

January 1968

Accent on Learning, 1968

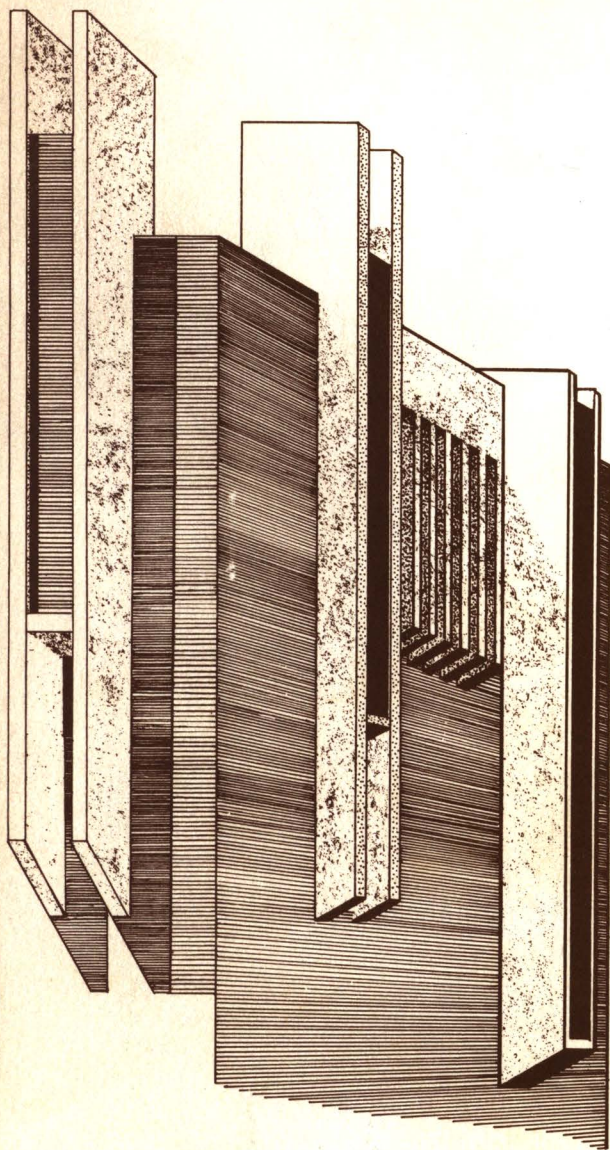
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ACCENT ON LEARNING

UNIVERSITY OF SOUTH FLORIDA BULLETIN
1968 - 1969 • CATALOG



Accent on Learning

**GENERAL CATALOG
OF THE
UNIVERSITY OF SOUTH FLORIDA
1968-69**

**BULLETIN OF THE
UNIVERSITY OF SOUTH FLORIDA**

Volume 10, Number 2 April, 1968

Published four times per year by the University of South Florida, Tampa, Florida. Second-class mail privilege authorized at Tampa, Florida, October 1, 1959.

VISITING THE UNIVERSITY

Prospective students are invited to visit the University whenever possible. Normal office hours are 8 a.m. to 5 p.m., Monday through Friday. Given advance notice, the Registrar's Office will arrange tour guides for visiting groups.

The University is located on Fowler Avenue (State Route 582) approximately two miles east of Nebraska Avenue (U.S. Route 41).

CORRESPONDENCE

Correspondence regarding various phases of the University program should be directed as follows:

Application and admission information

Director of Admissions, Registrar's Office

Conferences and workshops

Center for Continuing Education

Courses and programs for freshmen

Office of the Dean, College of Basic Studies

Courses and programs for upperclassmen and graduates

Office of the Dean of the appropriate college

Evening Classes

Center for Continuing Education

Financial assistance

Director of Financial Aids

Graduate study

Office of the Dean of the appropriate college

Gifts and bequests

University of South Florida Foundation

Facilities for handicapped students

Dean of Student Affairs

Housing assistance

Housing Office, Auxiliary Services

Placement and employment

Division of Personnel Services

Transcripts and records

Registrar's Office

Student Information

Registrar's Office

General Information

Office of Information Services

University of South Florida
Tampa, Florida 33620

University Telephone: 988-4131
(Area Code 813)

The University of South Florida reserves the right to withdraw or change the announcements included in this Bulletin, without notice.

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ACADEMIC CALENDAR

FOURTH QUARTER, 1967-68

May 6, *Monday*
June 7-8, *Fri.-Sat.*

June 8, *Saturday*
June 10, *Monday*
June 28, *Friday*

July 3, *Wednesday*
July 4-5, *Thurs.-Fri.*
July 19, *Friday*

July 26, *Friday*
August 20, *Tuesday*
August 21-25, *Wed.-Sun.*
August 25, *Sunday*

Last day to apply for admission
Registration for cleared students by appointment
Registration for six-week summer session for teachers
Last day to register
Classes begin
Last day to remove an "X" grade. (Grade replacing "X" grade due in Office of Admissions and Records.)
Last day to apply for degree to be earned at end of Fourth Quarter
Last day to drop courses without penalty
Independence Day holiday
Last day of classes for six-week summer session for teachers
Last day to withdraw without penalty
Last day of classes
Final examinations
End of Fourth Quarter

FIRST QUARTER, 1968-69

Sept 25-27 July 31, *Wednesday*
~~September 9-18, Mon.-Fri.~~
September 15, *Sunday*

September 16, *Monday*
September 18, *Wednesday*

October 4, *Friday*

October 11, *Friday*
November 6, *Wednesday*
~~November 27, Wednesday~~

27-28

Last day to apply for admission
Registration week
Last day to cancel and receive full refund of registration fees
Classes begin
Last day to withdraw and/or drop and receive partial refund of registration fees
Last day to remove an "X" grade (grade replacing "X" grade due in Records Office by this date) or to apply to Dean, College of Basic Studies, for the removal of machine-scored final examination
Last day to apply for a degree to be earned at the end of Quarter I—NO EXCEPTIONS TO THIS RULE WILL BE ALLOWED
Last day to drop courses without penalty
Last day to withdraw without penalty
End of Quarter I

SECOND QUARTER, 1968-69

Jan 2-3 October 23, *Wednesday*
~~December 2-8, Mon.-Tues.~~
December 3, *Tuesday*

Jan 6 ~~December 4, Wednesday~~
December 6, *Friday*

December 23-January 3

Last day to apply for admission
Registration
Last day to cancel and receive full refund of registration fees
Classes begin
Last day to withdraw and/or drop and receive partial refund of registration fees
Christmas break—No classes

January 8, Wednesday

Last day to remove an "X" grade (grade replacing "X" grade due in Records Office by this date) or to apply to Dean, College of Basic Studies, for the removal of machine-scored final examination
Last day to apply for a degree to be earned at the end of Quarter II—NO EXCEPTIONS TO THIS RULE WILL BE ALLOWED

January 15, Wednesday

Last day to drop courses without penalty

February 7, Friday

Last day to withdraw without penalty

February 10, Monday

Gasparilla Day holiday

February 28, Friday

End of Quarter II

NO. 120

THIRD QUARTER, 1968-69

1968-69 CALENDAR

September 22

September 25, 26 & 27

September 30

November 28-29

December 13

January 2 & 3

January 6

February 10

March 20

March 31

April 1

June 11

June 15

June 16

June 17

July 4

August 29

June 2, Monday

June 4, Wednesday

June 20, Friday

June 27, Friday

July 4, Friday

July 24, Thursday

August 14, Thursday

QUARTER I

First day of Orientation

Registration (by appointment)

First day of classes

Thanksgiving Holiday

Last day of Term

QUARTER II

Registration (by appointment)

First day of classes

Gasparilla Holiday

Last day of term

QUARTER III

Registration (by appointment)

First day of classes

End of term

Commencement

QUARTER IV

Registration (by appointment)

First day of classes

Holiday

Last day of term

Last day to withdraw and/or drop and receive partial refund of registration fees

Last day to remove an "X" grade (grade replacing "X" grade due in Records Office by this date) or to apply to Dean, College of Basic Studies, for the removal of machine-scored final examination

Last day to apply for a degree to be earned at the end of Quarter IV—NO EXCEPTIONS TO THIS RULE WILL BE ALLOWED

Last day to drop courses without penalty

Independence Day holiday

Last day to withdraw without penalty

End of Quarter IV

UNIVERSITY OF SOUTH FLORIDA

KEY TO CAMPUS MAP

- | | | | | | |
|------------------------|-----------------------------|-------------------------|----------------------------------|--|---|
| 1 Administration Bldg. | 10 Engineering Bldg. | 18 Faculty Office Bldg. | 26 Theta | 34 Engineering Research Bldg. | 39 Episcopal Student Center |
| 2 Library | 11 Physics Bldg. | RESIDENCE HALLS | 27 Iota | 35 Fontana Hall (private residence hall) | 40 University Chapel Fellowship Center |
| 3 University Center | 12 Education Bldg. | 19 Alpha | 28 Kappa | 36 University Foundation Apartments | 41 Catholic Student Center |
| 4 University Theatre | 13 Business Adm. Bldg. | 20 Beta | 29 Lambda | 37 Observatory | 42 DeSoto Hall (private residence hall) |
| 5 Theatre Arts Bldg. | 14 Social Science Bldg. | 21 Gamma | 30 Mu | 38 Baptist Student Center | 43 Planetarium |
| 6 Fine Arts Bldg. | 15 Physical Education Bldg. | 22 Delta | 31 Operations & Main. Adm. Bldg. | | |
| 7 Life Sciences Bldg. | 16 Argos Center | 23 Epsilon | 32 Main. & Utility Bldgs. | | |
| 8 Chemistry Bldg. | 17 Andros Center | 24 Zeta | 33 Central Rec. Bldg. | | |
| 9 Science Center | | 25 Eta | | | |

GENERAL INFORMATION

The University of South Florida was founded December 18, 1956, by the State Board of Education, following more than two years of preparatory study by the State Legislature, the Board of Education, and the State Board of Control (now the Board of Regents). When it was opened to a charter class of 2,000 freshmen on September 26, 1960, it became the first state university in the United States to be totally planned and initiated in this century. It also represented the first step in a broad and comprehensive expansion of the State University System of Florida.

This system of public universities now includes the University of Florida in Gainesville, Florida State University and Florida A & M University in Tallahassee, the University of South Florida, Florida Atlantic University in Boca Raton, the University of West Florida near Pensacola, and Florida Technological University near Orlando. In addition, there are 25 public junior colleges in population centers throughout the state.

More than 1,050 students graduated from the University of South Florida in 1966. On-campus enrollment for the fall of 1968 is expected to exceed 11,500 with an additional 1,750 in off-campus programs.

The University is accredited by the Southern Association of Colleges and Schools, the official accrediting agency for all educational institutions in the South.

The Campus

On a 1,672-acre campus eight air miles northeast of downtown Tampa, the University is ideally located for steady growth and development in the heart of an expanding metropolitan area having nearly a million people within a 30-mile radius. The campus is midway between U.S. Highway 41 and 301 on State Highway 582. Interstate 75, now under construction, passes two miles to the west.

The physical plant of the University, now including 26 major academic and residence buildings, is currently valued at more than \$45 million. The buildings are of similar, modern architectural design and all are completely air conditioned. New buildings costing about \$5 million are now under construction. Major buildings now in use are:

Administration Building, housing administrative and business offices and a number of special service units of the institution;

Library, a five-story structure designed for 250,000 volumes in open stacks;

University Center, with student and faculty offices, meeting rooms, recreation areas and classrooms, as well as a cafeteria, and the University Bookstore;

Theatre, seating 550 persons for cultural events and also serving as a lecture and teaching auditorium;

Chemistry Building, with classrooms and laboratories for chemistry and offices for faculty;

Life Sciences Building, housing the University's programs in biological sciences;

Fine Arts-Humanities Building, with separate wings for humanities, art and music;

Physics Building, housing physics, astronomy, and mathematics, and the Planetarium; and

Argos and Andros residence halls and activities centers, housing 2,800 students and providing central dining, recreational and service facilities in 14 separate but coordinated buildings.

Major buildings completed in 1966 were:

College of Business Administration Building, housing the dean and faculty of the college, classrooms, and a 430-seat teaching auditorium;

College of Engineering Building, housing the dean and faculty of the college, classrooms, laboratories, and a 250-seat auditorium; and

Physical Education Classroom Building, housing the director and faculty of the Division of Physical Education, classrooms, gymnasium, activities area, and an indoor swimming pool.

Completed in the fall of 1967 was the *College of Education Building*, housing the dean and faculty of the college, classrooms, an auditorium seating 200, and an Instructional Materials Center.

Scheduled for completion during 1968 are a Science Center, Phase 1, the Social Sciences building and a Theatre addition.

The University's *Bay Campus* in St. Petersburg provides a unique opportunity for the development of advanced and evening instruction for residents of the Pinellas County area.

In addition to these Continuing Education programs serving Pinellas County, and a number of special programs such as training for Peace Corps workers and other extended training sessions, the Bay Campus is headquarters for USF's programs in marine sciences. It will also be a headquarters for visiting scientists and students from cooperating institutions interested in using these fine facilities for marine studies. The Bay Campus has been approved by the State Board of Regents as headquarters for the State University System's programs in oceanography.

Development of the Bay Campus is expected to keep pace with the continuing growth of the Tampa Bay area.

Internal Organization

The University is organized internally in five colleges, with supporting services designed for this basic pattern. The five colleges are: Basic Studies, in which all freshmen and sophomores enroll and from which a minimum of six courses must be taken during the first two or three years; Business Administration, which offers majors in such fields as economics, accounting, management, marketing, and office administration; Education, which provides teacher training in all major teaching fields; Engineering, organized around systems design, research, and operation; and Liberal Arts, which offers programs in the areas of fine arts, natural sciences, social sciences, and languages and

literature. A College of Medicine and Nursing has been authorized for the University. Detailed planning for this new addition is now under way.

Bachelor's degrees are offered by all the University's colleges, with major programs available in more than 40 different areas. Master's degrees are offered in several areas of business, education, engineering, and liberal arts.

The University's first Ph.D. program, in Biology with emphasis on Marine Biology, began operation during 1967. It is being conducted cooperatively by the Departments of Zoology and Botany and the Marine Sciences Institute.

The University's teaching faculty, numbering more than 500, represents all major areas of higher learning, and nearly 60 per cent hold doctoral degrees.

For administrative purposes, the University is organized into the three broad areas of academic affairs, student affairs, and administration and business affairs. The administrative officers who head these three units serve with the President in the Executive Committee, the principal policymaking and advisory body of the University. The President is responsible to the Board of Regents for internal policy and procedure of the University. In addition to the Executive Committee, advice and assistance to the President in the determination of policy is given by the University Senate, comprising elected representatives from all areas of the University community, including the student body.

The Foundation

The University of South Florida Foundation is a non-profit corporation functioning solely to provide supplemental funds for the University. These contributions are used for student aid, cultural events, library, research, guest lecturers and other areas needing support. All gifts and bequests to the University should be made through the Foundation. Membership in the Foundation is open to all friends, parents, and students interested in the dynamic growth of the University of South Florida.

Contact the Foundation office, or the Director of Development if considering membership or a gift.

The Foundation is serving as the temporary headquarters of the Alumni Association, which was organized in December, 1963, upon graduation of the first class.

Purposes and Goals

A university is defined as an institution of higher learning consisting of several schools or colleges and offering programs in the liberal arts as well as in a number of professional areas. It is, however, more than this; it is a place where new knowledge is sought, and old knowledge is synthesized in new ways through research and scholarship for the benefit of mankind.

It is not, however, a trade school where the detailed techniques of a trade can be learned by practice. It deals with professional areas more in theory than in practice, providing the broad background and understanding necessary to the development of specific skills. In this way it develops the intellectual judgments necessary to deal with constantly changing problems of a profession.

A university should not be regarded simply as a place to prepare for a profession, important as this may be. One of the most important functions is to

provide all its students with a better understanding of life in a rapidly changing world. Man is surrounded by a natural environment and confronted by rapidly increasing knowledge of that environment. These are matters of human affairs which he needs to know about as an educated citizen and as a professional person. Hence, a university has an important obligation to provide in its educational program for all students those common elements which make for more responsible and responsive living.

A university is also a servant of the society which supports it, and at the same time it is one of the leaders of that society. It is the medium through which the greatest wisdom of the past and the living spirit of the present are passed on to new generations of young people to be used by them as leaders in the further advances of society toward goals of better and finer living.

In the classroom, subjects are dealt with objectively, critically, analytically and constructively, as well as inspirationally and creatively. The student is expected to learn to be analytical as well as creative in his own approach and to understand that such activities, to be constructive, must be carried out with a minimum of emotional bias and prejudice. He must learn to understand that in a democracy points of view will differ and there may be no wholly right or wrong answers to many questions, only better or worse answers from the viewpoint of society or the individual. He must be prepared to examine objectively his own position on such matters and develop for himself a tenable position or philosophy with which he can continue to live.

The University of South Florida, in trying to attain this character, has set up for itself the primary goal of placing "Accent on Learning" as its most important reason for being. Toward that end, the University has these specific objectives:

- I. *To provide the citizens of Florida with an outstanding public institution of higher learning, giving leadership and service in the intellectual, cultural, economic and scientific interests of the state.*
- II. *To create a community of scholars dedicated to teamwork in the search for truth, the exchange of ideas and the establishment of high standards of intellectual inquiry and creative activity.*

The faculty has been carefully chosen for its training, competence and ability to teach. In an unusual sense it is a team. The faculty has many times shown its outstanding ability to carry on creative work and significant research and to provide opportunities for able students to learn the meaning of, and assist in, such work as part of the process of education.

- III. *To provide opportunity for the development and training of the mind which promotes maturity, objectivity and creativity.*

All degree programs of the University are designed to promote the following general aims for all students: (1) the necessary skills in writing, speaking, reading and listening; (2) self-reliance through the ability to think clearly; (3) understanding of oneself and one's relationship to others; (4) growing convictions based on the search for truth; (5) understanding and appreciation of our cultural, social, scientific and spiritual heritage; (6) intelligent approach to local, national and world problems leading to good citizenship and leadership in life; (7) some practical understanding of another language; (8) professional competence based on high ethical standards; and (9) healthful development of the body.

- IV. *To provide a broad cultural and basic educational pattern for all*

students, together with programs of liberal, pre-professional and professional studies, and to supplement these with opportunities for independent development and work experience.

Recent studies indicate a strong trend in American liberal arts colleges toward the inclusion of more professional preparation in their programs and, conversely, for the professional colleges to include more general and liberal studies in theirs. Thus, the professional and the liberal arts colleges are coming closer together in the effort to provide a continuum of studies which includes the general, the liberal and the professional in the same program. The University of South Florida is attempting this in a way that provides greater unity of knowledge for the student.

For each student the educational program combines preparation in basic studies with work in the liberal arts and the sciences and with professional studies. Ideally, a student's program will be devoted about one-third to basic studies, one-third to professional studies and one-third to elective and related choices.

A LOOK AT THE FUTURE

The University of South Florida's location in a large and expanding metropolitan area, coupled with the broad growth and development of Florida in the space age, suggests a future of rapid change and expansion for the University. It is estimated that enrollment in University of South Florida courses will increase approximately 1,000 each year through 1975. Construction will continue at a rapid pace each year for several years to come. A \$5 million construction program is currently underway. New faculty are joining the University staff at a steady rate. In every respect, the University of South Florida is a vital part of the state's inevitable growth, and it is destined to become a large, multi-purpose university.

University Theatre



ADMISSION

The University of South Florida requires definite ability and competency on the part of students. Those having these abilities and skills and who are seriously interested in earning an education can expect to succeed in college. Students who lack them are almost sure to encounter serious difficulty. Until such students have corrected some of their academic deficiencies by private study, review work in high school, or perhaps study in a junior college, they may not be accepted.

Whether or not students have a reasonable possibility of being admitted to and succeeding in the University will be appraised by the Director of Admissions and Registrar. He will admit students who meet the formal requirements of the University for admission. He will suggest other possibilities to those who do not. He will refer borderline decisions to the University Committee on Academic Standards. This committee's decisions will be final.

The University requires a medical examination from each full-fee paying student filed with the Student Health Service. Full-fee paying students must also have had recent immunizations against smallpox, tetanus and polio. The University may refuse admission to a student whose record shows previous misconduct not in the best interest of citizens of the University community.

