATIONAL EDUCATION (4)
PR: CI. A study of the factors involved in the supervision of instruction including plans for teacher education, improvement of instruction, coordination of activities, and personnel relations.

EVT 6563 CURRENT TRENDS (4)
Historical information, issues, current trends, new dimensions and problems in the area of specialization.

EVT 6769 METHODS, PROCEDURES, AND PROCESSES OF VOCATIONAL EVALUATION (4)
A study of the purposes, methods, processes and procedures used to plan, implement and operate a vocational evaluation program.

EVT 6926 STAFF DEVELOPMENT (1-4)
Implementation of new procedures addressed to discreet developmental needs of the staff as identified by an educational agency.

EVT 6930 SEMINAR (4)
PR: EDF 6431 and EDF 6481. Applied research techniques and investigation of important current issues of theses in the area of specialization.

EVT 6948 PRACTICUM: INDUSTRIAL-TECHNICAL EDUCATION (4-8)
A problem-centered field study in the local community, school, government, office, social agency, business or industry.
ENGINEERING


Basic and Interdisciplinary Engineering
Course Work

UNDERGRADUATE COURSE

EGN 1002 ENGINEERING ORIENTATION
The role of engineering in society, characteristics of different fields of engineering, required preparation for engineering ca­ reers, techniques and approaches used by engineers in their pro­ fession. (S/U only.)

EGN 1111C GRAPHIC ANALYSIS I
The theory and application of projective systems and related topics. Basic problems in engineering drawing. Purchase of drawing instruments and other necessary drafting supplies to be discussed at first class session. Lec.-lab.

EGN 1401 GRAPHIC ANALYSIS II

EGN 1402 GRAPHIC ANALYSIS III
PR: EGN 1111C. An elective course designed for students with limited background in pre-calculus mathematics necessary for graphical processes. Emphasis on graphical concepts of alge­ braic and trigonometric relationships.

EGN 1403 GRAPHIC ANALYSIS IV
Continuation of EGN 1402.

EGN 2021L INTRODUCTION TO ENGINEERING I
To present an overview of Engineering, its role and its concepts. Experimental program; see adviser.

EGN 2210 ANALYSIS & COMPUTATION I
Basic computer operation and programming concepts. Use of FORTRAN in solving engineering type problems.

EGN 2405L INTRODUCTION TO ENGINEERING II
PR: EGN 2021L. Continuation of EGN 2021L. (Experimental program.)

EGN 2410 ENGINEERING PROBLEMS I

EGN 3211 ANALYSIS & COMPUTATION II

EGN 3313 STATICS
PR: MAC 3281. Principles of statics, mechanical equilibrium, forces, moments, plane trusses. Lec.-pro.

EGN 3321 DYNAMICS
PR: EGN 3313. Dynamics of discrete particles and distributed mass bodies; spatial kinematics and kinetics. Lec.-pro.

EGN 3331 DEFORMABLE BODIES
PR: EGN 3313. Stress, strain, Hooke's Law; torsion, beam, col­ umn analysis; combined stresses; inelastic effects, limit design. Lec.-lab.

EGN 3343 THERMODYNAMICS I

EGN 3344 THERMODYNAMICS II

EGN 3354C BASIC FLUID MECHANICS
PR: PHY 3031. Fundamental and experimental concepts in ideal and viscous fluid theory; momentum and energy considera­ tion, introduction to hydraulics, pipe flow. Lecture.

EGN 3355C COMPRESSIBLE FLOW
PR: EGN 3354C. Compressible flow and free surface flow.

EGN 3365L MATERIALS ENGINEERING I
PR: CHM 2047, EGN 3313. An introduction to structure and property relationships in engineering materials, i.e., metal, ceramic and polymer systems. Environmental effects on materi­ als are also treated. Lecture.

EGN 3366 MATERIALS ENGINEERING II
PR: EGN 3365L. Continuation of EGN 3365L.

EGN 3373 INTRODUCTION TO ELECTRICAL SYSTEMS I

EGN 3374 INTRODUCTION TO ELECTRICAL SYSTEMS II
PR: EGN 3373. Continuation of EGN 3373.