A student from a non-accredited or disaccredited Florida secondary school may be admitted provided he meets all of the requirements for students from accredited Florida secondary schools and, in the judgment of the Academic Standards Committee, can be expected to do successful academic work.

APPLICATION, REGISTRATION, AND PAYMENT OF FEES

- A. Regular Students: those paying full fees or taking more than one course.
 - 1. The University of South Florida reserves the right to *review* all *credentials* of any student before he becomes a degree candidate.
 - 2. The deadline for *receiving applications* for admission or re-admission to any quarter shall be thirty (30) days prior to the first day of registration in that quarter in which the student wishes to matriculate.
 - 3. *Registration* will be completed in person by appointment during the regular scheduled registration period. Each quarter, this registration period will conform to the established university calendar and will consist of a period of at least two (2) days.
Late registrations are not accepted except in most unusual circumstances. These exceptions must be on waivers submitted by the Dean

of the appropriate college and approved by the Director of Admissions and Registrar.

Changes of class registration will be accepted only during the time and day(s) announced in the individual quarter term schedule.

Any regular University student wishing to enroll in off-campus or evening classes shall register and pay fees in the manner prescribed for regular students attending campus daytime classes.

Payment of Fees. Registration fees are due, by mail or in person, by the close of business on the last day of registration prior to the first day of class in any quarter. Any fees paid after that date must be accompanied by an additional ten dollars (\$10.00) *penalty payment*.

Late payment of fees, including the penalty payment, will only be accepted during the first three (3) regular class days of any quarter. Fee payments may be made in advance of final complete registration. A student has eligibility for a *partial refund* of fees upon withdrawal from the University only during the first three (3) regular class days in any quarter.

No late payment of fees, with or without penalty payment, will be accepted and no refund of fees will be made to any student after the close of business on the third regular class day in a quarter.

Registration will be *cancelled* for any student who has not paid his fees in full by the close of business on the third regular class day in a quarter.

- B. Continuing Education Students: Those registering for courses off-campus.
 1. *Application, registration, and payment of fees* (for non-degree seeking students) may be made (simultaneously) by mail or through personal appearance during the regular registration period. In the event this is by mail, the letter enclosing the registration and payment of fees must be postmarked not later than 24 hours following the second class session.
 2. With two exceptions, the regular institutional calendar will apply to continuing education classes:
 - a) no late registration fees will be charged.
 - b) enrollment in these courses will not be closed until the end of the second class meeting.

Procedures for Applying

Application papers may be requested as early as 12 months prior to anticipated enrollment. Most of the secondary schools in Florida have application forms. Public school teachers wishing courses for certificate extension and other non-degree seeking students who feel that they fall into a special category should indicate the category in their initial inquiry and should inquire about special application forms.

There are definite advantages in applying early. Housing priority is explained elsewhere in the catalog. Each quarter has its own application deadline, usually about 30 days prior to the first day of registration. The application will be acknowledged and qualified students will be accepted. Final decisions will be made upon receipt of test scores and evidence of completion of high school work, or upon the arrival of the final college transcript. The candidate will be notified if he was not previously apprised of a tentative decision or if the tentative decision must be reversed.

All academic records must be mailed to the Director of Admissions, University of South Florida, directly from the appropriate institution (i.e., high school record from high school attended; college record from each college attended; G.E.D. test scores from appropriate high school or State Department of Education; U.S.A.F.I. scores from Madison, Wisconsin; S.A.T. scores from high school or central office). The student has the responsibility of getting the records mailed to us from each school attended.

A student who applies and does not enroll must notify us during the month of the original planned date of entry if he wishes his application changed to a future date of entry. Otherwise, new application forms must be completed and the application fee paid again.

ADMISSION TO THE UNIVERSITY

FRESHMEN

It is recommended that all prospective freshmen who wish to be admitted to the University of South Florida earn at least 14 high school units in the areas of English, mathematics, foreign languages, social studies, and natural sciences.

Freshmen enter the University from four principal sources, and special qualifications are established for each. Borderline students are urged to begin in June rather than waiting until September.

University Center



The four sources are:

1. Graduates of Florida high schools, who must have a favorable character recommendation from officials of their high school, must have an overall average of "C" or better in all academic subjects and must earn a minimum score of 300 on the Florida State-Wide Twelfth Grade Tests.
2. Graduates of high schools outside Florida, who must have a favorable character recommendation from officials of their high school, must have grades placing them in the upper 40 per cent of their graduating class and must have acceptable test scores (examples: 900 or higher on the Scholastic Aptitude Test—450 or higher on the verbal portion).
3. High school graduates by Armed Forces Tests of General Education Development (G.E.D.), who must have a favorable recommendation from their employer, must have an acceptable high school record for the portion attended and must have a minimum individual score (percentile) of 50 and a minimum average of 60 on the G.E.D. test.
4. Early applicants, who wish to enroll prior to high school graduation, must have outstanding high school records (minimum average of 3.5 or B+), must show high performance on tests such as the College Qualification Test and must score a minimum of 425 on the Florida State-Wide Twelfth Grade Tests. Early applicants are interviewed by a number of University officials and are comprehensively tested before their applications are approved.

TRANSFER STUDENTS

Degree-seeking students wishing to transfer to the University must have a minimum average of "C" for all college work previously attempted and must be eligible to return to the last institution in which they were enrolled. Those with less than 90 quarter hours of transferable college credit must also meet the University's freshmen entrance requirements.

After a prospective transfer student has applied to the University and all official records are received directly from each institution involved, his records are evaluated to determine how many of his credits are transferable. Only work in which the student has earned a grade of "C" or better may be transferred. Credit will not be awarded for college level G.E.D. tests, for basic R.O.T.C., military science, nor for courses given credit without a grade such as "Orientation."

Final determination regarding the applicability of transferred credits to graduation requirements is up to the college concerned.

The final 90 quarter hours of work taken for the bachelor's degree must be earned in a senior institution. A maximum of 45 quarter hours of extension and correspondence courses and Armed Forces credit can be applied toward a degree.

Service school courses will be evaluated with reference to the recommendation of the American Council on Education when official credentials have been presented. Such recommendation, however, is not binding upon the University. The applicant must apply for service school credit during his first term in residence at the University.

A transfer student from a state-operated junior college or university may satisfy the basic studies requirements of the University of South Florida by completing (before transfer) the general education program prescribed by

that junior college or university. Graduation for those attending a junior college is recommended. Students' general education programs in private colleges and out-of-state schools, and students with incomplete general education programs from state institutions will be evaluated on an individual basis.

Graduates of accredited junior colleges are not required to take additional work in physical education.

Students already graduated from accredited four-year institutions who apply for admission to work toward another undergraduate degree must meet the University's regular graduation requirements. A minimum of 45 quarter hours must be earned in on-campus courses and the student must meet the requirements for liberal education and for major concentration as specified by his departmental adviser and dean.

Qualified transfer students will be admitted to an upper level college by the Admissions Office.

TRANSIENT STUDENTS

A student interested in enrolling at the University of South Florida for a summer session or for one term only before returning to his parent institution should request *transient* application papers. A statement of good standing and of the acceptability of credits is required from the parent institution.

MATURE (NON-DEGREE) STUDENT

Mature persons (21 or older) may, by providing evidence (a. an acceptable high school record; or b. acceptable test scores; or c. an acceptable recommendation) that they are qualified to do the proposed work, enroll as non-degree students—in day classes or in the evening sessions—without meeting the requirements established for degree programs. They may transfer to degree programs later if their work as non-degree students indicates the likelihood of success. Work taken for credit as a non-degree student may later be counted toward a degree program if such work is applicable and of satisfactory grade. Persons under 21 years of age wishing to enter as non-degree students must meet the same admission requirements as degree-seeking students. Mature students are not required to take Physical Education.

CHANGE OF DEGREE STATUS

Non-degree seeking students who wish to change to a degree-seeking status must first meet the degree-seeking admission requirements or earn a minimum of 15 quarter hours with a minimum average of 2.0 (C).

EVENING SESSION STUDENTS

While serving degree-seeking and non-degree seeking students, the Evening Sessions of the University of South Florida offer only courses for full academic credit. Any student accepted as a candidate for a degree may enroll in courses offered in the evening which are appropriate to this program. The admissions requirements and achievement levels in the day courses and in the evening sessions are the same. The evening sessions are more fully explained on page 52.

SPECIAL CONSIDERATION

Freshmen or transfers with above average ability who do not meet all the aforementioned requirements may apply for special consideration. The ap-

plication accompanied by a full letter of explanation and supporting information should be mailed to the Academic Standards Committee. It should be noted, however, that the regular guidelines are regarded as sound for the student and for the institution. Few exceptions are made.

Whenever a student is admitted after special consideration, he will usually be placed on Academic Warning or Final Academic Warning; therefore, he should be familiar with the meaning of these terms which are described on page 19.

GRADUATE STUDENTS

Admission requirements for graduate students are given in the section entitled Graduate Study, page 113. Graduate applicants should also refer to descriptions of the master's degree programs for specific admission requirements.

REAPPLICATION

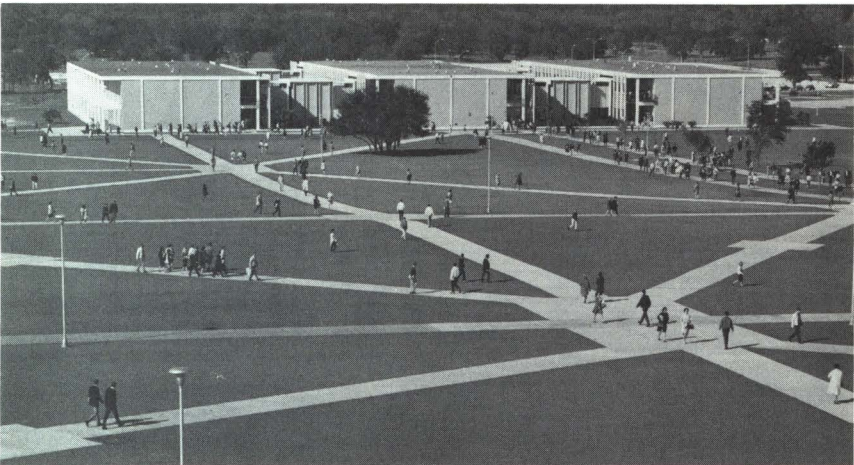
Any student who has been enrolled at the University of South Florida during a given calendar year, upon resuming his studies during the same calendar year, will not have to reapply.

Any student who has not been enrolled at the University of South Florida during the calendar year in which he wishes to re-enter will need to secure a special application for students in this category from the Records Section of the Office of Admissions and Records. (Exceptions: Those enrolled the first quarter [fall] who want to continue the second quarter [winter] which immediately follows that first quarter.)

A student enrolled in the University at the end of the second quarter does not have to reapply in order to resume his studies the following first quarter.

All students who withdraw while on "Final Academic Warning" must secure the approval of the Academic Standards Committee before they can register for a subsequent quarter. Also, any student who withdraws twice

Fine Arts-Humanities Building



from the University after January 1, 1966, must petition the Academic Standards Committee before he can reapply.

Orientation and Enrollment Program

At the beginning of each quarter, prior to the beginning of classes, all new students are expected to participate in the Orientation and Enrollment program of the University. This program is designed to help new students become acquainted with the university procedures and regulations and to learn of the University's expectations of its students. Those sessions which are information-gathering are necessary for enrollment, and those that are information-giving are considered the orientation aspect of the program.

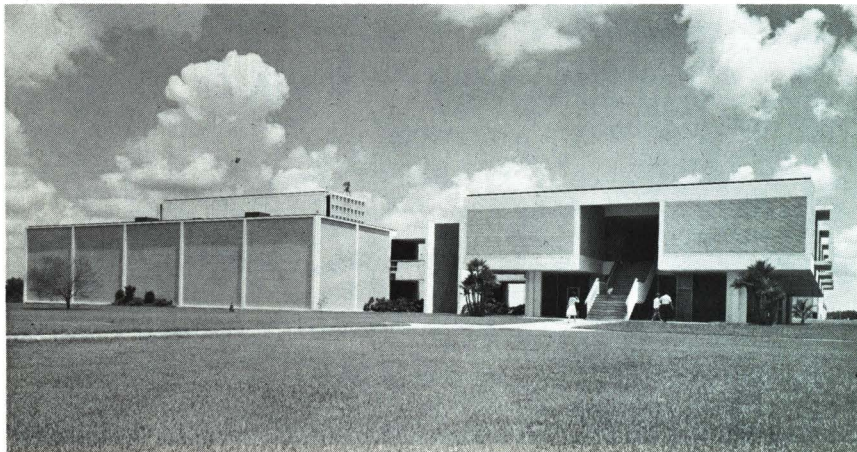
Pre-Enrollment Program

To help ease the rush of activities, it is anticipated that new students entering the University in September will attend one of the Pre-Enrollment conferences held each summer. The conference is designed to acquaint students with the university and with each other, and to accomplish in an organized and efficient manner those steps necessary for the completion of registration.

New students' participation in the pre-enrollment program is urged because it assures maximum attention to the curricular and extra-curricular needs of the individual student. Some testing is included in the conference principally for the purpose of providing advisers with information about the student. Such information is necessary for realistic planning and the choice of appropriate courses.

The conference also facilitates the transition from high school to college by assisting the student toward an understanding of the objectives of and opportunities in the University community. It further strives to provide an opportunity for private conferences with a faculty adviser with a view to increasing the students' understanding of the programs and courses available through the University.

Life Sciences Building



ACADEMIC POLICIES AND PROCEDURES

The University is concerned that each student make reasonable progress toward his educational goal, and will aid each student through guidance and faculty advising. Whenever this progress is hindered, blocked or interrupted, the University will, through additional guidance, special counseling or restrictions on the student's activities, aid the student to resume satisfactory advancement. He may be required to leave the University for a period sufficient to gain adequate maturity and motivation.

To be in satisfactory academic standing at the University a student must be properly admitted and be matriculated for a degree or have qualified as a special student and normally hold a cumulative grade point ratio of 2.0. The precise averages for good standing are described below. Falling below these points should suggest to the student that he must change his pattern of work to restore himself to a satisfactory status.

Any student is not in good standing whenever his cumulative grade point ratio falls below 1.5 and his attempted hours are less than 45, or below 1.7 when his attempted hours are between 45 and 89, or below 2.0 when he has attempted more than 89 credit hours. Such a situation occurs generally because the student lacks the maturity, diligence, or motivation to realize the necessity for adequate scholarly effort. Whenever a student falls into this status, he will be placed on Probation and a notification to this effect will be sent to him and his permanent record will be posted accordingly. For a complete description of the probation rules, see next page. The student will be required to meet with his faculty adviser for additional assistance in identifying and correcting his difficulties.

A transfer student who was not in good standing at his prior institution but who for special reasons has been admitted to the University will be placed immediately on Probation for a trial period.

All students who do not raise their grade point ratio to a level of good standing within the quarter in residence after being placed on Academic Warning shall be placed on Final Academic Warning.

Whenever a student is placed on Final Academic Warning, a notification of this will be sent to the student's parents or guardian unless the student is 21 years of age or older and is living independently of his parent or guardian. The student will be required to meet with his faculty adviser for additional assistance, and must forego holding any executive or committee office in any

student or campus organization, and forego participation in any student or organization which represents the University. The permanent academic record of the student's progress will show that he was placed on Final Academic Warning and he must earn at least a 2.0 average regardless of credit hours attempted during his next quarter in residence. Failure to do so implies that the student has disqualified himself from continuous attendance at the University and that he must wait at least one full quarter before becoming eligible to be considered by the Academic Standards Committee for readmission to the University. Any student who withdraws from the University while on Final Academic Warning must petition and secure approval of the Academic Standards Committee to re-enter the University.

The Academic Standards Committee meets regularly to review petitions submitted by students to waive certain academic regulations. Students must petition and secure approval of the Committee to return to the University after having been disqualified from further immediate attendance or for reasons pertaining to admission, registration or other academic policies and procedures.

PROBATION—DISQUALIFICATION AND READMISSION

A student is not in good standing whenever his cumulative Grade Point Ratio falls—

Below 1.500 and his attempted quarter hours are less than 45;

Below 1.700 and his attempted quarter hours are between 45 and 89.

Whenever a student falls into one of the above categories he will be placed on *Academic Warning*. All students on *Academic Warning* who do not raise their cumulative Grade Point Ratio to a level of good standing, as indicated above, within the term enrolled after being placed on *Academic Warning* will be placed on *Final Academic Warning*.

Below 2.000 and his attempted quarter hours are more than 89.

Whenever a student falls into the above category he will be placed on *Final Academic Warning*. A student on *Final Academic Warning* must earn at least a 2.000 average during the next term enrolled. Failure to do so will disqualify the student from continued attendance at the University of South Florida. If a student withdraws while on *Final Academic Warning*, he must petition and secure approval of the Academic Standards Committee for re-entry.

Below 2.000 and his attempted quarter hours are more than 135.

Whenever a student falls into the above category he will be automatically disqualified.

A student who fails to have a 2.000 cumulative Grade Point Ratio after attempting 135 quarter hours is *automatically disqualified*. A *disqualified* student must petition and secure approval of the Academic Standards Committee before readmission. Normally, one full quarter must pass before such a petition will be considered. *This rule overrides all others.*

Any student who is readmitted to the University following Disqualification will be placed immediately on a *Final Academic Warning* status. This does not apply to a student who has received a degree in a college parallel program from a Florida state junior college.

A disqualified student seeking to gain readmission must apply to the Academic Standards Committee through the Office of Admissions and Records.

If the student attends another college or university during this intervening period, he will be classified as a transfer student and his admission will be based on his total educational record. In rare and exceptional cases a disqualified student may petition the Academic Standards Committee for earlier readmission when it can be clearly demonstrated that circumstances beyond the student's control accounted for his academic problems.

PENDING

A student may be placed on "Pending" by failing to meet obligations to the University. When a student is on Pending, he may not be allowed to register, graduate, receive a final grade report, nor request a transcript. Settlement of accounts can be made at the University Cashier's Office.

The administration of the system of Academic Warning status, Final Academic Warning status, academic disqualification and pending is the responsibility of the Director of Admissions and Registrar. He will work closely with other University officials and faculty advisers in these matters.

Students having questions or problems about these matters should go either to their adviser, the Director of Admissions and Registrar or the dean of the college in which they are enrolled.

ADDS

After a student has completed his registration on the date assigned to him, he may add courses only during the time and day(s) announced in the individual quarter term schedule.

AUDITS

If a student wishes to audit a course, he must obtain written permission from the instructor of the course and section in which he wishes to enroll. Audit forms must be obtained from the Records Section of the Office of Admissions and Records and completed prior to registration. The student must also secure definite clarification from the instructor concerning just what is expected of an audit in his class. If permission is granted, the audit forms must be presented to the Registration Approval Clerk after a regular class and section card has been obtained. This will ensure the student a place in the class even though no credit will be given. The student must pay the regular registration fee for audit courses.

WITHDRAWALS (Prior to first day of classes)

If, after completing his registration, a student wishes to cancel it, he may do so by completing a Withdrawal Form in the Office of Admissions and Records, and will receive a complete refund of registration fees.

COURSE WAIVERS

See information under College of Basic Studies, page 55.

DROPS

For the first four weeks of any term a student may drop a course or courses without penalty (he will receive a grade of "W") and without any consultation with the instructor. Any course drop after the first four weeks of classes will result in a grade of "F."

WITHDRAWALS

Until three weeks before finals any student may withdraw from the University without penalty. After that date grades of "F" will automatically be assigned for all course work. If the student is on Conditional Registration or Final Academic Warning and withdraws from the University, it will be necessary for him to petition and secure the approval of the Academic Standards Committee before being readmitted.

Following a second withdrawal from the University there will be posted on the student's record "ineligible to return, must petition the Academic Standards Committee for readmission." Any student who already is showing, as of January 1, 1966, a withdrawal on his record will *not* have the rule retroactively applied. This does not affect existing regulations concerning withdrawal while on Final Academic Warning.

CLASS STANDING

A student's class is determined by the number of credits he has earned without relation to his grade point ratio.

Freshman:	up to 44 credit hours
Sophomore:	45 to 89 credit hours
Junior:	90 to 134 credit hours
Senior:	135 or more credit hours

The classification of Non-Degree Student is given to those who are not enrolled in a program leading to a degree and who have accumulated fewer than 45 credit hours. Special Students who accumulate 45 or more hours are advised to enroll for a degree program.

ADMISSION TO THE UPPER LEVEL

Qualified transfer students will be admitted to an upper level college by the Admissions Office.

Courses and programs offered at the junior and senior levels are generally considered to be "upper level."

Generally, a student enrolled in the College of Basic Studies will be eligible for admission to an upper level college when he has completed the lower division requirements of the College of Basic Studies, taken a comprehensive examination some time during his sophomore year, satisfied the physical education requirements, and completed at least 90 quarter hours with at least a 2.0 ratio. A student with 81 hours and a ratio of 2.0 or better may be admitted with special permission of the dean of the college involved. Qualified students will be identified and referred to an upper level program by a member of the College of Basic Studies advising corps.

In addition, students must meet the specific admission requirements of the college to which they are applying. These requirements are shown elsewhere in this catalog and should be verified with the college before application is made.

Students transferring into upper level college programs from other institutions must meet the same standards and requirements as those whose first two years were taken at the University of South Florida.

All students must complete at least the last 45 hours of their undergraduate credit in on-campus courses (*after* having been accepted to an upper level program) to qualify for a University of South Florida degree.

DOUBLE MAJOR

Students may elect to graduate with two majors in disciplines within the same division, the same college, or in more than one division or college. In that event, the student should meet all requirements of each major separately. He must apply independently and be assigned an adviser in each discipline. He must be certified for graduation by the appropriate dean or divisional director for each major.

CHANGE OF MAJOR

Any student *in the upper level* who wishes to change his major must obtain the Change of Major form in the Records Section of the Office of Admissions and Records. This form must be signed by the student's adviser, the dean or director of the former major, and the dean or director of the new major. A copy of the completed Change of Major form must be returned to the Records Section of the Office of Admissions and Records.

APPLICATION FOR GRADUATION

Each student who plans to complete his graduation requirements by the end of a term must complete the Application for Graduation no later than the first day of the fourth week of that term. The application is available at, and after completion must be returned to, the Records Section of the Office of Admissions and Records.

Graduation Requirements

While each college sets specific requirements for graduation, the general University requirements must be met by every student upon whom a degree is conferred.

These general requirements specify that a student must attempt and pass at least 180 quarter hours of credit with at least a "C" average for all University of South Florida courses attempted in order to be eligible for graduation. At least 60 of his quarter hours must be for upper division level work (courses numbered 300 or above).

In addition to specific requirements of their major and of the college in which they are enrolled, candidates for graduation must also pass the senior seminar offered by the College of Basic Studies, and be recommended for graduation by the dean of their college.

All students must complete at least the last 45 hours of their undergraduate credit in on-campus courses after having been admitted to an upper level college to qualify for a University of South Florida baccalaureate degree. Approved exchange program students may take courses off-campus which will be considered in on-campus courses.

If changes are made in major or graduation requirements during the time a student is enrolled in the University, the student has the choice of being graduated under the old or the new requirements.

While every effort will be made to give each student appropriate advice in meeting major and graduation requirements, the final responsibility for meeting these rests with the student. He should study the catalog carefully and seek advice when in doubt. In any case, he should check with his dean or divisional office when he has reached 135 quarter hours to make sure that his program plans are complete.

Specific requirements of the several colleges are listed on the following pages: College of Basic Studies, page 55; Business Administration, page 59; Education, page 64; Engineering, page 83; Liberal Arts page 90.

GRADUATION WITH HONORS

Each student graduating from the University with a grade point ratio earned at USF of 3.5 or higher will receive a special notation on his diploma indicating that he has been graduated with honors.

In addition to the above, transfer students must have a grade point ratio when combined with previously attempted college work of 3.5 or above.

Availability of Courses and Programs

The University does not commit itself to offer all of the courses, programs and majors listed in this catalog unless there is sufficient demand to justify them. Some courses, for example, may be offered only in alternate quarters or years, or even less frequently if there is little demand. Some of the less popular majors may not become available until later in the University's development. Students wishing such majors may take what is offered here and major in some closely related field or transfer to an institution which offers the desired program.

Notice of Change

Notifications regarding change of address, change of name, change in marital status, change in residency, and change of citizenship should be filed promptly with the Records Section of the Office of Admissions and Records.

Florida College Exchange

Through an exchange agreement, students of the University of South Florida, with the approval of their advisers, may elect courses in Greek, Hebrew, Bible, or religious education at nearby Florida College. Credit for acceptable work may be transferred to the University and counted as elective credit toward graduation. Students from Florida College have a similar transfer arrangement.

Costs for students under these dual enrollment plans are based on credit hours of work taken, and payment is made to the appropriate institution in accordance with its per-hour fee rate.

The Traveling Scholar Program

The University System of the State of Florida has a Traveling Scholar program which will enable a graduate student to take advantage of special resources available on another campus but not available on his own campus: Special course offerings, research opportunities, unique laboratories, and library collections.

PROCEDURE

A traveling scholar is a graduate student who, by mutual agreement of the appropriate academic authorities in both the sponsoring and hosting institutions, receives a waiver of admission requirements and the application fee of the host institution and a guarantee of acceptance of earned resident credits by the sponsoring institution.

A traveling scholar must be recommended by his own graduate adviser, who will initiate a visiting arrangement with the appropriate faculty member at the host institution.

After agreement by the student's adviser and the faculty member at the host institution, graduate deans at both institutions will be fully informed by the adviser and have the authority to approve or disapprove the academic arrangement.

A student will register at the host institution and will pay tuition and/or registration fees according to fee schedules established at that institution.

CONDITIONS

Each university retains its full right to accept or reject any student who wishes to study under its auspices.

Traveling scholars will normally be limited to one term (semester, trimester, quarter, etc.) on the campus of the host university.

Traveling scholars are not entitled to displacement allowance, mileage, or per diem payments. The sponsoring institution, however, may, at its option, continue its financial support of the traveling scholar in the form of fellowships or graduate assistantships, with any work obligation to be discharged either at the sponsoring or host institution.

Intra-American Exchange Program

Through a reciprocal exchange agreement, University of South Florida students may study for one academic year at the University of Massachusetts in Amherst, Massachusetts. Exchange students are selected in the spring (third) quarter preceding the exchange year. Acceptable grades are transferred to the University of South Florida and counted as credit toward graduation. University of Massachusetts students enjoy the same exchange opportunity.

Student costs remain essentially the same, but students must pay transportation costs to and from the exchange institution. Further information may be obtained from the Office of the Dean, College of Education, University of South Florida.

Future plans call for expanding the program to include institutions throughout the United States.

Selective Service

The Selective Service System requires the University to submit, for each male student who has a selective service number on file at the University, an Enrollment Certificate to local draft boards for every full-time male undergraduate and graduate student at the beginning of each term. In August of each year, the University is required to submit a cumulative report

on all undergraduate male students between the ages of 18 and 25.

Note: Undergraduate students must enroll for at least 12 quarter hours to be considered full-time. The Selective Service System requires the completion of 45 quarter hours each academic year. Graduate students must enroll for 9 quarter hours to be considered full time.

Students may obtain special "student status" certifications and transcripts from the Records Section of the Office of Admissions and Records between regular reports upon request by the Selective Service.

Students desiring further information concerning Selective Service requirements should inquire at the Records Section of the Office of Admissions and Records.

Veterans Administration

The University of South Florida is approved for the education and training of veterans by the Veterans Administration. Disabled veterans covered under the Vocational Rehabilitation program, Chapter 31, may also receive training here. The War Orphans Educational Assistance Act of 1956 (Public Law 634) provides educational benefits to the children of veterans who have died as a result of a "disease or injury incurred or aggravated in the armed forces during World War I, or World War II." Public Law 88-361 provides educational benefits to children of servicemen totally and permanently disabled from service causes. Public Law 89-358 was passed June 1, 1966, providing educational training for servicemen having served more than 180 days of active duty. Inquiries relating to veterans education should be addressed to the Veterans Administration, Regional Office, P. O. Box 1437, St. Petersburg, Fla. 33731. Full-time benefits are paid to students enrolling for 14 quarter hours or more.

Social Security

The Social Security Administration requires the University to submit an enrollment certificate for students between the ages of 18 and 22 receiving educational benefits under the Social Security Act. Students receiving these benefits must be and remain full-time students. Students must enroll for 12 quarter hours to receive full-time benefits.

Inquiries relating to Social Security benefits should be addressed to the student's local Social Security office.

Academic Advising

At the University of South Florida, academic advising is the province of the teaching faculty. It is thus an extension of the teaching function—a conscious concern for the academic and educational questions that most students have about the importance of their studies, the proper direction of their educational development, and the practical values of their educational objective.

Since the beginning student generally is in greater need of advice and guidance, a selected corps of advisers serves students who are registered in the College of Basic Studies. Members of the advising corps are faculty members who are relieved of some teaching responsibility in order to devote relatively more time to student advising. Faculty members participating in the program represent all of the colleges and divisions of the University and are

chosen because of their interest and experience in curricular advising. The advising program in the College of Basic Studies is designed to provide students during their first two years with whatever assistance is necessary in order to move them toward their educational goals in a timely fashion. Coordination of the advising program for students enrolled in the College of Basic Studies is the responsibility of the Coordinator of Student Advising under the dean of that college.

Students entering the upper level programs, usually at the beginning of the junior year, are assigned to an adviser in their major field. Curricular advising in the upper level programs is the responsibility of the associate deans in the College of Liberal Arts and of the coordinators designated by the respective deans in the Colleges of Business Administration, Education, and Engineering.

All degree-seeking students entering the University are urged to participate in a two-day orientation conference, at which time they meet with an adviser in their proposed field of study to prepare a schedule of courses. Prior to this meeting, advisers are provided with pertinent information, such as admission data and test scores, concerning each student. During the orientation conference, or shortly after the beginning of classes, the new student is assigned to a specific adviser in accordance with his stated educational objective. The student who has not yet decided on an objective is assigned without regard to the adviser's area of specialization.

A student is expected to meet at least once each term with his adviser for purposes of program planning. However, he is encouraged to visit his adviser whenever he feels in need of help with academic or personal problems. Although the adviser is essentially a resource person for assistance with academic and curricular matters, he can often refer the student to a source of specialized help when the problem is one with which he is not qualified to deal.

Although it is not necessary for a student to have a specific educational goal in mind at the time he enters the University, he should discuss with his adviser any general educational objective he might have at their first meeting. Some courses of study require enrollment in key courses during the first year if the student is not to lose time in his work toward a degree. Both engineering and the medical sciences are curricula which illustrate this point.

Provisions are made to permit a change of adviser when it appears to be in the best educational interests of the student. A change of educational objective is the most common reason for reassignment, but reassignment may be made at any time the student or adviser believes a change is desirable.

While the University provides advising services to assist students with academic planning, the responsibility for seeing that all requirements are met rests with the student.

SPECIAL ACADEMIC FEATURES

The University of South Florida seeks to achieve its objectives not only through its formally organized colleges and courses but also through certain special services. These are programs or activities which clearly are designed to enhance the education of students but do so through means other than orthodox courses and classes. Many of these do not even offer academic credit,

although some may be means by which students do earn credits. Regardless of whether or not these activities count toward the definite graduation requirements, they can be tremendously significant in the lives of students who participate in them.

CREDIT BY EXAMINATION

Students may apply to take lower division basic studies courses by Credit by Examination. If the application is approved and presented at regular registration, they take the final examination with the class. Those making "B" or higher on the examination will receive college credit for the course. Those making "C" are still eligible for waiver but without credit. Those making "D" or lower lose the waiver privilege and must take the course in class or use the course as the one authorized omission. Students who have completed more than two college courses in the field of study concerned may not earn use the course as one of the two authorized omissions. Students who have completed more than two college courses in the field of study concerned may not earn credit by examination; however, they may take the examination and secure a waiver by scoring a "C" or higher.

INDEPENDENT STUDY

Students wishing to take a course by independent study must contact the instructor of the course and complete a *written contract*. This contract specifies the requirements to be completed by the student including tests, periodic class attendance, term papers, etc. If the course is in the College of Basic Studies, approval for independent study may be given by the course chairman. A copy of the contract is to be sent to the Coordinator of Independent Study. The student must take the final examination in the course, or the equivalent.

Not all courses in the University can be taken by independent study. The respective colleges have jurisdiction in the determination of which courses may be taken in this manner.

The regular grading system applies to all independent study students. Grades earned by independent study have the same status as those acquired through regular class attendance. Students taking a course by independent study must register for the course in the regular manner and for a specific section.

ADVANCED PLACEMENT-CREDIT PROGRAM

The University of South Florida participates in the Advanced Placement Program conducted by the College Entrance Examination Board, which provides 13 college-level advanced placement examinations in American history, biology, chemistry, English, European history, French, intermediate German, advanced German, Latin IV, Latin V, mathematics, physics, and Spanish. Examinations in Russian are being added.

Examination papers are graded by selected committees on a five-point scale: 5—high honors, 4—honors, 3—good, 2—credit, 1—no credit.

The University allows automatic advanced placement credit for scores of 3, 4 and 5, and allows advanced placement with or without credit for scores of 2, upon recommendation of the program concerned.

Credit may be applied to basic studies courses where appropriate, or to comparable liberal arts courses as best fits the needs of the student.

Participation in this advanced placement program does not affect the University's regulation concerning waiver, credit by examination, independent study, or other provisions for the advanced placement of qualified students.

ADVANCED PLACEMENT-NON-CREDIT PROGRAM

Frequently a superior student, particularly in the fields of science and mathematics, is allowed to enter advanced courses in those subjects. It is possible for students well trained in mathematics to enter calculus as freshmen. It is also possible for well trained students to enter physics or chemistry without having other college level science. Before permission is granted to do so, students are required to take a science and mathematics examination to determine whether or not they actually have the knowledge and competency to succeed in these advanced courses. This same procedure is applied to other subjects.

EXTRA LOADS

The normal load for full-time students ranges from 12 to 18 quarter hours each term. For most students seriously involved in study this is ample. However, some students find they can, with profit, take even heavier loads. To do so they must receive permission of the dean of the college in which they are enrolled and should clearly understand the difficulties they will encounter in taking as many as 21 quarter hours. For some students, however, an overload is the best way for them to gain maximally from their college education. It should be noted, however, that under the quarter system the carrying of overloads is more difficult than under the trimester system.

Registration for more than 18 credits requires approval of the dean or division director of the student's college. A first-quarter freshman is only rarely permitted to undertake more than 18 credits. Thereafter, permission may be granted if the student's grade point is 3.0 or higher. Freshmen and sophomores who wish to carry more than 18 credits should be referred to the Dean of the College of Basic Studies or to the Coordinator of Advising.

HONORS

The University of South Florida, emphasizing as it does solid academic achievement, is developing ways of recognizing distinguished student achievement. On the opening day of classes for the fall quarter, an Honors Convocation is held to recognize those students who have maintained a grade point ratio of 3.5 or better in 12 or more quarter hours attempted at USF in each of the quarters of attendance within the year immediately preceding the Convocation.

The Gold Key honor society recognizes outstanding students.

COOPERATIVE EDUCATION PROGRAM

The Cooperative Education Program has as its objective a balanced education where experience is an integral part of formal education, and theory is blended with practice. In addition to regular classroom and laboratory exercises, it acquaints the student with the world of work and a professional environment. Students become acquainted with professional skills while obtaining their academic training. The ultimate objective of the program is to bring business, industry and governmental agencies close to the educational

program of the University and have the graduates absorbed into permanent employment of the Southeast's leading employers.

The Cooperative Education Program is particularly designed for recent high school graduates rather than older, more mature students with considerable work or professional experience. It also requires students of demonstrated academic ability. A student must have a minimum of 36 quarter hours of academic work completed with a grade point average of 2.0 or better before being assigned to an employer. The program is open to all students regardless of major, undergraduate and graduate as well.

All University of South Florida cooperative programs are approximately four years in length except in the field of engineering, which is approximately a five-year program. Following three or more quarters on campus the student is assigned to a team and alternates between quarters of training (paid employment) and quarters of study until he reaches the senior level, when he returns to the campus to complete his academic requirements.

The University will assign students to training programs relevant to their educational and professional goals. Usually students are first placed on assignments where they can learn the fundamentals. They may then advance in the type of assignment from training period to training period.

Many types of enterprises have joined the University as cooperative employers. Those currently having cooperative programs and accepting University of South Florida students in these training programs include: public utilities, financial institutions, chemical plants, department stores, school systems, aircraft and automobile manufacturers, insurance firms, chemical, biological, and nuclear laboratories, and many governmental agencies including the U.S. Food and Drug Administration, the National Aeronautics and Space Administration, and the National Archives and Records Service. Six of NASA's centers currently have University of South Florida students in their training programs.

Students are encouraged to make application for placement in the program during their first quarter on campus even though they must complete at least 36 hours of academic work before being assigned to an employer.

Once a student is accepted into the program, the training assignments become a part of his academic program leading to a degree. The student must remain on the alternating pattern of training and study until he reaches senior level or is released from the Cooperative Education Program by the director. Students signing an agreement covering training periods are obligated to fulfill their agreement.

Students who fail to report for a training period after signing an agreement, who fail to keep their agreement to remain with an employer to the end of a given training assignment, or who fail to remain in the program until they reach senior level, will not be permitted to register as full-time students during their next quarter on campus.

Cooperative Education students are encouraged to take one course during each training period. This may be a regular course taken by class attendance, by independent study, or credit by examination, at the University of South Florida or any other accredited college or university, a course by home study or correspondence, or a special problems course in an area appropriate to the student's major interests. Most of these special problems courses at the University of South Florida carry a course number of 481. They may be re-

peated and credit may vary from one to five hours per quarter for Cooperative Education students, the amount to be determined at the time of advising.

A special course is available for Cooperative Education students—CBS 471, Cooperative Education Research Report, 1-5 credits. This course is designed specifically for Cooperative Education students in which the student pursues for a minimum of two training quarters a research subject dealing with his training assignment and his major area of professional interest. The Cooperative Education student is assigned to a professor in his major field and will confer regularly with him on the subject, structure and content of the written research project. The findings of this project would be embodied in an intensive written report. This course may be used with designators other than CB if approved by the dean and department head of the college and area concerned. Further information may be obtained in the Office of Cooperative Education.

The registration fee for the training period is \$40.00 and, in general, covers the fee for one course up to five hours in value (see Cooperative Education Handbook for exceptions), student publications, use of the Library, Student Health Service, and privileges enjoyed by other full-time students. Transfer students are welcome to select the program and should make application during their first quarter at the University.

GRADES AND EXAMINATIONS

There will be a final examination for most courses offered by the University. These will be given during a regularly scheduled examination period. Final examinations may not be given at any other time except in those courses the very nature of which makes other arrangements necessary.

Courses which meet only at night will normally have the final examinations scheduled at night. Courses which meet during the daytime but which have evening sections will normally be scheduled for final examinations during the daytime. Students should therefore be prepared to make any necessary arrangements to meet their final examination schedule.

There will be a common final examination each term for each 100 and 200 level course in the College of Basic Studies, prepared by the Office of Evaluation Services. While the nature of this final examination will vary with the nature of the particular course, final examinations will count for 40 per cent of the student's final grade.

The University of South Florida maintains a five-letter grading system. While pluses and minuses may be used for computation of grades or other purposes, no pluses or minuses will be recorded on students' permanent records. The five letters are:

- A—Superior performance
- B—Excellent performance
- C—Average performance
- D—Below average performance, but passing
- F—Failure

In addition to the above grades, the following grades are given as explained below.

- S—Satisfactory
- U—Unsatisfactory

W—Withdrawal from course without penalty

X—Incomplete

Y—Automatic failure (Recorded as F)

In CBS 401 and EDC 499, "S" and "U" grades are used to indicate the student's final grade in the course. These grades do not affect the students Grade Point Ratio since no grade points are assigned to either an "S" or "U" grade. However, the student will receive quarter hours credit for the course toward his degree if an "S" grade is attained.

For illustration, if a student has received a grade of "S" in one three-hour course and has attempted and passed 180 quarter hours of work, his cumulative Grade Point Ratio will be based upon the 177 hours of work for which he received grade points.

If a student received a grade of "U" in the same illustration, his cumulative Grade Point Ratio would still be based upon the grade points for 177 hours of work, his attempted hours would still be 180 hours, but the passing hours would, however, be only 177 hours.

A "W" indicates withdrawal without penalty from the course. "W" is an administrative grade only, and may not be assigned by an instructor.