EGN 3375 INTRODUCTION TO ELECTRICAL SYSTEMS III
PR: EGN 3373. Continuation of EGN 3373 or EGN 3374.

EGN 3411 ENGINEERING PROBLEMS II
CR: MAC 3282. Continuation of EGN 2410.

EGN 3412 ENGINEERING PROBLEMS III
CR: MAC 3283. Continuation of EGN 3411.

EGN 3413 ENGINEERING PROBLEMS IV
CR: MAC 3284. Continuation of EGN 3412.

EGN 3433L DYNAMIC RESPONSE OF ENGINEERING SYSTEMS I
PR: PHY 3041, PHY 3041L. Linear dynamic analysis of elec­ trical, mechanical, pneumatic, hydraulic and thermal systems. LaPlace transformation, block diagram representation, transient and frequency response. Lec.-dem.

EGN 3443 ENGINEERING STATISTICS I

EGN 3613 ENGINEERING VALUATION I
PR: EGN 2210. A study in analyzing the economic limitations imposed on engineering activities using basic models which con­ sider the time value of money.

EGN 4421 ENGINEERING ANALYSIS I

EGN 4450 INTRODUCTION TO LINEAR SYSTEMS
PR: EGN 4421. Study and application of matrix algebra, differential equations and calculus of finite differences.
EGN 4905 INDEPENDENT STUDY (1-5)
PR: CI. Specialized independent study determined by the students' needs and interests. May be repeated up to 15 credit hours. (S/U only.)

EGN 4933 SPECIAL TOPICS (1-5)
New technical topics of general interest on an intermediate or experimental basis. May be repeated to a total of 10 credit hours.

EGN 4935 PROFESSIONAL ENGINEERING SEMINAR I (1-5)
PR: CI. A lecture-discussion seminar on modern trends in the engineering profession.

EGN 4936 PROFESSIONAL ENGINEERING SEMINAR II (1-5)
PR: CI and Senior standing. An examination of current engineering and related problems facing the graduating senior.

EMC 3121 TRANSFER OPERATIONS I (3)

GRADUATE COURSES

EGN 5422, 5423, 5424, 5425, 5426 ENGINEERING ANALYSIS II, III, IV, V, VI (3,3,3,3,3)
PR: CC or MAP 4302. A five course sequence. (1) Ordinary differential equations with emphasis on series solutions and numerical methods. (2) Vector analysis, partial differential equations, boundary value problems and orthogonal functions. (3) & (4) Functions of a complex variable with applications. (5) Selected Topics.

EGN 6427 ENGINEERING ANALYSIS VII (3)
PR: CC. Application of applied mathematics to the study of linearized dynamic systems and networks; state space; stability theory; extensions to discrete and non-linear systems.

EGN 6720C SCIENTIST IN THE SEA I (4)
PR: CI and diver certification (NAVI or equiv.) Hyperbaric Operations; the basic principles, physiology and psychology involved in submarine hyperbaric operations, inside and outside habitats. Communication and life support is also treated extensively. Lec.-lab. (Also offered under Marine Science.)

EGN 6721C SCIENTIST IN THE SEA II (4)
PR: CI and diver certification (NAVI or equiv.) Marine Sciences; an extensive discussion of research equipment and techniques for underwater operations in the Marine Sciences presented by practicing research workers in the field. Lec.-lab. (Also offered under Marine Science.)

EGN 6722C SCIENTIST IN THE SEA III (4)
PR: CI and diver certification (NAVI or equiv.) Underwater Engineering; the ocean as a constraint for structures and devices. Factors involved in the planning and design of underwater operations and experimental devices. Lec.-lab. (Also offered under Marine Science.)

EGN 6907 INDEPENDENT STUDY (var.)
Independent study in which students must have a contract with an instructor. Repeatable. (S/U only.)

EGN 6911 DIRECTED RESEARCH (var.)
PR: GR. Master's level. Repeatable. (S/U only.)

EGN 6971 THESIS: MASTER'S (var.)
Repeatable. (S/U only.)

EGN 6991 GRADUATE INSTRUCTION METHODS (1-5)
Special course to be used primarily for the training of graduate teaching assistants. Variable credit, repeatable. Limited to a cumulative total of 5 credits per student. (S/U only.)