An "X" grade may be used for any authorized failure to meet the requirements of a course. An "X" grade resulting from any cause other than a 100 or 200 level basic studies final must be removed (*graduate students excluded*) within three weeks of the next term the student is enrolled. Permission to remove an "X" resulting from a basic studies final must be secured from the Dean of Basic Studies within the first three weeks of the next enrollment and the exam completed at the end of the term for which permission is granted. Failure to meet applicable conditions will change the "X" to "F." Until removed, the "X" is computed in the grade point ratio as "F."

A "Y" grade is used only in the College of Basic Studies and is a failing grade. It is used when the instructor believes that regardless of the grade a student earns on a final examination he should fail the course. A "Y" grade insures this failure. It is viewed as final and is recorded as "F."

The University has a system of grade points used in computing grade point ratios. (A = 4 grade points, B = 3, C = 2, D = 1, F = 0.) Grade point ratios are computed by multiplying the number of credits assigned to each course by the point value of the grade given. The total of the credit points for all courses taken divided by the total number of quarter hours attempted equals the grade point ratio. For example, a student attempting five three-credit courses who earned two A's, two B's, and one F, would have a grade point ratio of 2.800.

If a student repeats a course for any reason, his grade point ratio will include each grade received. For example, if a three-hour course is repeated, it is computed as six quarter hours attempted.

If the grade in the course being repeated is an "X," the "X" is changed to an "R" (Repeat) and is computed as an "F."

ACADEMIC SERVICES

Computer Research Center

The University maintains centralized highspeed electronic computer facilities for use in teaching, research, and administration. This Center has

a Systems Planning Department which assists University Administrative Offices, a Faculty Consulting Department responsible for facilitating the use of computers in relation to classroom teaching and research conducted by faculty and students, and an education unit which sponsors non-credit seminars in computer languages such as FORTRAN and COBOL, as well as other subjects relative to the use of computers. Finally, a central corps of programmers service the University computer needs as expressed through the systems and consulting departments.

At present, the University computer facilities include an IBM 1410 and auxiliary equipment. This equipment as well as the staff of the Computer Research Center are housed in the new Science Building. Within the next year, electronic computer facilities on the campus are expected to be expanded considerably with the introduction of an on-line, time-sharing computer system. Input-output stations as well as relevant auxiliary equipment are anticipated to be ultimately located in major University buildings in order to facilitate the use of the centralized computers.

Educational Resources

The Division of Educational Resources offers the following services.

AUDIO-VISUAL SERVICES. Audio-Visual Services make a variety of equipment and instructional materials available for the classroom, University events, and other functions. Such equipment includes public address systems, tape recorders, and projectors of all kinds.

PRODUCTION CENTER. Both graphic and photography services for use in the classroom as well as the overall University program are produced here.

BROADCASTING SERVICES. Radio and television are a part of the Broadcasting Services. Radio WUSF is an FM radio station operating on 89.7 mc. WUSF-TV, Channel 16, UHF, is an educational television station serving the University and the communities of the seven surrounding counties. Closed-circuit television is also provided to most classrooms. These facilities are used as a laboratory for students enrolled in the broadcast curriculum.

INSTRUCTIONAL MATERIALS CENTER. The center maintains a library of instructional materials including a curriculum laboratory, films, filmstrips, tapes, records, maps, and slides. These materials are available to the faculty and staff for academic purposes. Certain records, filmstrips, and other materials are loaned to faculty, staff, and students for independent study and recreational purposes.

FILM LIBRARY. A complete film service is available. Films not a part of the University Film Library will be requested from other sources through this service.

The Library

It is important that a library should take into account not alone the books on its shelves but also the people it serves. This point of view is central in the philosophy of the University of South Florida Library. A library is good, not because of the volumes it has, but because it is used by people who derive personal benefit from its use and who produce something as a result of its use that will be of benefit to our society.

The Library staff is interested that students come to regard books as a

way of life and that they use the Library regularly. It is the Library's aim that students should buy, read and discuss books and feel bereft when deprived of books. The University expects students to become thoroughly familiar with the University Library book collection, to master the techniques of using it, and—before graduation—to achieve a familiarity with books which will carry over into later life.

The Library has about 190,000 volumes, and these holdings are being increased at the rate of approximately 25,000 volumes each year. The Library also subscribes to about 3,000 journals. It is a depository for U.S. Government publications. These resources provide a beginning toward library service for the University community.

The Library collection is made available to readers by means of an open stack system. The Library's basic policy is to encourage users to become familiar with many kinds of books by browsing through the stacks. There are reference librarians to assist in bibliographical searches or in locating material. Specialized areas include a recreational reading area in the first floor lobby, special collections area (including a Florida collection), a United States Government documents collection, and an art gallery.

Sponsored Research

Research is an important aspect of the education program at the University of South Florida. Faculty members are encouraged to pursue research activities, and many students participate in research and training projects supported by funds given to the University by public and private granting agencies. Research is integrated with the instructional program in a very real sense.

The Office of Sponsored Research is the central coordinating unit for research and other sponsored educational activities on the campus. It provides information about granting agencies and serves as a consultation center for faculty who desire help in processing research proposals.

Although the Office of Sponsored Research operates primarily for the benefit of the faculty, students who have an appropriate interest in research are welcome to visit the office.

Center for Research and Development

In the Spring of 1966, The University of South Florida Research Institute was established to house multi-disciplinary sponsored projects, such as the Aging, SECA, and Marine Science.

The USF Research Institute is structured within the Dean of Academic Affairs Office and is directed by the Office of Sponsored Research. The Institute maintains faculty research positions to be used to supply continuity for research and demonstration projects.

FEES

The following fee schedule applies to all University of South Florida students. All fees are subject to change by action of the State Legislature, without prior notice. The University will make every effort to advertise any such changes if they occur.

A. Initial application fee (each application—not refundable) \$ 10.00

B. The following fees must be paid in full at the time of registration:

	<u>Registration Fee</u>	<u>Tuition*</u>
1. Registration Fee and Tuition:		
Undergraduate or Graduate students registering for less than seven quarter hours (credit or non-credit) per quarter hour	\$ 10.00	\$ 14.00
Students registering for seven or more quarter hours (credit or non-credit)	\$125.00	\$200.00
2. Registration fee and tuition for off-campus students.		
Undergraduate or graduate students per quarter hour	\$ 12.00	\$ 14.00
3. Applied music fees		\$ 25.00
4. Late Registration Fee		10.00
5. Audit Fees (same rate as if registered for Credit)		
6. Cooperative Education Program (for work-training quarter)		40.00
7. Student Deposit (for full-time students)		15.00
8. Breakage Fee (Fees may be paid after registration for courses requiring breakage fees.)		

C. Room and board to be paid in accordance with information in the Housing and Food Service Contract.

	<u>Per Quarter†</u>
1. Room and Board (students living on campus)	
Plan A—21 meals per week	\$298.62
Plan B—15 meals per week	275.96
2. Food Service Plan (students living off-campus)	
Plan A—21 meals per week	158.62
Plan B—15 meals per week	135.96
Commuter's Food Plan (five meals per week)	45.00

* Tuition is paid by non-Florida residents in addition to the registration fee. Florida residents pay only the registration fee.

† State Sales and Use Tax included.

FLORIDA RESIDENCY

A Florida resident, for purposes of admission, expenses and other University classification needs, is one whose parent or guardian (or the applicant if over 21) is a citizen of the United States, or a resident alien, and has resided permanently in the state of Florida for at least 12 months immediately preceding registration at the University. No applicant can claim Florida residence only by virtue of the fact that he or she has attended any school, college, or university in the state for the 12-month period immediately preceding registration. The owning of property in Florida while being physically located in another state does not qualify a person to claim Florida residence.

REFUND OF FEES

Students who find it necessary to withdraw from the University may be permitted to have a refund of fees upon presentation to the University Business Office of an authorization issued by the Registrar's Office. These refunds will be made under the following conditions.

1. No part of the student activity fee will be refunded if the student fails to surrender his original (current quarter) "Certificate of Registration" card;
2. Deductions from authorized refunds will be made for unpaid accounts due the University;
3. No fees will be refunded after the third regular class day in any quarter except in the following cases:
 - a. A student involuntarily called back to duty with the armed forces will be entitled to a refund in the amount of the registration fee less \$30.00 for a full-time student and \$3.00 per hour for a part-time student.
 - b. The death of a student or an incapacitating illness of such duration and severity as to preclude successful completion of the academic program for the term for which enrolled would also permit a refund in the amount of the registration fee less \$30.00 for a full-time student and \$3.00 per hour for a part-time student.
 - c. Cancellations would be considered a separate category where the student is considered not to be registered because of the University's actions, usually resulting from some pre-existing University regulations.
4. Refunds for a full quarter for undergraduates and graduates:
 - a. A full refund will be made if withdrawal is effected before the first day on which classes begin for the quarter.
 - b. A full refund less a \$30.00 charge will be made for a full-time student making a complete withdrawal from the University on or before the third regular class day in any quarter.
 - c. A full refund less a \$30.00 charge and the proper charges per hour for each hour continued by students changing from full-time to part-time on or before the third regular class day in any quarter.
 - d. Part-time students will receive a full refund less a charge of \$3.00 for each hour dropped on or before the third regular class day in any quarter.
5. A full refund of music fees and out-of-state fees will be made if withdrawal is effected on or before the third regular class day in any quarter.

STUDENT DEPOSIT FEES AND CHECK CASHING SERVICE

At the student's first registration, every full-time student is required to pay a refundable deposit of \$15.00 to cover cost of replacement due to any loss or breakage of University equipment, fines and other charges. The student will be required to maintain his deposit at a minimum of \$5.00 and will not be billed during the enrollment period except when the deposit falls below this amount. If the deposit falls below the minimum before the end of attendance at the University, the student will be notified by the University Cashier to bring his deposit up to \$15.00. Failure to comply will deny the student the privilege to re-register.

If a student changes from full- to part-time, or withdraws from the University, he may apply to the Cashier's Office for a refund of the deposit. All deposits will be refunded by check within 30 days after application has been made. If the student has registered on a full-time basis, the deposit will be extended for that period.

The University will accept personal checks for accounts due the University. Each student is urged to make his own financial arrangements through his choice of commercial banks. The University Cashier and the Bookstore will cash personal checks not exceeding \$50.00.



STUDENT WELFARE

The State Universities of Florida are dedicated to the intellectual, social, and moral development of students in order to provide responsible leaders who can work effectively in a democratic society. Each university has a concern for the total life of the student as well as for his classroom performance. Diversity of opinion, criticism, and dissent are essential in discharging these responsibilities, and this has been set forth and safeguarded in the Board of Regents' Operating Manual (Section 2-3.20, pp. 2-28 to 2-30).

As a condition for admission to one of the the State Universities of Florida, students agree to abide by the policies of the Board of Regents and by the rules and regulations of the institution. The universities have the right and responsibility to determine who shall be admitted to the institution; the conduct or behavior acceptable to the institution; and under what conditions one may continue as a student. Administrative due process and the right of review in all disciplinary hearings are guaranteed by the Board of Regents in its Operating Manual (Section 2-7.3).

Academic freedom and free inquiry in the State Universities can be preserved only if protected from outside manipulation and subversion. The universities must be protected from those persons who would disregard normal channels by which grievances may be aired and who would create disturbances on campuses in such a way as to impede or arrest the academic processes of the university. Acts of disrespect and disregard of authority will not be tolerated.

University officials and particularly Deans of Students and their staffs are charged with the responsibility of interpreting the policies of the Board of Regents to students and others in the university communities, and with developing positive student personnel programs which further the intellectual, social, and moral development of students.

Student Affairs

Implementation of the personnel service program for students is the concern of the Office of the Dean of Student Affairs. Orientation of new students, residence hall programs, University Center programs, scholarships, financial aid, student health, student activities, student organizations, class attendance, disciplinary action, personal counseling, physical education, recreation, inter-collegiate athletics, and student publications are programs of Student Affairs. The University provides the leadership and professional services for maintaining the educational philosophy of this program.

The Office of Dean of Women is available to help women students. Personal counsel and advice about student women's organizations are provided by this office. Attendance in classes, academic difficulties, social standards, and advisement to the Council on Religious Activities are also concerns of the Dean of Women.

The Office of Dean of Men is available to help men students. Personal counsel, advice about organizations, social standards, and orientation of new students are concerns of the Dean of Men. This office also serves in an advisory capacity for foreign students and fraternities.

Experiences which develop in students a firm and enlightened belief in democracy, an understanding of its methods, and a sense of personal responsibility are essential for a free society. The social experiences of working in extra-curricular activities provide valuable personal understanding, emotional maturity, recreation, and social skills. Out-of-class activities of the University are related to these ends. Student activities, clubs and organizations are incorporated in the University's total educational program through the staff of Student Affairs and faculty advisers. The Director of Student Organizations, Dean of Women, Dean of Men, and the University Center and residence halls are particularly concerned with this co-curricular area of student life.

Information and advice about student organizations are provided by the Office of Director of Student Organizations. The office assists in the organization of new groups and serves as an advisory center for programs of activities, membership requirements, names of student leaders, financial advice, and assistance for advisers. Active participation in student organizations is a valuable part of a student's total education, and develops desirable qualities and traits of leadership, personality, and character.

Student Conduct, Dress, and Discipline

Social standards governing activities of student groups have been developed jointly by students, faculty, and the Student Affairs staff. Social standards boards review violations of these codes. Self-discipline and awareness of social obligations are the objectives of the program.

Students attending the University of South Florida are considered to be responsible young adults studying with their faculty colleagues in search of knowledge. Rigid regulation of personal conduct should not be necessary.

Freedom must be balanced by individual responsibility and respect for the rights and freedom of others. Students will, therefore, be considered responsible for their own decisions and actions both on or off campus. Failure to assume this responsibility or actions which jeopardize the rights and freedoms of others or the integrity of the University will result in disciplinary review.

Just as the University expects high standards of academic performance, so does it expect high standards of individual conduct. Similarly, it expects dress to be appropriate to the activities in which the individuals are engaged.

Noticeable or gross departures from expected standards of conduct or dress on the part of students will first be considered errors in judgment. Advisers or other officers of the institution will discuss such lapses with the student concerned. Persistent violations of expected standards or established regulations will involve appropriate disciplinary action. The University may deny admission or continued attendance to those whose decisions and actions are contrary to the purposes and procedures of the University.

Student Association

The Student Association includes all regularly enrolled students of the University. Each student carrying seven or more credit hours per quarter is a voting member of the University of South Florida Student Association. Through its councils and elected officers, the Association directs, under the advisement of the Dean of Student Affairs, many student activities. Elections for membership on college councils and for Student Association offices are held annually.

Representation in the Student Association Legislature is based on proportional representation from the colleges, residence areas and at large.

The Student Association is the medium through which students participate in the program of University life. In addition, the Student Association elects student representatives to the University Senate.

Insurance

TRAVEL INSURANCE

Students may obtain accident insurance for a nominal charge at the U.S.F. Bookstore in the University Center for field trips and personal travel.

PERSONAL PROPERTY INSURANCE

Students living in the residence halls may obtain insurance on personal property at the rate of \$5 for personal property valued up to \$500. Applications are available in the Housing Office and payment is made to the Cashier in the Finance and Accounting Office.

Housing

The housing program of the University is part of the total educational plan. Functional, pleasant living conditions contribute to a student's scholarship, habits, and attitudes. Provision of adequate living conditions is a responsibility shared by students, parents, and the University.

Students apply for housing when applying for admission to the University. Contracts for housing assignment will be sent after admission has been approved.

Those students who reside within a 20-mile radius of the University are generally expected to commute. All Tampa students are considered to be within the 20-mile radius.

Other regularly enrolled students paying the registration fee for full time attendance are expected to live in University residence halls or in approved off-campus residence halls which meet University regulations pertaining to operation and staffing.

Students will be permitted to live in University-approved off-campus accommodations if they are at least 21 years of age by September 1 of the first quarter, January 1 of the second quarter, March 1 of the third quarter, and June 1 of the fourth quarter. Those students who become 21 years of age while in residence must complete their current housing contract.

Students will be permitted to live in other than University-approved accommodations if they meet one of the following qualifications: (a) married student living with spouse; (b) living with parents, legal guardians, or (with

the approval of parent or guardian) other adult relatives; (c) paying part-time fees.

Applications for exceptions are to be directed to the Dean of Men or the Dean of Women.

RESIDENCE HALLS

Accommodations for students are available in the University's modern residence halls. Residences are completely air conditioned and provide for the living, educational, social, and personal needs of students.

In general, rooms are furnished with beds, dressers, mirrors, desks, lamps, drapes, and chairs. Linen service is provided. In each living unit, composed of between 40 and 50 students, a Resident Assistant is available to assist students. A Resident Instructor for each hall is available for personal and academic counseling.

The University's residence halls are grouped in units called complexes. The first completed complex—Argos—includes three residence halls grouped around Argos Center, which serves as the living and dining rooms of these halls. In addition to the lounges and cafeteria, Argos Center has a snack bar, TV room, conference rooms, barber shop, beauty shop, and Argos Shop (an annex of the University Campus Shop and Bookstore). The students residing in these halls live in study-sleeping rooms. An outdoor swimming pool in this complex is also available for student use.

Andros Complex—consisting of nine residence halls—provides a different type of living arrangement for students. Suites are designed to accommodate eight students—two students sharing a bedroom, four students sharing a study room and eight students sharing a bath. In addition, each living unit has its own lounge. Andros Center is also considered the living and dining room of the students residing in this complex and has most of the same facilities as in Argos Center.

The residence hall program emphasizes gracious living, attractive surroundings, opportunity for group activity, self-government, and counseling services of professional people.

OFF-CAMPUS HOUSING

The University has approved certain off-campus residence halls which have met University regulations pertaining to operation and staffing. Information regarding these facilities is available through the Housing Office.

Students who meet the University requirements for off-campus living must live in housing acceptable to their parents and the University.

The Housing Office maintains a list of approved off-campus housing. Rental arrangements may best be made after personal inspection of facilities and conference with the householder before the University opens. Fall quarter arrangements may be made during the summer.

Food Service

All students in residence halls on the campus receive three meals a day in the cafeterias. The cost is included in the total charge for room and board. A food service boarding plan is available to those living off campus. Snack bars,

open during the day and evening, provide sandwiches and fountain service. Several small dining rooms may be reserved by committees or special groups wishing to take their trays to a private place for luncheon or dinner meetings.

Student Health Service

Comprehensive health care is provided for full-time students through the University Student Health Service.

A medical examination must be filed by each full-time student prior to registration, including certification of recent immunizations against smallpox, tetanus, and polio. The required form for the examination is provided by the Registrar's Office.

An outpatient clinic, with laboratory and physiotherapy facilities, is maintained. Infirmary care is available for students with illnesses precluding attendance at classes. University physicians have daily office hours, except weekends; and emergency care in the Health Center is available continuously, including nights and weekends.

Consultation with medical specialists and hospital emergency room care may be provided by the Student Health Service, as well as payment of the first \$100 of hospitalization expenses, when approved by the Director of the Health Service. Other types of off-campus medical care remain the responsibility of the individual student.

A voluntary health insurance program is available through the University.

A medical history and record of physical examination and inoculations must be filed in the Student Health Service as a requirement of admission.

Developmental Center

The Developmental Center provides services for students desiring professional assistance in the areas of reading, vocational guidance, personal counseling, tutoring, speech and hearing. These services are available to assist students in evaluating and remedying problems which interfere with efficient learning and satisfying participation in campus life.

The Reading Service provides diagnosis and evaluation of reading skills and habits. Visual screening is also available. Two approaches are offered to meet the needs of students referred for help in reading. Non-credit courses in developmental reading are offered which include extensive instruction and practice in word attack, comprehension and in different ways and purposes of reading. An independent study non-credit course is available for students who prefer to assume responsibility for their own improvement with the emphasis on the individual need. Reading laboratory service is available for all reading students enrolled in either the classes or independent study sections. Regular registration procedures will be followed for specific courses such as Developmental Reading. Staff and facility limitations will restrict servicing of new applications to emergencies during peak periods.

The Speech and Hearing Service offers diagnostic and therapeutic sessions for students whose speech or hearing interferes with effective communication. Speech and hearing screening is required for all new entering students. Therapy is available for students who are referred or feel a need for speech improvement.

Counseling Services are available for students requesting help in career planning and in dealing with personal problems. Through testing and interview the counselors assist any student to evaluate his personal aptitudes for his educational and career goals. Any student may ask for help in the Center when he feels that increased understanding of himself and of his relations with others would lead to more confident and satisfactory living and learning.

Students desiring special assistance in their courses may apply to the Developmental Center for tutoring provided by other students in various subjects and courses. Fees are charged by the tutors according to standard rates established by the Developmental Center staff.

Application for any of these services of the Developmental Center may be made by any student at any time and as often as desired.

Financial Aids

The student financial aids program at the University of South Florida is intended to assist qualified students to obtain a university education when they might otherwise lack financial resources. Financial assistance, with the exception of Service Awards, is granted on the basis of financial need, academic promise or attainment, and character.

Scholarships are available, suited to student financial need and academic promise. Registration Fee Work Scholarships are awarded which require about four hours of work on campus per week. University of South Florida Foundation Grant-in-Aid Scholarships and Service Awards are available if the student makes timely application and is qualified for the award.

Scholarship applications are accepted only once each year and must be filed no later than February 1 for scholarships which will begin with the fall quarter. National Defense Student Loan applications for the entire academic year and/or first quarter must be filed not later than March 1. Applications for other quarters may be filed at any time; however, availability of funds will be the controlling factor in granting loans after the original deadline date.

National Defense Education Act Student Loans permit entering freshmen, transfer students, and continuing students to borrow up to \$5,000, with a maximum of \$22 per quarter hour carried each quarter. Repayments begin nine months after the borrower ceases to be a full-time student, at which time the loan draws interest of three per cent. Payment must be made within ten years. Part of the loan may be canceled if the student teaches in an elementary or secondary school, college or university. Payment is deferred if student enters armed service or Peace Corps.

Florida State Education Loans permit any student who has been a resident of Florida for a minimum of three years to borrow an amount predicated on financial need, but usually limited to the registration fee. Repayments begin approximately one year after the borrower ceases to be a full-time student, at which time the loan begins drawing four per cent interest. Repayment of the loan must be completed within five years.

Additional long-term loans may be granted, subject to the availability of funds, from the following programs: Sertoma Memorial Loan Fund for residents of Hillsborough County (number and amount of loans vary); the James J. Love Memorial Scholarship Loan Fund, preference to Gadsden County residents (number and amount of loans vary); Pan-American University Women's Club of Tampa Scholarship Loan Fund for a Tampa high

school graduate of Latin descent; Credit Women of Tampa Scholarship Loan Fund; Vallie H. Perry Chapter of United Daughters of the Confederacy Scholarship Loan Fund for a student whose ancestor served in the Confederate Army or Navy; Henry & J. Edward Rosenzvaig Memorial Fund with preference given to Hillsborough County students majoring in science or engineering; Memorial Junior High School Loan Fund for students who have attended Tampa Memorial Junior High School; Ruby S. Friedberg Student Loan Fund of the B'nai B'rith Women of Tampa; Selby Foundation for brilliant and deserving science students, preferably Sarasota County or West Coast area; Tampa Jr. Chamber of Commerce Student Scholarship Loan Fund for residents of Hillsborough County; Florida Philatelic Society Student Scholarship Loan Fund; Gloria Davis Haston Memorial Loan Fund for graduates of Hillsborough High School; Mrs. Nylah Bell Memorial Loan Fund for graduates of Hillsborough High School; Richard Martin ("Marty") Starns, III, Memorial Engineering Student Loan Fund for students pursuing an engineering education; and the United Daughters of the Confederacy Scholarship Loan Fund for descendants of those who served in the Confederate Army or Navy.

Long-term loans may be available from home town participating banks through the Guaranteed Bank Loan Fund Program. Loans are not payable until the student graduates, or leaves the University. More information on this program is available in the Office of Financial Aids.

Short-term loans are available throughout the academic year to meet financial emergencies. These loans must be repaid before the end of the quarter in which the loan was granted.

Applications for scholarships and/or student loans should be made to the Director of Financial Aids.

The following scholarships, with their minimum value given in parentheses, are currently available to qualified students: Ernest Atkins Scholarship (one, \$300); John Stewart Bryan Memorial Award (one, \$500); Pauline Bush Scholarship (one, amount varies); Elizabeth Cone Book Scholarship (one, varies); East Hillsboro Opti-Mrs. Club Book Scholarship (one, \$50); Florida West Coast Chapter of the American Society of Heating, Refrigerating, and Air Conditioning Engineers, Inc. (one, \$250); General Telephone Scholarship (two, Registration Fee); General Telephone All-Employee Chorus Scholarship (four, \$375 each); Eleanor Gilbert Scholarship (one, \$200); Patrick Gordon Estate Scholarship (number and amount vary); Graham-Jones Paper Company Scholarship (one, \$300); Gulf Coast Chapter of the Florida Accountants Association (one, \$250); Gulf Life Insurance Company Scholarship (one, \$1,000); Knight and Wall Scholarship (one, \$451); Maas Brothers Scholarship (one, \$525); Personnel Administration Association of Central Florida Scholarship (one, \$300); Reader's Digest Foundation Scholarship (number and amount vary); Robinson High School PTA Scholarship (one, \$400); Schlumberger Foundation Scholarship (one, \$500); Ione Lister Simmons Creative Writing Scholarship (one, \$500); State Teachers Scholarship (number varies, \$400 each; application should be made to the student's County Superintendent of Public Schools prior to October); Tampa Lakes Women's Club Scholarship (one, \$50); Teachers of the Mentally Retarded Scholarship (five, \$1,600 each plus tuition); University of South Florida Women's Club Scholarship (one, amount varies); University of South Florida Registration-Fee Work-Scholarships (approximately 100, \$375 each); Winn-Dixie Stores Foundation Junior-Senior Scholarships (one to three,

amount varies up to \$200); Winn-Dixie Stores Foundation Scholarship (number varies, \$375 each; recipient chosen by Winn-Dixie Stores Foundation, Jacksonville, Florida).

The Vocational Rehabilitation Division, State Department of Education, Tallahassee, Florida, provides limited assistance to students who are handicapped.

The Florida Council for the Blind, P. O. Box 1229, Tampa, Florida 33601, provides financial help for blind students.

Students with a minimum of 24 hours of academic credit and a grade point average of 2.0 or better may apply for a Cooperative Education team. Further information on the Cooperative Education Program is given on page 29.

Student employment under the College-Work-Study Program, administered by the Office of Education, Department of Health, Education and Welfare, is available for students from families meeting the income requirement for eligibility. Certification for eligibility must be received from the Office of Financial Aids.

Additional information on scholarships is available in the Office of Financial Aids.

Placement Services

The purpose of the Placement Services Division of Administrative Services is to assist students and alumni in realizing their career objectives. This office, together with the Cooperative Education Program and the Financial Aids Office, attempts to insure that economic considerations will not impede the progress of any student who is seriously in pursuit of a college education.

Every effort is made to insure part-time placement for undergraduate and graduate students who express a need for employment. Students may register for part-time placement both on and off campus, as well as for seasonal employment throughout the world. Up-to-date job listings are maintained during the year to assist the student seeking part-time employment.

One of the recognized goals of a college education is to maximize career satisfaction, and Placement Services exists to facilitate the achievement of this end. The Career Planning Center provides the student with materials on vocational guidance, career opportunities, and employers. It is maintained in Placement Services as an adjunct to the Graduate Placement Service, the Cooperative Education Program and the Developmental Center, for the benefit of all students.

Placement Services also serves as a central source of information on graduate schools and programs and maintains a variety of material on financial assistance available to graduate students. In addition to graduate school catalogs and information on individual college and university stipends, material and applications are maintained on such national and international awards as Fulbright and Rhodes Scholarships, National Science Foundation Fellowships, and many others. All students with an interest in attending graduate school are encouraged to begin their investigation of opportunities in this office.

Students register with Placement Services early in their graduating year. This enables them to interview on campus with recruiters from educational

systems, businesses, industries, and governmental agencies throughout the country. Every registrant receives 25 free copies of his personal resume. In addition, these credentials may be used when applying to graduate school. The above services are also available to alumni desiring career relocations.

University Center

The University Center serves as the hub of campus life outside of the classroom. It provides facilities, services, and programs to enhance the social, cultural, and recreational life of the University. The information service desk serves as the coordinating center for the numerous and varied services and activities of the University Center and out-of-class student life. It is here that student organizations schedule facilities and request services for their various activities. The master schedule of all student activities is maintained at this location.

Many of the University Center's facilities and services provide for personal and social needs. It has conference and activity areas, lounges, a cafeteria, dining rooms, a snack bar, student organization offices, craft and photography areas, a ballroom, book lockers, lounges for music and television listening, billiards, table tennis, table games, the University Campus Shop and Bookstore, Student Health Services, a magazine browsing library, campus lost and found, and various other services. Food Service, Bookstore and Health Service operations are coordinated through their respective University administrative areas, while the other facilities and services are coordinated by the University Center Director's office.

In addition to providing services and facilities, the University Center also functions as a program. The University Center Program Council is comprised of the chairmen of 12 student committees and three elected officers. The Program Council provides a social, cultural and recreational program to make leisure time activities more meaningful. The overall program is designed to supply additional experience by providing opportunities for self-directed activities and the attainment of social skills and knowledge.

The Center's program contributes to achievement of the educational goals of the University by providing a laboratory for experience in citizenship—a community center where all may have a part in the direction of community enterprises. Academic and non-academic interests are related so that students' development may be well-rounded and complete. Enhancement of social skills and emotional development of the individual are also goals of the program.

The University Center Program Council has as its objective to provide a balanced program of activities reflecting the special social and recreational needs of all students' out-of-class interests. All activities are planned, arranged, and directed by student committees. A student may volunteer to serve on such committees as dance, hospitality, fashion, talent, music, special events, arts and exhibits, movies, recreation, lessons, personnel, public relations and publicity committees.

University Bookstore and Campus Shops

The USF Bookstore is located on the first floor of the University Center Building. The Book Department carries all required textbook and student

supplies. In addition, it has a complete selection of trade books, and over 7,000 paperback titles. Special orders will be taken for any book which is in print. Other items carried are art prints, USF monogrammed clothing and jewelry, sundries, records, and greeting cards. There are copying and film development services.

Argos Shop, located in the Argos complex, and Andros Shop, in the Andros complex are branch stores carrying a large selection of non-required reading material plus a complete line of personal toiletries. Andros Shop also specializes in monogrammed sorority and fraternity items.

Clubs and Other Organizations

Students have formed clubs, organizations, and councils in almost every field of interest. New groups are being formed and will continue to develop. Groups presently organized cover the most frequently desired kinds of activities.

MUSIC AND DRAMA CLUBS

The excellent program in the Fine Arts and the facilities of the Fine Arts-Humanities Building and the Theatre have attracted students to various student interest groups. These student organizations—Bay Players, for those interested in Theatre, and Sigma Alpha Iota and Ripieno, for those interested in Music—welcome all students to participate. Students are also welcome to join such academic units as the University-Community Orchestra, the University Concert Band, and the Fine Arts Chorale. (See Music course descriptions)

CULTURAL EVENTS

The University of South Florida Artist Series, now in its ninth season, has brought to the campus many of today's outstanding professional musicians. The Artist Series significantly contributes to the education of the students and the University community through the unusual opportunities it provides for hearing the best music performed.

In addition to the Artist Series, the Division of Fine Arts arranges a full schedule of concerts, exhibitions, plays, lectures, films and forums throughout the academic year. Many of these events are presented both during the day and in the evening, and most are free of charge. Programs on the University's Calendar of Events are also open to the general public.

PUBLICATIONS

The University has encouraged and is developing a growing program of campus communication through various publications. These publications are all-University in approach and coverage. They are staffed by students under the general supervision of the Office of Campus Publications.

An 8-column campus newspaper, *The Oracle*, is published each Wednesday of the school year. Containing 10 to 14 pages in each issue, it provides professional experience for those students interested in journalism. Laboratory sessions of journalism classes in newswriting, news editing, makeup and advertising are used to produce major sections of the newspaper. Any student interested in working on the newspaper in any capacity is not only encouraged but urged to participate. About one-third of the staff each quarter is not enrolled in journalism classes.

A University yearbook, *The Aegean*, is produced once a year. All students are eligible to work on this publication and much valuable experience in photography, layout, editing, and business techniques is received by these students.

A campus literary magazine, *South Florida Review*, is produced periodically. While the magazine is sponsored by the Office of Campus Publications, anyone at the University may submit manuscripts for consideration. This publication is devoted primarily to essays, poetry, and literary criticism.

Interested students are invited to join the staff of any campus publication.

FRATERNITIES AND SORORITIES

There are currently thirteen national fraternities and five national and three local sororities functioning on the campus. They carry out a program of social, educational, service, and recreational activities for their members. Membership in these organizations is open to students, by invitation only, once the student has completed 12 credit hours with a 2.0 ("C") average or better. Their programs are coordinated through the Interfraternity Council and the Panhellenic Council with the advice of faculty and staff members.

RELIGIOUS ORGANIZATIONS

The University has encouraged student religious organizations to develop associations and centers. Denominations have built centers in a reserved area on campus. The Episcopal Center was dedicated in the fall of 1962 and the Baptist Center in the Spring of 1964. The University Chapel Fellowship was dedicated in the Spring of 1966. (This center is an ecumenical campus ministry of the following denominations: Methodist, Presbyterian, and United Church of Christ). The Roman Catholic Center was dedicated in the Fall of 1967.

Student religious organizations active on campus include the Baha'I Club, Baptist Student Union, Campus Crusade for Christ, Canterbury Association, Catholic Student Organization, Christian Science Organization, Hillel of the University of South Florida, Lutheran Student Organization, University Chapel Fellowship, and the University Religious Council.

SERVICE AND HONORARY

Alpha Phi Omega (men's national service fraternity), Circle K, Collegiate Civinettes (women's service organization), Athenaeum (women's honorary), Omicron Beta Kappa (men's leadership honorary), Gold Key Honor Society, Pi Mu Epsilon (mathematics honorary), Sigma Alpha Iota (women's music honorary), Psi Chi (psychology honorary), Sigma Pi Sigma (physics honorary), and Tau Beta Phi (engineering honorary) provide associations for leadership and University service experience.

SPECIAL AND ACADEMIC INTEREST ORGANIZATIONS

Students have organized and continue to organize clubs covering a broad range of special and academic interests. Membership is usually open to anyone having an interest in the club's activities. Clubs active at present include Barbenders, Basketweavers, Bay Players, Civil War Round Table, English Club, Exceptional Child Club, Florida Engineering Society, Forensics Club, Geography/Anthropology Club, Golf Club, Karate, Le Cercle Francais (French Club), Library Science Audio Visual, Marine Biology, Medical

Society, Political Union, Polyphonic Motets, Radio Club, Reader's Theatre Guild, Ripieno, Russian Language Club, Sailing-Windjammers, Senior Accounting Organization, Speech Pathology Club, Sports Car Club, Student Florida Education Association, Students for Peace and Freedom, Students for Responsible Government, T. C. C. (Judo), Veteran's Club, Water Ski Club, Women's Karate Club, Young Democrats, and Young Republicans.

COUNCIL AND SPECIAL SERVICE ORGANIZATIONS

In addition to the organizations mentioned above, a number of groups provide programs, information, and governmental outlets for the students of the University. These include the Aegean (yearbook), the College of Basic Studies College Council, the Dean's Advisory Board of Liberal Arts, Education Council, Engineering College Council, the Oracle (campus newspaper), Residence Hall Centers, the Senior Class, the Student Association, the University Center Program Council, and the World Affairs Council.

Recreational Sports

The University of South Florida provides a variety of physical and recreational activities designed to meet the needs and interests of students. Believing that a sound and complete education includes a proper balance of work and study with physical activity, the University program includes Intramural Sports competition for men and women, Sports Clubs, and All-University event days in addition to basic instructional programs in physical education.

The activities represent a broad selection of sports ranging from those of a highly competitive nature to those of a non-competitive type and include individual, dual, team and aquatic sports. Through participation, students, faculty and staff will increase physical fitness, augment leisure time skills and develop a wholesome attitude toward physical activity.

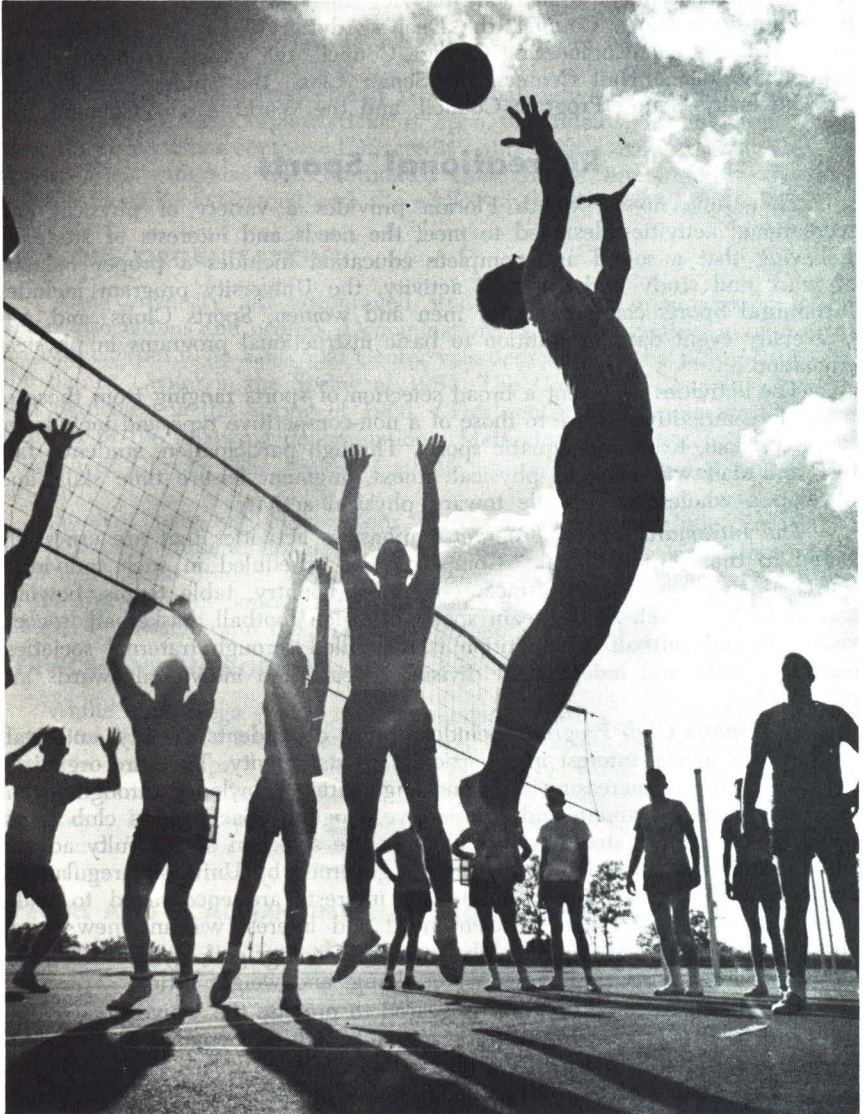
The Intramural Sports Program emphasizes activities that are especially suited to the Florida climate. Competition is scheduled in such individual sports as swimming, tennis, track, golf, cross country, table tennis, bowling and archery, as well as the team sports of touch football, basketball, soccer, volleyball and softball. Competition is scheduled through fraternal societies, residence halls, and independent divisions. Team and individual awards are presented.

The Sports Club Program includes groups of students, faculty, and staff who have a special interest in a particular sports activity. They are organized for the purpose of increasing skills and augmenting knowledge through a continuing in-service training and competitive program. Each sports club is assisted by the coordinator of sports clubs in the selection of a faculty adviser and the initial organization of the club is governed by University regulations. Students with special sports abilities or interests are encouraged to make them known so that when sufficient need and interest warrant, new sports clubs may be formed. Present clubs include: fencing, golf, gymnastics, judo, karate, sailing, sports car, tennis, water skiing, and weight lifting.

The Special Events Program is geared to provide the University community with a variety of informal recreational activities. Some of the activities are: open tournaments, trips to special athletic events, splash parties, picnics, camping, boating, bowling, bike racing and other special project activities related to the development of campus recreation.

Intercollegiate Athletics

The University of South Florida fields teams in such intercollegiate sports as baseball, golf, soccer, swimming, tennis, track, and cross-country. It is not anticipated that such activities as football and basketball will be initiated. Schedules are arranged with quality and reasonable competition which reflect the high standards of the University. Women's athletics are encouraged and held to the same rules that apply to men's athletics.