EGN 6992 GRADUATE RESEARCH METHODS (1-5)
Special course to be used primarily for the training of graduate research assistants. Variable credit, repeatable. Limited to a cumulative total of 5 credits per student. (S/U only.)

EGN 7911 DIRECTED RESEARCH (var.)
PR: GR. Ph.D. level. Repeatable. (S/U only.)

EGN 7980 DISSERTATION: DOCTORAL (var.)
PR: Must be admitted to Doctoral Candidacy. Repeatable. (S/U only.)

Electrical Engineering

UNDERGRADUATE COURSES

CDA 4101 COMPUTER ORGANIZATION (3)
PR: EEL 4705. The structural organization of digital computers; control, data operations, I/O, memory. Functional description of their behavior.

CDA 4171 MINICOMPUTER LABORATORY (1)

CIS 4911 COMPUTER SCIENCE PROJECT (3)
PR: CI and diver certification (NAVI or equiv.). Projects intended to develop individual interests and abilities in computer science involving either computer hardware or software aspects of a well defined proposal.

CNM 4100 ENGINEERING ANALYSIS FOR COMPUTER SCIENCE II (3)
PR: CC or MAP 4302. Numerical solutions of ordinary differential equations through series and numerical methods.

COP 2170 PROGRAMMING IN BASIC (CAI) (1)
Laboratory course in theory and applications of BASIC interactive programming language using a minicomputer and CAI instruction.

COP 3150 PROGRAMMING IN APL (CAI) (2)
PR: MAC 1104 and MAC 1114. Laboratory course in fundamental theory and applications of APL programming language using a minicomputer and CAI learning technique.

COP 3510 INTRODUCTION TO COMPUTER SCIENCE I (2)
PR: MAC 1104. CR: COP 3510L. Introduction to the concepts of algorithmic formulation of problems for computer solution and the general abstract operations used in these formulations.

COP 3510L COMPUTER SCIENCE LABORATORY I (1)
CR: COP 3510. Laboratory for implementation of algorithms in a general purpose computer language.

COP 3514 INTRODUCTION TO COMPUTER SCIENCE II (2)

COP 3514L COMPUTER SCIENCE LABORATORY II (1)
PR: COP 3510L. CR: COP 3514. Continuation of COP 3510L.

COP 4400 COMPUTER SYSTEMS (3)
PR: EGN 3211, MAC 3283 or CC. Linked course with COP 4400L. Principles of computer organization, machine and assembly language programming.

COP 4400L COMPUTER SYSTEMS LAB (1)
PR: EGN 3211, MAC 3283 or CC. Linked course with COP 4400L. Computer systems and programming laboratory.

COP 4550 PROGRAMMING LANGUAGES (3)
PR: COP 4400. An introduction to programming languages, syntax and semantics, properties of algorithmic languages, binding times, arithmetic, string handling, data structures, list processing, translation.

COP 4620 INTRO TO SYSTEMS PROGRAMMING (3)
PR: COP 4400. Introduction to systems programming, design of assemblers, loaders, linking, data structures and operating systems.
### COT 4001 INTRODUCTION TO DISCRETE STRUCTURES
PR: EEL 4705. Introduction to set algebra, propositional logic and finite algebraic structures as they apply to computers.

### COT 4130 SWITCHING THEORY
PR: EEL 4705. Elements of sequential machine theory including minimization methods.

### EEL 3100, 4101 NETWORK ANALYSIS AND DESIGN I, II

### EEL 3302, 4301 ELECTRONICS I, II
PR: EGN 3374. A second course in the physical principles of electronic devices with emphasis on semi-conductor electronics. Includes the analysis and design of amplifiers and switching circuits.

### EEL 3410, 4411 FIELDS AND WAVES I, II
PR: EGN 4421, PHY 3042, PHY 3042L. A basic introduction to electromagnetic field theory, including static and dynamic electromagnetic fields.

### EEL 4101 See EEL 3100

### EEL 4102 LINEAR SYSTEMS ANALYSIS
PR: EEL 4101. Provides further study in the analysis of linear networks and systems. Includes time and frequency domain points of view. Laplace, Fourier and superposition integrals.