ACADEMIC PROGRAMS

The University of South Florida programs are presently conducted through five colleges. The College of Basic Studies provides the basic general education needed by all students. The College of Business Administration offers professional courses leading to the bachelor of arts and master of business administration degrees. The College of Education offers professional courses leading to the bachelor and master of arts degrees for teachers. The College of Engineering offers programs leading to the bachelor and master of science in engineering. The College of Liberal Arts offers courses in the arts and sciences, including a variety of professional and preprofessional programs, on the baccalaureate and master's levels. Each of these colleges has its own requirements and standards. However, all share University-wide emphases and certain common requirements for graduation.

Each college has prepared its course offerings with strong undergraduate programs clearly in mind. Students are urged to make their college education a broad one, reserving intensive specialization until they are on a job or have gone on to graduate or professional school.

Each college accepts the idea that a college education begins with a broad base of general courses, proceeds to more specialized work and ends with a formal effort to bring together the many separate threads of an education into a significant pattern. Thus, all students enroll first in basic studies courses, then in courses in the college where they wish to concentrate, and finally in a senior integrating seminar. It is hoped that students will constantly attempt to synthesize their education as they move along and that they will have had considerable experience by the time they reach their senior seminar.

Summer Session

The Summer Session (4th Quarter) constitutes an integral part of the academic program of the University of South Florida. Summer courses are identical with those offered at other times during the academic year and are taught by the regular University instructional staff or by outstanding visiting teachers. In addition to these regular courses, there are various workshops, institutes and conferences conducted by specialists.

While the Summer Session may serve as a continuation of study, as the fourth quarter of the academic year for regular students, these courses and programs have an added emphasis for in-service teachers and for beginning freshmen just graduated from high school.

A special feature of the summer session is the six-week session for teachers. Most of the professional courses in education and many of the courses in the College of Liberal Arts and the College of Basic Studies have been planned to fit into the six-week session for the benefit of teachers.

The Evening Sessions

The Evening Sessions of the University of South Florida are designed to meet educational needs of people within commuting distance.

The admission requirements, the deadlines and other University regulations for the Evening Sessions are the same as those for other students. Evening students must complete an application for admission to the University of South Florida and present all material required and described under Admission to the University (page 12).

Degree seeking students are assigned an adviser shortly after admission to the University and will continue with the assigned adviser so long as they remain students at the University. Advisers are assigned on the basis of the educational objective of the student. The Center for Continuing Education acts as adviser to non-degree seeking students. The Center for Continuing Education is open each evening classes are in session.

Students admitted to the Evening Sessions may select courses to fit their needs with the adviser's approval and with the consent of the instructor. However, students who do waive these requirements must possess sufficient background and experience to compensate for them. The student and his adviser should determine the need for prerequisites and the level of courses in which he will enroll.

(Registration for courses in the evening is held during the same period as registration for day sessions.) The courses of the Evening Sessions contain the same material and requirements as the equivalents offered during the day. Each student will be expected to meet the same standards of performance and pass the same examinations full-time day students are required to complete. Grades and progress will be based on the same system applicable to full-time students.

Students may enroll in courses offered by any of the colleges of the University. As a general rule, part-time students attending night classes are encouraged to take no more than two courses. No evening student may enroll in more than three courses in any one quarter.

Students seeking degrees through the Evening Sessions must meet the same degree requirements as day students. These requirements are set forth under the curricula of the various colleges.

Continuing Education

CREDIT COURSES

The University of South Florida serves the in-service and continuing educational needs of its ever-expanding professional and occupational community which encompasses 12 counties: (Charlotte, DeSoto, Hardee, Hernando, Highlands, Hillsborough, Lee, Manatee, Pasco, Pinellas, Polk, and Sarasota).

Both degree and non-degree seekers may participate in the University's Continuing Education Credit Program. A part of an individual's master's degree credit may be earned by taking off-campus credit courses. This in-



Theatre and University Center

dividual, however, is encouraged to apply for graduate status at an early date so that these courses may be considered for inclusion in his planned and approved graduate program of studies. Acceptance for enrollment in a course does not itself constitute acceptance to the University.

To assure quality of instruction, the continuing education credit courses for the most part are taught by the regular faculty of the University. When this is not possible, outstanding instructional personnel are recruited from neighboring accredited institutions. In addition, the University System Extension Library makes available for each continuing education course the latest in reference and audio-visual instructional materials.

The academic calendar for courses scheduled off campus is essentially the same as for the University's on-campus credit program. Classes are generally scheduled once a week, although a few do meet twice a week.

Although some continuing education credit courses are generated by the University itself, most originate through requests which are initiated by individuals or interested groups. Requests for continuing education courses in the area of education should be submitted to the county contact person designated by the county superintendent of schools. Requests for continuing education courses in all other areas should be transmitted by individuals, groups, companies, agencies, etc., directly to the Coordinator of Off-campus Credit Courses, Center for Continuing Education, University of South Florida.

NON-CREDIT PROGRAMS

A variety of non-credit educational programs (conferences, workshops, seminars, etc.) of short duration are scheduled throughout the year, making it possible for the University to serve greater numbers of adults with richer and more diversified programs. The programs vary in length from one day to three weeks, and the subject matter is concentrated as needed by the group being served.

The Center for Continuing Education develops programs for business and industry, government, professional, civic and service groups. A variety of instructional methods are used to assure maximum participation in the educational programs. Distinguished faculty members from the several colleges of the University, faculty from other institutions of higher education as well as national and international resource persons, serve as instructors and lecturers for the programs.

A staff of professional program advisers is available to provide technical assistance in program planning, budget preparation and evaluation, and to assist organizations in developing programs consistent with the needs of the group and the overall educational objectives of the University. Programs are offered in the following areas: business, education, engineering, liberal arts, public administration, health occupations, and science.

The Center also offers a number of non-credit courses designed to meet various educational needs of individuals. Emphasis is placed upon quality classes for professional advancement, personal improvement and cultural enrichment.

Registration in these classes is open to all adults with a desire for knowledge and interest in the subject matter. Instructors of non-credit classes are chosen from the faculty of the University, or are outstanding local resource persons.

Pre-Professional Programs

In addition to the vocational training which students can complete at the University of South Florida, programs are provided which are basic to completing a vocational preparation at another institution. The University offers curricula to prepare students for entrance directly into such professional schools as medicine, dentistry, veterinary medicine, law or theology. Whether or not a student entering one of these programs will stay four years at the University of South Florida or will transfer before the completion of four years depends on which professional school he elects to attend. Some medical schools accept outstanding students at the end of the junior year, but most require a bachelor's degree for admission. The same differences are found in law schools and other professional programs. Students who are planning to enter one of these pre-professional curricula should discuss their program with their adviser, should read carefully the bulletins of institutions to which they might transfer, and should consider the specific branch of professional education they ultimately wish to enter.

Inter-institutional combinations are possible for home economics, with students finishing their degree from Florida State University or other institutions having a home economics curriculum. Florida State also offers a degree in nursing, the first part of which can be taken at the University of South Florida. Agriculture, architecture, forestry, health services, pharmacy, library work, and social work are other vocations in which joint programs are possible.

The prospective student interested in any career requiring collegiate education may safely take at least the first part of that education at the University of South Florida without danger of losing substantial numbers of credits when he transfers to the institution in which he will complete his work.

College of BASIC STUDIES

The College of Basic Studies provides that part of a formal university education which should be common to all graduates of the University of South Florida. All students enter the college as freshmen and must complete its requirements before entering one of the other colleges of the University.

Lower division courses are offered by the college in eight areas (see list under Waiver, below). Completion of six of these eight areas, including Functional English, satisfies the lower division basic studies requirement. In Foreign Languages the student may choose from more than one course (a year of Latin or Ancient Greek may be substituted for a functional modern language course); only one course from an area can be used to satisfy basic studies requirements. However, in the science area, the student may take both Biological Science and Physical Science. The lower division Humanities offering is available in four three-credit courses. The student may meet the Humanities requirement by completing any three of these courses.

Ordinarily a student would seek to complete his basic studies courses by the close of the sophomore year. In certain majors, owing to the prescription of required courses, it may not be possible to complete the six lower division basic studies courses within the first two years. In these cases, it is recommended that the "300" level basic studies courses, American Idea and Humanities, be scheduled in the junior year.

Waiver

Some entering students have already achieved competence in one or more areas of the basic studies. These students may request a waiver of one or more of the basic studies requirements. However, a specific high school unit may not be applied toward a waiver of more than one basic studies area. For example, high school chemistry may not be used toward the waiver of both biological and physical science. Applications for waiver must be completed in the Registrar's Office during the first quarter the student is in attendance at the University. Routine approval will be granted when applicants meet the following conditions: (1) a score of 425 or higher on the Florida State-Wide Twelfth Grade Tests, or 1075 on the C.E.E.B.; (2) a grade of "C" or better in each of three or four years of relevant high school work. A course which has been waived may not subsequently be taken for credit. Requirements specific to the area in which waiver is requested are

as follows:

Functional English:

No waiver available.

Behavioral Science:

Evidence of competence acquired elsewhere.

Biological Science:

Three or more years of high school science including biology, chemistry, and one additional unit other than general science.

(A student passing BIO 201, BIO 202 and BIO 203 with an average grade of "C" or higher in the three courses may waive CBS 205-206-207.)

Physical Science:

Three or more years of high school science including chemistry, physics, and one additional unit other than general science.

(A student passing any two first year sequences in the Physical Sciences, i.e., CHM 211-212-213; PHY 211-212, PHY 213-214, PHY 215-216 or PHY 221-222, PHY 223-224, PHY 225-226; GLY 201, GLY 301, AST 201, AST 202, with an average grade of "C" or higher in the sequence may waive CBS 208-209-210.)

Functional Mathematics:

Three or more years of high school mathematics including two years of algebra and one semester each of geometry and trigonometry, with "C" or better.

(A student passing mathematics courses MTH 203, 303 and 304 with an average of "C" or higher for the sequence may waive CBS 109-110.)

Functional Foreign Languages:

Three or more years of one foreign language.

American Idea:

Four or more years of high school social studies, including one year of world history and one year of American history.

Humanities:

Evidence of competence acquired elsewhere.

Lower division basic studies requirements may be satisfied by independent study or credit by examination, according to the procedures described on pages 27-28 of this catalog. Students who have completed more than two college courses in the field of study concerned may not earn credit by examination. They may, however, take the examination and secure a waiver by scoring a "C" or higher.

Placement of Students in Language Classes

The appropriate placement of students in language classes is often a difficult matter calling for consultation with a member of the language staff. Generally,

if a student has had four years of high school language, he should enroll in the first quarter of the third year of language; three years would put him in the second quarter of the second year; two years in the first quarter of second year; and one year in the second quarter of the first year. If a student's background is inadequate, he may be allowed to drop back one quarter with the permission of a member of the language staff. If a student has had two years or less of a foreign language in high school five or more years previous to enrollment in a language at the University of South Florida, he may disregard the high school language courses and register in a beginning course.

Advanced Basic Studies Major

An Advanced Basic Studies Major consists of CBS 311-312-313, CBS 403-404, CBS 405-406-407, and CBS 409-410-411, plus a concentration of 18 quarter units in an upper level program approved by the adviser. Not more than 36 credits from a single program can be counted toward a basic studies degree unless the student is completing a double major. Students seeking a double major may petition to the dean's office to waive the 36-credit limit. Students interested in an Advanced Basic Studies major are urged to inquire at the Basic Studies College office.

Humanities Major

Requirements for a major in humanities are 45 credits of upper level humanities courses (400- and 500-level), including HUM 591, and 9 credits in the creative or performing arts. A graduate program leading to a Master of Arts in Humanities Education is available; for requirements, see College of Education, page 76.

Basic Physical Education

The required program in Basic Physical Education is planned to build on the prior knowledge and experience of students. Those who have already obtained the necessary knowledge and all or part of the skills required may meet these requirements by proficiency examination or evidence of adequate prior experience. For others not so prepared, appropriate courses are offered.

The Basic Physical Education requirement applies to all students under age 21 at first full-time U.S.F. enrollment and consists of four courses. These should include: (1) Functional Physical Education, (2) one aquatic activity, (3) one individual or dual activity, and (4) a fourth course elected from any activity area. Transfer students should contact the Division of Physical Education for program evaluation. Prior military service is not a substitute for the Physical Education requirement.

Functional Physical Education (PEB 101) is a prerequisite to all courses except Beginning Swimming and must be taken through regular class enrollment. This course may be taken during the first or second quarter of the freshman year, but must be taken during that year.

Normally a student will register for one course during each of his first four quarters. Three of the requirements must be completed before a student can be admitted to an upper level college and the fourth before he attains senior status.

Physical education proficiencies and enrollment in appropriate physical education courses will be determined individually for handicapped students by a joint decision of the student, Adaptives Coordinator, and the Director of the Student Health Center.

The three required courses other than PEB 101, may be met by whichever of the following methods are deemed most suitable to the students and staff:

1. By proficiency examination. Proficiency examinations may be attempted during the quarter a student takes PEB 101. There is no penalty for failing an examination. Examinations are not available for every activity listed in the curriculum. There are two parts to the proficiency examination: (1) a written test covering rules, history, strategy and basic fundamentals, and (2) a skill test in the chosen activity administered only to those who have successfully passed the written portion. The level of competency needed for successful completion of the written and skill tests is basically that of a student who has taken the course and received a grade of "B" or better.
2. By presenting evidence of adequate prior experience. If evidence presented indicates a high degree of skill in a designated area, the student is not required to take a proficiency examination. Current life saving certificates, membership on swimming teams, district, state or national ratings, established handicaps, two high school or college varsity awards are examples of evidence necessary to meet a Basic Physical Education requirement by prior experience.
3. By enrolling in one aquatics activity, one individual or dual sport and one activity elected from any area and subsequently receiving a passing grade.

No credit points are given for Basic Physical Education. For programs in Professional Physical Education, see the College of Education.

Chemistry Building



College of BUSINESS ADMINISTRATION

The College of Business Administration is a professional school within the University. Satisfactory completion of the prescribed courses leads to a Bachelor of Arts in one of the six major fields below: Accounting, Economics, Finance, Management, Marketing and Office Administration.

Fulfillment of opportunities in today's business world is demanding. Procedures and practices used efficiently today could become obsolete before a student graduates. The College of Business Administration meets these challenges by stressing knowledge of principles inherent in the subjects the student studies, rather than through teaching fixed information.

The College further seeks:

1. To prepare students for a succession of jobs rather than their first job or for top management.
2. To give the student a broad foundation in general and liberal education, a thorough grounding in basic business courses, some technical competence in at least one significant area of business and the ability to apply these to major practical business problems.
3. To strengthen students' powers of imaginative thinking, creative independent analysis and sensitiveness to social and ethical values.
4. To instill in each student a desire for learning that will continue after he has graduated and taken his place in the business community.
5. To convey to each student the spirit of pioneering, risk and adventure, long a unique characteristic of the American business scene.

UNDERGRADUATE ADMISSION AND DEGREE REQUIREMENTS

A professional program of education for business leadership must be based on a foundation of comprehensive general education; consequently, most of this basic work must be taken prior to admission to the college. It should be further noted that approximately one-half of the work leading to the bachelor's degree in business is required from academic areas outside of business.

Upon application, students who have fulfilled the following requirements will be admitted to the College of Business Administration:

1. Successful completion of at least four of the eight lower level courses in the College of Basic Studies.

2. Satisfactory completion of the four required physical education competencies.
3. Completion of 82 or more credit hours with a grade point ratio of 2.0 or higher.
4. Satisfactory completion of the foundation courses Elementary Accounting (ACC 201-202-203) and Economic Principles (ECN 201-202).
5. Two quarters of college mathematics.
6. Provisional admission is possible in some instances.

Transfer Students

From Junior Colleges: Junior college students should complete the program of general education as required by the junior college. Certification to this effect will be accepted as fulfilling the general education requirements of the University of South Florida. While completing the program of general education students should also be aware of the upper level requirements of the College of Business Administration. Note that these requirements include two quarters of college mathematics and completion of courses in accounting and economics principles. Two semesters of each of the above courses should be included in the junior college parallel program to satisfy upper level requirements at this institution. If scheduling permits, the student should also include a course in basic statistics.

All transfer students, particularly those not pursuing the parallel program should note that a maximum of nine quarter hours will be allowed for courses taken during the first two years of study which are available only as third or fourth year professional courses in the College of Business Administration at the University of South Florida. However, no more than five quarter hours may be transferred for credit in the student's major area.

From Non-Junior Colleges: Students attending a four year college who wish to transfer after two years should follow a program in general education similar to that required at the University of South Florida. The prerequisite courses in business subjects of accounting principles, economics principles, and mathematics should also be included in the first two years of study. Transfer credit will be allowed for all of the above courses. Any remaining courses after fulfilling the general education requirements and business prerequisites should be taken in such areas as mathematics, the natural sciences, the social sciences, and the humanities.

Requirements for Graduation

Graduation requirements are 180 quarter hours.

The breakdown of these 180 hours are 95 within the College of Business Administration and 85 hours outside the College of Business Administration further divided as follows:

- (1) 58 hours of Basic Studies.
- (2) 27 hours of general electives outside the College of Business.
- (3) 50 hours of Business Core which includes ACC 201-202-203; ECN 201-202, 301, 331; GBA 361; 499; FIN 301; MGT 301; MKT 301.

- (4) 27 hours in the major subject with a 2.0 grade point average in the major. (Accounting students also wishing to qualify as C.P.A.'s need additional courses; see under curricula and program, Accounting).
- (5) 18 hours of Business Electives not in the student's major field.

CURRICULA AND PROGRAMS

1. ACCOUNTING

Major Requirements: ACC 301, 302, 303, 411, 421, 423 and three of the following: ACC 323, 401, 402, 412, 422, 424, 425, 431. Students intending to take the C.P.A. Examination in Florida will need to take ACC 323, 401, 402, plus two of the following: ACC 412, 413, 422, 424.

Business Electives: GBA 362, 371 and 9 hours of other business courses.

General Electives: These 28 hours must be taken outside the College of Business Administration. It is strongly recommended that all accounting students take SPE 201.

2. ECONOMICS

Students may concentrate in General Economics, Labor and Industrial Relations, or International Trade.

Major Requirements: ECN 311, 323, 401, and 13 hours of courses in desired concentration as follows:

General Economics—ECN 405, 423, and 4 additional hours of upper-level economics.

Labor and Industrial Relations—ECN 313, 411, and 4 additional hours of upper-level economics.

International Trade—ECN 351, 451, and 479. International Trade majors must take a functional foreign language.

Business Electives: 18 hours in the College of Business Administration. International Trade majors are required to take FIN 351 and 13 hours of other business courses.

General Electives: These 28 hours must be taken outside the College of Business Administration.

3. FINANCE

Major Requirements: FIN 411, 421 and 451, and 15 hours of upper level finance courses to be selected in consultation with major advisor. A maximum of 8 hours of upper level courses in economics and other related fields may be substituted in satisfaction of finance electives based on written permission of the major advisor.

Business Electives: ACC 305 and 15 hours of other business courses. At least two courses must be taken from the following: ECN 323, 351, 431, 423, 437; GBA 351, 362.

General Electives: 28 hours outside the College of Business Administration.

4. MANAGEMENT

Students may concentrate in Personnel Management or Industrial Management.

Major Requirements: MGT 341 and 381, and other courses in the desired con-

centration as follows:

Personnel Management—MGT 343, 441, 445, 489.

Industrial Management—MGT 371, 421, 431, 471, 472.

Business Electives: 18 hours in the College of Business Administration.

General Electives: 28 hours outside the College of Business Administration. It is recommended that management students take SPE 201.

5. MARKETING

Major Requirements: MKT 311, 312, 315, 316, 411, 415, and any seven (7) hour combination from the following: MKT 413, 419, 459, 489.

Business Electives: 18 hours in the College of Business Administration.

General Electives: 28 hours outside the College of Business Administration. It is recommended that marketing students take SPE 201.

6. OFFICE ADMINISTRATION

Major Requirements: OAD 141, 142, 143, 251, 252, 253, 351, 361, and 461.

If waiver is granted for OAD 141 students will substitute OAD 353. If waiver is granted for OAD 251 or 253, students will substitute OAD 353 or business electives.

Business Electives: 17, 18, or 19 hours in the College of Business Administration, depending on requirements to complete 45 hours in business administration in addition to the core courses. The following are suggested: ACC 305, MGT 341, GBA 351, or GBA 371.

General Electives: These 28 hours of electives must be taken outside the College of Business Administration.

GRADUATE ADMISSION AND DEGREE REQUIREMENTS

Courses are offered in the College of Business Administration leading to the degree of Master of Business Administration and Master of Business Administration with specialization in accounting. Students should consult the graduate study section of this catalog for information on the requirements for admission to graduate study. The College of Business Administration will generally follow the same standards.

The Master of Business Administration Program

Students applying for admission will have diverse backgrounds. Students with undergraduate majors other than business administration can be accepted into the M.B.A. program by taking certain business foundation courses which prepare them for graduate level courses. These 24 quarter-hours include the following courses: Accounting 501, 502; Economics 501, 502, 503; Finance 501; Marketing 501; and Management 501. 500 level courses may not be included in the 54 hour requirement leading to the M.B.A.

The program requires that the student satisfactorily complete a total of 54 quarter hours including: Accounting 601, 602; Economics 601, 603, 604, 605, 607, 608; Finance 601, 602; Marketing 601, 603; Management 601, 603, 605; General Business Administration 601; and six quarter hours of College of Business Administration senior level elective courses. The six quarter

hours of senior level elective courses are to be selected by the student in consultation with his advisor.

The 54 quarter hour program is to be completed with an overall "B" average (3.0 grade point ratio). In addition, a written and oral examination will be given near the end of the last quarter of work, on which the student must give a satisfactory performance.

The Master of Business Administration Program with Specialization in Accounting

It is contemplated that students applying for admission to this program will have a baccalaureate in Business Administration which includes a minimum of 36 quarter hours credit in Accounting. Students applying for admission who do not meet these prerequisites will be required to take additional courses. The number of additional courses deemed necessary will depend on the academic background of the individual students, and may vary from 27 quarter hours for a non-accounting business major to 61 quarter hours for a non-business major.

The program requires that the student satisfactorily complete a total of 48 hours including: ECN 601, 603, 605, 607; FIN 601; GBA 601; accounting concentration including ACC 605, 607, 609, 611, 621, 623; one senior level accounting course; and, nine quarter hours of electives to be selected by the student in consultation with his advisor.

The 48 quarter hour program is to be completed with an overall "B" average (3.0 grade point ratio). In addition, a written and oral examination will be given near the end of the last quarter of work on which the student must give a satisfactory performance.

Business Administration Building



College of EDUCATION

The College of Education places an emphasis on each student learning what is relevant for the world of today and on his getting deeply involved in his own educational process. Thus, the emphasis is on the student learning to do his own thinking about himself and his universe.

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

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

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

BACHELOR OF ARTS DEGREE PROGRAM

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

Admission Requirements

While each student admitted to the University is expected to have the qualifications to graduate, this does not necessarily mean that he is expected to have the qualifications to become a teacher.

Students are strongly urged to apply for admission to a teacher education program during the quarter in which they accumulate 90 hours of credit. Associate of arts degree holders from state junior colleges and other transfer students with more than 60 semester or 90 quarter hours of college credit should apply their first quarter in residence. A student who wishes to graduate within the normal 180 quarter hours must apply and qualify for admission to a teacher education program by the 135 quarter hour level.

Prospective secondary and K-12 teachers are enrolled in teacher education programs involving both the College of Education and the College of Liberal Arts.

Admission to a teacher education program requires that—

1. The student initiate his application with the College of Education Guidance Office at the latest by the second week of the quarter in which he is eligible to be admitted, and
 - (a) declare a major and make formal application to that program,
 - (b) arrange to take a required battery of tests, and
 - (c) schedule an interview with a designated faculty member in the College of Education.
2. The applicant receives the approval from his program selection committee. Among the criteria to be considered by the committee are the following:
 - (a) an overall minimum grade point ratio of 2.0.
 - (b) recommendation of the medical center, student affairs, and the speech and hearing clinic,
 - (c) demonstrated proficiency in spoken and written grammar and satisfactory scores on the battery of tests and inventories,
 - (d) recommendation of the faculty member who conducted the interview, and
 - (e) additional criteria at the discretion of the program selection committee.

Acceptance is only one phase of a continuous and cumulative selection which continues through the supervised teaching experience.

Admission to Supervised Teaching Experience

One full quarter of observation and supervised teaching in elementary or secondary schools. In certain specialized subject areas (i.e., Business Education, Special Education, Distributive Education) the student teaching-seminar experience may vary.

Special requirements for enrollment in the supervised teaching and seminar courses are:

1. admission to the teacher education program,
2. completion of an application for supervised teaching,
3. successful teacher aide experience,
4. an overall 2.0 grade point ratio,
5. a 2.0 grade point average in the professional education sequence,
6. completion of at least two-thirds of teaching specialization with a minimum of 2.0 grade point ratio.

Students planning to enroll in the Cooperative Elementary Teacher Preparation Program should refer to statements on internship included under *Teacher Education Curricula and Programs* on page 66.

College Requirements for Graduation

A student to be certified by the College of Education as having completed its requirements must have earned 180 credit hours with a minimum overall

grade point ratio of 2.0. An average of 2.0 or better also must be made in the student's professional education sequence and in his teaching specialization courses. Satisfactory completion of supervised teaching is required. To complete EDC 499, a score of 500 or above on the National Teachers Examination or a minimum score of 800 on the Graduate Record Examination is required. A student must also have completed the major requirements in an approved teaching program (which includes general preparation, teaching specialization, and professional preparation) and passed the senior seminar in the College of Basic Studies. A minimum of 12 credits in professional courses and 18 credits in specialization courses must have been earned in residence.

SPECIFIC REQUIREMENTS

A minimum of 180 quarter hours including:

Basic Studies requirements	53 quarter hours
Major Concentration	36 to 78 quarter hours
Professional Education Core of EDF 305, 307, EDC 401, and appropriate "methods" course	17 quarter hours
Senior Seminar in Education (EDC 498)	3 quarter hours
Supervised Teaching (EDC 499 or appropriate intern course described in catalog)	12 quarter hours
Elective courses in Education	4 quarter hours

The remaining credit hours up to a minimum of 180 will be elected by the student with the help of his adviser.

Recommendation for Florida Certification

The dean of the College of Education has the responsibility of recommending for Florida state teacher certification any applicant who graduates from the University of South Florida. The decision on whether to make the recommendation will be on the basis of the applicant's character, academic proficiency, commitment to teaching, emotional stability, personal and social qualities, and his demonstrated teaching ability during the internship period. Before recommending teacher certification, the dean will consult with various faculty members who have taught the student at the University.

NON-DEGREE STUDENTS SEEKING CERTIFICATION

A person who has previously earned a bachelor's degree and has a desire to satisfy teaching requirements may enroll in courses in which he has met the course prerequisite.

A holder of a bachelor's degree wishing to enroll in EDC 498 and 499 should file an intent to student teach with the College of Education Guidance Office. Approval of the application by the Selections Committee of the College of Education and satisfactory completion of 12 quarter hours of course work in residence are prerequisite to registration in EDC 498 and 499 by students in this non-degree seeking category.

All students who have a total of 135 hours or above should register with Placement Services.

TEACHER EDUCATION CURRICULA AND PROGRAMS

There are three distinct areas in the teacher education program, and all

teacher candidates must meet certain minimum requirements in each. The three areas and their requirements are as follows:

1. General Preparation (53 to 62 credits)

Elementary teacher candidates must take CBS 101-102, 201-202-203, 109-110, 301-302-303, any three of CBS 305-306-307-308, 401, and either 205-206-207 or 208-209-210. EDC 101 is strongly recommended. If substitutions are made, they must be part of a planned program.

Secondary and K-12 teacher candidates have the same general preparation requirements as prospective elementary teachers, except the students may take either mathematics or a foreign language, although both are strongly recommended.

2. Professional Education Core (32 credits)

Elementary and secondary teacher candidates are required to take 32 quarter hours in the professional education core. In addition, the teacher candidate is required to take the senior seminar in education, supervised teaching and one four quarter hour elective in Education. It is recommended that teacher candidates consider electing other professional education courses in addition to these. It is not recommended that these courses be taken in lieu of liberal arts offerings. Some of the areas in which they might profitably elect courses are: Guidance, Special Education, Tests and Measurements, Principles of Learning, Philosophy of Education, and Comparative Education.

The required courses in the professional education core, senior seminar, and supervised teaching for teacher candidates are EDF 305, 307, EDC 401, 498, and 499. Elementary education majors must also take EDC 440 (methods); secondary education majors are required to take one methods course in their subject area.

In the newly approved Physical Education program, EDC 498 and 499 are not required since these experiences are structured into the new extended internship in EDP 311, 321, 331, 411, 421 and 431.

3. Teaching Specialization Preparation (up to 78 credits)

Course requirements in the area of teaching specialization vary according to subject. The different specialization requirements are listed on the following pages.

A. ELEMENTARY EDUCATION

EDF 305 (Human Development and Learning) is a prerequisite to work in the undergraduate elementary education program.

No student may intern without a 2.0 grade point ratio in course work taken in the separate areas of professional education and teaching specialization.

Students may pursue a program of elementary teacher preparation which provides continuous daily laboratory experiences in the local schools. Students electing this program must arrange to spend a minimum of two hours daily working in a variety of classroom situations with the local school instructional personnel. Internship credit is earned for this field experience which extends over a period of five quarters. The continuous field experience is in lieu of the full quarter of internship and related laboratory aide assignments.

(1) Elementary Specialization

The major consists of an elementary specialization sequence and a subject concentration sequence.

The 45 hours of elementary specialization courses are offered in four areas. These areas are: (a) Communication Arts (reading, language, and literature—EDE 409, 411, and 413), (b) Environmental Concepts (arithmetic, science, and social studies—EDE 415, 417, and 419), (c) Aesthetic and Recreational Learning (art, music, and health, physical education—EDE 421, 423-4, and 425), and (d) Special Methods for Elementary Teaching—EDE 440. Co-registration is encouraged in EDE 440 and EDC 401.

A teaching concentration is chosen by elementary education specialist with the assistance of an adviser. This should include a minimum of 27 credit hours in a subject taught in the elementary school. With careful planning, the student may receive dual certification in elementary education and in a kindergarten through twelve, or a secondary education field.

(2) Elementary-Early Childhood

Students interested in early-childhood teaching which includes pre-school and grades 1-3 should pursue a program leading to certification both in early-childhood and elementary education. This program includes 46 hours of course work as follows: EDE 409, 413, 415, 417, 419, 425, 426, 431, 433, 529, 531.

Students who desire to add early-childhood specialization to an existing major in elementary education may complete a planned program in consultation with their adviser.

(3) Elementary-Library-Audio Visual

Information on course work leading to dual certification in elementary and library science-audio visual education is given in Section B-3.

B. KINDERGARTEN THROUGH TWELFTH GRADE

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

(1) Art Education

Required courses are ART 201, 202, 301, 302, 401, 402, 411, 421, 423, 431, 441, 451; EDA 377, 379, and 498; FNA 423, 433, 543, 553, three hours of electives in Art History, and nine hours of electives in Art Studio, for a total of 69 quarter hours.

Students are also required to take 18 hours in elective subjects offered outside the College of Education and Visual Arts department.

(2) Physical Education

Professional major students must meet the same four quarter requirement in basic physical education as other regular students, namely: functional physical education (PEB 101), aquatic sports (PEB 130 or 132 or 134 or 136), individual and dual sports (selection from PEB 150-179), and an activity elected from any area (PEB 102-179).

Proficiency examination of evidence of adequate prior experience may meet the requirements above if approved by the Division of Physical Education.

Required professional program courses are: EDP 255, 311, 321, 331, 312, 322, 332, 314, 365, 411, 421, 431, 412, 422, and 432.

The following courses are elective and may be taken upon approval of academic advisor: EDP 366, 457, 459, 466, 468, 469, 478, 479, 486, 488, 489, 499, 556 and 558.

(3) Library and Audio-Visual Education (Learning Resources)

Dual certification in Elementary Education and in Library Education. Requirements include the professional core, the Elementary Education Program and a total of 36 quarter hours in Library Education/Audio-Visual courses.

The required EDL courses meet Rank III certification in library and audio-visual service. These courses are EDE 413, EDL 411, 412, 419, 513, 514, 515, 517, 518 and 524. Electives may be chosen with the consent of the adviser.

(4) Special Education

MENTAL RETARDATION

Students are prepared to become teachers of the mentally retarded.

Thirty-two credit hours are required in the major area of specialization—EDS 311, 322, 371, 423 I & II or 424, 531, 598, and EDF 303.

In addition, 37 hours are required in the area of Special Preparation for Elementary Teachers—Aesthetic and Recreational Learnings (13 hours), Communication Arts (9 hours), and Environmental Concepts and Understandings (15 hours).

SPEECH PATHOLOGY

For the preparation of professionals to work with speech, language, and hearing impaired children and adults. Training sequence is a five year program terminating in a M.A. degree in Special Education (Speech Pathology). Meets the certification requirements of the American Speech and Hearing Association.

The following courses, or their equivalents, constitute the course of study—EDS 311, 322, 371, 372, 471, 472, 479, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 611, 671, 672, 673, 674, 675; SPE 201, 411, 503, 511; EDF 305, 307; EDC 401, 498, EDE 531; SSI 301; PSY 335; PSY 431 or EDS 531; EDS 699 and/or EDS 579, the basic studies courses listed for the elementary education major; and the Process Core for the M.A. in Education.

Supervised clinical work in school and non-school environments is done in EDS 479 and 579.

Completion of requirements for the master's degree in Special Education: Speech Pathology is required prior to certification for employment in the schools.

(5) Music Education

Programs in both instrumental and vocal music are offered. It is strongly

advised that students elect a core in other relevant areas such as humanities, theatre arts, and art.

Instrumental music students must take MUS 212-213-214, 312-313-314, 412-413-414, two each of the following outside the family of the student's major instrument: MUS 215, 245, 255, 265; 18 credits (12 intermediate level, 6 advanced level) of study on the major instrument; EDM 431, 432, 433; FNA 413, 433, 543, 553; and ensemble.

Vocal music students must take MUS 212-213-214, 225, 312-313-314, 335, 535, 412-413-414; FNA 413, 433, 543, 553; EDM 435, 437, 439, and ensemble.

Special requirements: successful completion of the piano proficiency requirement as defined by the music faculty before admittance to upper level; participation in ensemble, excluding only the internship quarter; the presentation of one-half recital in the major performing medium during the senior year; attendance at required recitals as scheduled. Electives are to be taken outside Music and College of Education.

C. SECONDARY EDUCATION

Candidates are required to meet specialization requirements in broad subject fields or in subject combinations. It is also possible for prospective secondary school teachers to add elementary school certification by following an approved program. The secondary school specialization requirements can be satisfied in more than 15 subject areas in six broad fields.

(1) Business Education

Requirements include ACC 201, 202, 203, ECN 201, 202, GBA 361 and 371. Also OAD 141, 142, 143, 251, 252, 253, 351, 361, and 461. OAD 251 and 253 may be replaced with special permission by electives in general education or liberal arts (e.g., Speech, Introduction to Teaching). A second special methods course is also required in the professional education sequence.

(2) Distributive Education

To qualify to teach in the area of Distributive Education, students must take 70 credit hours of course work. They must take 32 hours of business courses in the areas of accounting, economics, finance, and management and marketing. They must also take EDD 406 and EDD 507. The remaining 30 hours may be in Distributive Education and approved electives. In addition, they must fulfill the state requirement of two years on-the-job experience or completion of 2,100 hours of acceptable training. (Acceptability will be determined by the faculty staffing the existing program at the University of South Florida.)

(3) English

Teaching requirements met by satisfying specialization requirements in one of six curricula: English, English-Journalism, English-Latin, English-Library Audio-Visual, English-Modern Foreign Language or English-Speech.

ENGLISH

Requires ENG 201, 202, and 203. In addition, they must take either ENG 305 or 306, ENG 307, 321, 411, 517, and one from ENG 525, 527,

and 528; JNM 341, 342 (either may be taken first), and JNM 347; SPE 201, and 321, TAR 303; and any two English courses from 300, 400 and 500 choices exclusive of writing.

ENGLISH-JOURNALISM

Requires ENG 201, 202 and 203. In addition, they must take either ENG 305 or 306, ENG 307, 335 or 336, one ENG 500 elective, ENG 411 and 517; SPE 201 and SPE 321; JNM 341, 342, 343 or 349 and JNM 347; EDT 463. In addition to EDT 463, these majors must also take EDT 447, Methods of Teaching English.

ENGLISH-LIBRARY AUDIO-VISUAL

Students must take ENG 201, 202, and 203. In addition, they must take either ENG 305 or 306, ENG 307, 321, 411 and 517; SPE 201; EDL 411, 412, 419, 513, 514, 515, 517, 518, and EDE 413. Electives are EDL 523 and 524.

ENGLISH-LATIN

A 68-hour program, consisting of ENG 201, 202, and 203; ENG 305 or 306; ENG 307, 321, 411, and 517; SPE 201; CLS 301, 302, and 303, 401, 402, 403, 411, 412, 413; 517, 571. (CLS 201, 202 and 203 may not be counted in the major.) In order to be certified to teach both English and Latin, EDT 447 and EDX 465 must be taken.

ENGLISH-MODERN FOREIGN LANGUAGE

Requires 37 hours in English and Speech and 36 hours in one foreign language above the basic courses, for a total of 73 hours. The required courses in English are ENG 201, 202, and 203. In addition, they must take ENG 305 or 306, ENG 307, 321, 411, and 517; and SPE 201. The requirements in foreign language are (Spanish, French, German, Italian, or Russian): 301, 303, 305, 306, and 307, plus 19 hours of advanced work in courses selected with language adviser. In order to be certified to teach both English and the foreign language, the student must take both EDT 447 and EDX 449. A recommended elective is SPE 321.

(4) Foreign Languages

TWO FOREIGN LANGUAGES

Requires basic studies language requirements or their equivalent. In the major language (Spanish, French, German, Italian or Russian), the student must earn an additional 36 credit hours, and in the second language, the student must earn an additional 27 credit hours. The required courses are numbered 301, 303, 305, 306, and 307 (prefix will be determined by the specific language involved), plus 19 credit hours of advanced work in the major language and 10 credit hours work in the second language in courses selected with language adviser. Electives may include courses in Linguistics, English, or Humanities, or in the Social Sciences applicable to the language concerned.

With permission of the Dean, after consultation with the adviser, a student may elect a single foreign language major. Forty-five credit hours must

be earned in the language beyond the basic studies requirements.

Among these 45 credit hours must be the following:

FRENCH: FRE 301, 303, 305-306-307, 521-522-523.

GERMAN: GER 301, 303, 305-306-397, 513, and 521.

SPANISH: SPA 301, 303, 305-306-307, 513, 514 or 515, 523, 526, 542, and 543.

In addition, 10 credit hours of work must be completed in the language in courses selected with the language adviser. Electives may include courses in English, Humanities, Linguistics, Romance Philology, or in the Social Sciences applicable to the language concerned.

LATIN-MODERN FOREIGN LANGUAGE

Requires 39 credit hours in Latin above the 200 level, and 27 credit hours in the modern foreign language. The Latin requirements are: CLS 301, 302, 303, 371, 401-402-403, 411-412-413, 517, 571. The modern foreign language requirements are the courses numbered 301, 303, 305, 306, and 307 (Prefix to be determined by language selected), plus 10 credit hours of work in the modern foreign language in courses selected with language adviser. In order to be certified to teach both Latin and the modern foreign language, the student must take both EDX 449 and EDX 465.

(5) Mathematics or Science

To teach at the secondary level the minimum requirements of the divisional major must be met. Major requirements in the Division of Natural Sciences are a minimum of 36 quarter hours in the discipline of major concentration and a minimum of 24 quarter hours in the division outside that discipline. These latter 24 hours must be approved by the student's adviser and must include a minimum of three quarter hours at the 300 level or above. (Total program: 60 hours.) Concentrations are possible in biology, chemistry, mathematics or physics. A major in biology, chemistry, mathematics or physics will be accepted in lieu of the divisional major. MTH 423 and 424 are required of all prospective mathematics teachers. EDN 425 is recommended for all prospective physical science teachers, and EDN 427 is recommended for prospective biology teachers.