### EEL 4108 DISTRIBUTED NETWORKS
PR: EEL 3410, EEL 4101. Transmission lines, standing waves, impedance, waveguides.

### EEL 4133 MATRICES AND ELECTRICAL NETWORKS
PR: EEL 3100. Introduction to matrices applied to electrical networks; two-port network parameters.

### EEL 4163 COMPUTER AIDED ANALYSIS AND DESIGN
The use of the computer in analysis and design with applications to electrical problems.

### EEL 4220, 4222 ELECTROMECHANICS I, II

### EEL 4220L, 4222L ELECTROMECHANICS LAB I, II
CR: EEL 4220, EEL 4222, respectively.

### EEL 4300 COMMUNICATION CIRCUITS
PR: EEL 4301. Provides further study in electronic circuits. Includes oscillator, modulator, and detector analysis and design.

### EEL 4301 See EEL 3302

### EEL 4330 MICROELECTRONICS ENGINEERING

### EEL 4330L MICROELECTRONICS LABORATORY
CR: EEL 4330.

### EEL 4411 See EEL 3410

### EEL 4511 COMMUNICATION ENGINEERING
PR: EEL 4300. System considerations of electronic circuits; radio propagation; antennas; transmitters and receivers.

### EEL 4511L COMMUNICATIONS LABORATORY
CR: EEL 4511. Experiments in amplitude modulation, frequency modulation, pulse communications, and data transmission.

### EEL 4566 LINEAR CONTROL SYSTEMS

### EEL 4656L CONTROL LABORATORY
CR: EEL 4656.

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### EEL 4705 LOGIC DESIGN
PR: EGN 3374. Non-majors may enroll with CC. Binary number system; truth functions; Boolean algebra; canonical forms; minimization of combinational logic circuits; logic circuits in computers.

### EEL 4705L LOGIC LABORATORY
CR: EEL 4705.

### EEL 4743L MICROPROCESSORS LABORATORY
CR: EEL 4757. Laboratory for Microprocessor use and evaluation.

### EEL 4757 MICROPROCESSOR PRINCIPLES AND APPLICATIONS

### EEL 4850C PROGRAMMING METHODOLOGY
PR: CC. Methods of designing and developing effective and efficient computer programs. Top-down design, structured programming, debugging, and program analysis are addressed.

### EEL 4905 INDEPENDENT STUDY
PR: CI. Specialized independent study determined by the students' needs and interests. May be repeated up to 15 credit hours. (S/U only.)

### EEL 4906 DESIGN PROJECT
PR: Senior standing. An individual or team project involving the design of an electrical component or system. Required of all electrical seniors.

### EEL 4935, 4936, 4937 SPECIAL ELECTRICAL TOPICS I, II, III
(1-4 each)
PR: CC.

### ELR 3301L LABORATORY I
PR: EGN 3373.

### ELR 3302L LABORATORY 2
PR: EGN 3374.

### ELR 3303L LABORATORY 3
PR: ELR 3301L.

### ELR 4114 ELECTRICAL MEASUREMENTS
CR: EEL 3100. Techniques and principles of electronic measurement.

### ELR 4115 ELECTRICAL MEASUREMENTS LABORATORY
CR: ELR 4114.

### ELR 4221 SYSTEMS APPROACH TO BIOMEDICAL ENGINEERING II

### ELR 4228 SYSTEMS APPROACH TO BIOMEDICAL ENGINEERING I
PR: EEL 4101 or CC. Characterization of physiological systems, principles of modeling, system properties. Transfer function description, physiological feedback, effects of nonlinearities.

### ELR 4304L LABORATORY 4

### ELR 4305L LABORATORY 5
PR: ELR 3302L. CR: EEL 4300.

### ELR 4306L LABORATORY 6

### ELR 4313L DISTRIBUTED NETWORKS LABORATORY
CR: Laboratory for EEL 4108.

### MAP 4363 ENGINEERING ANALYSIS FOR COMPUTER SCIENCE III
PR: CC or MAP 4302. Vector analysis and methods of solution for boundary value problems in partial differential equations.