(6) Social Science

Prospective social studies teachers must meet the minimum requirements of the social science divisional major listed below. The requirements for a major in a single discipline such as history or geography can be met through careful planning of electives. The social science divisional major consists of 60 hours which must include HTY 100, 211, 212; 231-232; POL 201, 203; ECN 201, 202; GPY 201, 301-302; SSI 361; SOC 261 or 331 or 543 or 541 or 341 or PSY 331; and at least nine hours of electives in upper level courses in the Division of Social Science.

(7) English-Speech

Requires ENG 201, 202 and 203. In addition, they must take ENG 305 or 306, 307, 321, 411 and 517; SPE 201, 203, and 321, SPE 361 or 365, SPE 492; TAR 303; and two electives in Speech.

(8) Individual Majors

With special permission of the dean of the College of Education, individual teaching majors may be planned in one or more teaching subjects to satisfy the specialization requirements. When this permission has been granted, the student must meet the subject-area requirements of the major in the College of Liberal Arts in addition to the Florida Teacher Certification requirements.

MASTER OF ARTS DEGREE PROGRAM FOR TEACHERS

Effective teaching in the modern world requires a level of competence which normally cannot be developed in the brief span of an undergraduate academic program. To assist teachers to meet the increasing demands being placed upon them, the University of South Florida is expanding its graduate program for teachers according to a carefully designed plan. Master of Arts programs are now offered in Elementary Education, in most secondary and K-12 teaching fields, and in junior college teaching.

Qualified persons may earn Master of Arts degrees in the following fields:

Elementary Education (with emphasis on Curriculum, Early Childhood, Supervision, or Reading)

Secondary Education

Business Education

Distributive Education

English Education

Foreign Language Education (French or Spanish)

Humanities Education

Mathematics Education

Science Education (with specialization in Biology, Chemistry, Earth Science or Physics)

Social Science Education

Spanish Education

K-12 Certification Areas

Art Education

Guidance

Library and Audio-Visual

Music Education

Reading Education

Special Education (with specialization in Emotionally Disturbed, Gifted, Mental Retardation, Potentially Handicapped—N-3 [Varying Exceptionalities], Mental Retardation or Speech Pathology)

Junior College

Astronomy

Biology

Chemistry

English

French

Geology

Mathematics

Music

Physics

Psychology

Sociology

Spanish

Speech

Visual Arts

A two-year graduate program leading to the Master of Arts Degree in Research and Evaluation is tentatively planned to begin in the fall of 1967. This program will train persons with bachelors degrees in either education or related liberal arts to function as evaluation specialists in the context of on-going educational systems, i.e., public schools, state departments of education, regional laboratories, etc.

Programs for junior college teachers in fields other than those listed above will begin as the other instructional divisions of the University offer master's degree work. Those interested in any of these projected programs should contact the Office of the Dean, College of Education, for further information. General rules for graduate study may be found on pages 115-116 of this Catalog.

Program Description

Master of arts degree programs for teachers consist of 45 quarter hours, at least half of which must be at the 600 level. Most specialization areas include the option of a thesis of three to six credit hours.

During the last term of enrollment, prior to completion of degree requirements, the candidate must perform satisfactorily on a comprehensive examination in the process core and specialization areas.

Elementary Education

This program is a 45 quarter hour sequence, at minimum, requiring full certification as an elementary teacher for admission. There are four components of the program:

1. PROCESS CORE (4-16 hours)

Students will take a minimum of one process core course prior to admission to candidacy. All students will be required to take EDF 607, Foundations of Educational Research, as part of their graduate program. Competencies indicated by undergraduate background and qualification tests after admission will determine waiver of or enrollment in:

- (a) EDF 605, Foundations of Measurement
- (b) EDF 611, Psychological Foundations of Education; or EDF 613, Principles of Learning
- (c) EDF 621, Socio-Economic Foundations of Education; or EDF 623, History of Education; or EDF 625, Philosophy of Education

2. EDE 603, SEMINAR IN CURRICULUM RESEARCH (1-5 hours)

3. LIBERAL STUDIES (0-9 hours)

For the purpose of broadening and enriching the total education experience of the teacher, selected courses may be taken outside the process core and the specialization area.

4. SPECIALIZATION (27 hours minimum)

Students pursuing the master's degree in elementary education are required to present credit in the following courses: EDE 603, 609, and 613.

- (a) Elementary Curriculum Emphasis: Course work should be selected from EDE 611, 615, 617, 619, and 621. Additional work is available through consent of the adviser as part of a planned program.

- (b) Reading Emphasis: EDE 611, EDR 631, EDR 632, and EDR 633 are required.
- (c) Supervision Emphasis: EDC 661, 671, and EDE 641 are required.
- (d) Early Childhood: Individually planned program to include EDE 527, 529, 530, 531.

Secondary and K-12 Program—Plan I

(for the teacher fully certified in an appropriate field)

This program consists of a 54 quarter hour sequence with three components:

1. PROCESS CORE (4-16 hours)

Students will take a minimum of one process core course prior to admission to candidacy. All students will be required to take EDF 607, Foundations of Educational Research, as part of their graduate program. Competencies indicated by their undergraduate background and qualification tests admission will determine waiver of or enrollment in:

- (a) EDF 605, Foundations of Measurement
- (b) EDF 611, Psychological Foundations of Education; or EDF 613, Principles of Learning
- (c) EDF 621, Socio-Economic Foundations of Education; or EDF 623, History of Education; or EDF 625, Philosophy of Education

2. CURRENT TRENDS COURSE IN TEACHING SPECIALIZATION (4 hours)

3. SPECIALIZATION (27 hours minimum, may be as much as 45 hours)

A. Secondary Fields

(1) DISTRIBUTIVE EDUCATION

- (a) Appropriate College of Business Administration courses in Accounting, Economics, Finance, Management, Marketing, and Office Administration. (20 hours maximum)
- (b) Distributive Education—minimum of eight hours from EDD 506, 507, 607, 621, 631, and 651.
- (c) EDD 661, Seminar in Distributive Education Research
- (d) Selected courses in a related area such as Guidance or Special Education (4-12 hours)

Teaching certificate in an appropriate vocational education area is required for admission to candidacy. Since certain courses needed for such certification are not offered at the undergraduate level, limited certification credit may be applied to the Master of Arts degree requirements. This provision applies only to courses in the specialization area.

(2) ENGLISH EDUCATION

Before admission to the degree program, a student must have had, as an undergraduate, 28 quarter hours of literature and must receive a satisfactory score on the *Advanced* GRE test in literature.

PLAN I—EDR 509; ENG 623, two to three courses of ENG 683, “Selected Topics;” two to five courses from ENG 615, 655, 667, 687, 691 and

695; ENG 515 and EDT 631 (If these courses already have been taken, English 500-level courses may be substituted.); and one other English 500-level course.

PLAN II—ENG 623; ENG 515 and 531 (If these courses already have been taken, English 500-level courses may be substituted.); one course from ENG 683, "Selected Topics;" and three to five courses from ENG 615, 655, 667, 687, 691, or 695.

(3) HUMANITIES EDUCATION

A teaching certificate in fine arts, language, literature, or in special cases in a related subject will be required for admission to candidacy. The program in Humanities consists of 27-45 quarter hours selected from the following with the advice of adviser in the field of specialization: HUM 535, 536, 537, 539, 541, 542, 543, 545, 581, 611, 623, 683, 691, 692, 693. The last three are required. Up to nine hours may be substituted for the above from courses outside of Humanities with the consent of the adviser in Humanities.

(4) MATHEMATICS EDUCATION

Before admission to candidacy the student must demonstrate to the chairman of the Mathematics Department that he has the competence in Mathematics to undertake the program.

A maximum of nine quarter hours may be taken from MTH 405, 406, 407, 409, 421, and 422. Any 500-level MTH courses and any other 600-level MTH courses may be included in the planned program.

(5) SCIENCE EDUCATION

Biology—Before admission to the degree program, the student must have had the equivalent of the following undergraduate courses: BIO 201, 202, 203, and 331-332, twelve additional quarter hours in biology, and CHM 211, 212, 303, and 321. A minimum of 27 quarter hours will be taken from the following: ZOO 313 or 516, BOT 311, BOT 421, ZOO 311 or 312, BIO 415 or 351, BIO 445 or 565. CHM 551 may be substituted for any of these areas.

Chemistry—Before admission to the degree program, the student must demonstrate to the Chemistry Department that he has the competence to undertake the program. Before a degree is conferred a student must pass an examination given by the chemistry staff in inorganic, organic, analytical, and physical chemistry. Specialization in chemistry shall consist of at least 27 quarter hours.

Physics—Before admission to the degree program the student must satisfy the chairman of the Physics Department that he has the competence in physics to undertake the proposed program. He will take 27 or more credits approved by his adviser from the following courses, not more than 13 credits of which may be from courses numbered below 500. Students who can satisfy the chairman by transcript or examination that they have had 42 or more credits from the courses listed below may take a minimum of 18 credits in physics and devote the remaining nine or more to other fields.

PHY 305, 307, 309, 331, 341, 405, 407, 421, 437, 481, 501, 507, 509, 523, and 551. Any 600-level course in physics may be substituted for any course above.

(6) SOCIAL SCIENCE EDUCATION

Each program is individually designed in consultation with the adviser. Not more than one-half of the specialization (exclusive of thesis credit) may be in any one social science discipline or program.

B. K-12 Certification Areas**(1) ART EDUCATION**

- (a) Art Education: a minimum of eight credit hours from EDA 660, 661, and 682.
- (b) Art Studio: a minimum of 12 credit hours.
- (c) Art History: A minimum of three credit hours.

(2) GUIDANCE

The guidance program typically requires twelve credits from the Process Core including EDF 605, EDF 607, and one of the following: EDF 621, 623, or 625. Additional course requirements depend upon the major concentration in either elementary school guidance or in secondary school guidance.

Elementary School Guidance

Specialization requirements total 34 credits and include EDG 581, 603, 607, 611, 613, 617, 621, 625, 633.

Requirements in related fields total 32-33 credits and include PSY 433, EDE 527, EDF 613, SOC 535, SOC 651, either SOC 543 or 641, EDE 609, and EDS 610.

Secondary School Guidance

Requirements in Specialization and related courses total 34 credits and include EDG 581, 603, 607, 611, 619, 623, 627, 633, PSY 433, EDF 613, and an approved elective.

Plan II (See page 00), is available in both specializations and requires EDC 505 and EDG 691 in addition to minimum requirements.

(3) LIBRARY/AUDIO-VISUAL (Instructional Materials)

In consultation with the graduate adviser, a program will be planned which may include a minimum of 45 hours of undergraduate and graduate credit in library and audio-visual service which meets Rank II state certification requirements. The individual who has no background in the field normally will need to take one or more prerequisite courses which may not apply to the MA degree program. With the consent of the adviser at the time of registration, graduate student may petition for graduate credit for EDL 411 and 412. Required courses for all students are: EDL 411, 412, 513, 514, 515, 517, 518, 523, and 601. Library specialists must also take EDL 611. EDL 605 is required of all students who have not had EDE 413 within the past 10 years. Additional courses for Audio-Visual specialists are EDL 508, 607, 621, and 623. Electives for all students will be chosen from EDL 603, 605, 609, 615, 625, and 681.

(4) MUSIC EDUCATION

Programs in both instrumental and vocal music are offered. At least 27 hours are taken in one of these areas. Each candidate must meet the undergraduate level of piano proficiency before the quarter in which he expects to graduate. Participation in ensembles is required for at least three quarters.

Two plans are available to the candidate: 45 hours plus thesis or recital, or 54 hours without thesis or recital.

Vocal Majors: 7 to 14 credits in music education, including EDM 601 and 635; 4 to 8 credits in music literature, including MUS 603; at least 4 credits in music theory; MUS 614; and at least 4 credits in applied music.

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

(5) READING EDUCATION

The Reading Education program requires 8-16 hours from the Process Core. Candidate must have teaching certificate and three years teaching experience in classroom or reading clinic.

Specialization in Reading Education shall include a minimum of 36 hours, including EDE 609 or EDR 509, EDR 631, 632, 633, 634, 635, EDF 605, 617 and EDL 518. Electives may be chosen from the following courses: ENG 517, EDE 611, EDE 531, EDS 571, EDS 574, EDS 676, EDC 661, PSY 613.

(6) SPECIAL EDUCATION

The Emotionally Disturbed

The basic intent of the program is to train educators for emotionally disturbed children. This training prepares teacher-consultants who can function in public, private, or residential schools.

Necessary conditions for admission beyond the requirements of the College of Education are that students must have a teaching certificate and have successfully taught a minimum of one year.

Of the 54 credit hours needed for graduation, a minimum of 30 credit hours are allocated to the area of specialization. The equivalent of EDS 531, 610, 611, 632, 633 and 639 are required of all students. Additional courses and electives are jointly planned by the student and his adviser.

The Gifted

Plan I

Through a Plan I type of program an experienced, certified teacher can anticipate preparing for teacher-consultant roles in the area of the gifted in four quarters.

A minimum of 28 credit hours in the area of specialization is required. Included among the courses usually required are EDS 550, 551, 559, 610 and 611.

An individually tailored, Liberal Arts sequence of from 14 to 28 quarter hours is also a requirement of the program.

Plan II

An individual with a Liberal Arts undergraduate major may prepare as a teacher-consultant of the gifted through Plan II.

The student will be expected to take a minimum of 28 quarter hours in the area of specialization. In consultation with his adviser, he will choose from the following: EDS 550, 551, 559, 611, 610; EDR 631, 632; EDT 631; EDN 637, 639, 641; EDE 611, 613, 615, 617, 619; EDW 643.

An individually tailored Liberal Arts sequence of from eight to 24 hours is also a requirement of the program.

Mental Retardation

Advance preparation for the purpose of becoming a better teacher of the mentally retarded or for becoming a supervisor of teachers of the retarded is provided in the course of study.

A minimum of 30 credit hours is selected from Special Education courses with an emphasis on mental retardation—EDS 529, 541, 598, 611, 612, 613, 620, 621, 622, 631, 699. EDS 620 and 621 are required of all students in the program.

The Potentially Handicapped: Grades N-3

Plan I

The course of study is designed to prepare experienced teachers to teach young children who seem likely candidates for future Special Education services. (This program was formerly titled "Varying Exceptionalities") Early attention by these professionals to the prevention and the amelioration of handicapping conditions permit many children to later perform satisfactorily in regular educational programs. Those children who need special services immediately can be identified and provided such services earlier than otherwise.

A minimum of 28 quarter hours in the area of specialization is requisite to successful completion of the Plan I program for teachers of the Potentially Handicapped. The individualized program will include courses to be taken from the following: EDS 531, 541, 610, 611, 622, 632, 649, 676; EDE 527, 529, 530, 531, 609; EDR 530; EDC 510.

Plan II

Individuals with a non-education baccalaureate can prepare for the teaching of Potentially Handicapped children through Plan II. Ordinarily, it will take more than one academic year to complete the program.

The individually tailored program will consist of a minimum of 28 quarter hours in the area of specialization—EDS 531, 541, 610, 611, 622, 632, 649, 676; EDE 413, 527, 529, 530, 531, 609; EDC 501, 510; EDR 530.

Speech Pathology

A five-year program terminating in an M.A. in Special Education: Speech Pathology is available to undergraduate students. It is described on page 68. Students who already have a baccalaureate degree in Speech Pathology or a related area (such is Speech, English, Psychology, Education, Nursing, and others) are encouraged to enter the graduate program in Speech Pathology. They must take the requirements of the fifth year of the Speech Pathology sequence. The prerequisites to the courses in the fifth year may be waived by demonstration of proficiency or by electing suitable substitutes.

Requirements of the fifth year are EDS 531 or PSY 431; EDS 611, 671, 672, 673, 674, 675, 699 or 579, and the Process Core for the M.A. in education. In addition, three to six hours must be taken in EDS 579: Clinical Practicum in Speech Pathology.

Planning of such a graduate program must be approved by a speech pathology adviser.

Secondary and K-12 Program—Plan II

(for the liberal arts graduate seeking initial certification)

The program outlined below is designed for the person who has completed liberal arts bachelor's degree requirements with little or no work in professional education and who desires to earn a master's degree and meet certification requirements for secondary school teaching. Completion of an undergraduate major, or its equivalent, in the intended teaching field is assumed.

The components of the program are:

1. PROCESS CORE (20 hours)

EDC 501, Curriculum, and Instruction: Secondary

EDF 605, Foundations of Measurement

EDF 607, Foundations of Educational Research

EDF 611, Psychological Foundations of Education

EDF 621, Socio-Economic Foundations of Education; or EDF 623, History of Education; or EDF 625, Philosophy of Education

Any process core course, except EDF 607, may be waived by examination if the student has had an appropriate undergraduate course. A minimum of one process core course must be taken prior to admission to candidacy for the degree.

2. CURRENT TRENDS COURSE IN TEACHING SPECIALIZATION (4 hours)

3. SPECIALIZATION (minimum of 27 hours)

An individually planned graduate major in the College of Liberal Arts in the teaching field or in an appropriate College of Education program for K-12 specialists. See Specialization section under Plan I, above, for description of major requirements.

4. INTERNSHIP (8-15 hours)

A regular full quarter internship and seminar block, EDC 498 and 499, for 15 hours credit. In the case of an in-service teacher or the student who is placed in a full-time paid internship, enrollment will be in EDC 691 for eight hours credit. Both types of internship involve planned observation and supervision by a member of the University faculty and a secondary school staff member.

Junior College Program

The University of South Florida has developed a program for junior college teachers which leads to the master of arts degree and Florida State Department of Education certification at this level. The College of Education in close cooperation with the College of Liberal Arts has formulated the program. It is now being expanded to include the substantive disciplines of other colleges of the University and will continue to expand as masters degree programs are approved in new fields which are appropriate for junior college teaching. Information regarding programs not listed below should be

directed to the Office of the Dean of the College of Education.

The Junior College programs approved as of January 1, 1968 are:

Astronomy	Music
Biology	Physics
Chemistry	Psychology
English	Sociology
French	Spanish
Geology	Speech
Mathematics	Visual Arts

A. ADMISSION AND ADVISING

Because of the unique characteristics of the Junior College Program which integrally involves two colleges of the University, there are admission and advisory regulations which go beyond those listed on pages 110-111 dealing with Graduate Study.

While application for admission to the program may be made in either the office of the Dean of the College of Education or in the divisional office of the student's field of specialization, action on all applications is the joint responsibility of the two colleges. Admission to the program requires minimum scores of 600 of the National Teachers Examination or 800 on the combined verbal and quantitative aptitude tests of the Graduate Record Examination. Duplicate sets of the student's complete record will be on file in both offices, with the College of Education charged with the responsibility of making official recommendations for certification to the State Department of Education and for the granting of the degree to the Vice President for Academic Affairs and to the Registrar.

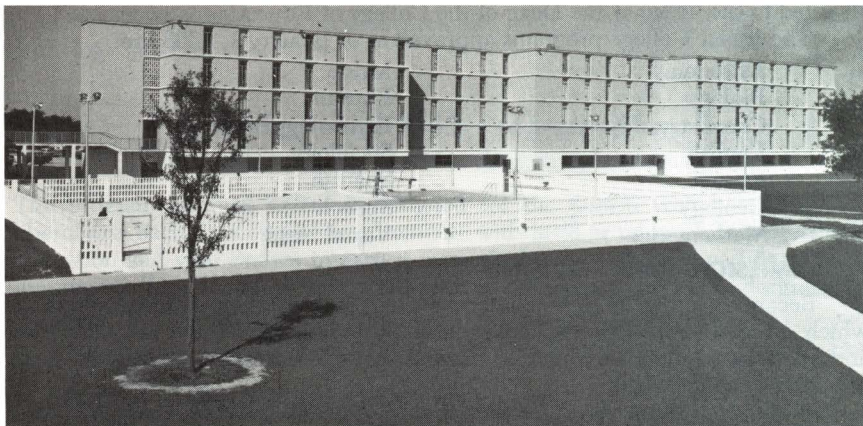
Students in this program will have two advisers, one in the College of Education and one in the area of the student's major field. The education adviser is the chairman of the Junior College Program or one assigned by him; the major field adviser will be assigned by the departmental chairman of the student's substantive field. The two will constitute the student's inter-college committee which supervises the student's individual progress, plans his program and recommends him to the deans of the two colleges, or their representatives, for admission to candidacy and for graduation. They also submit to the Dean of the College of Education their recommendation for Junior College Certification in his major field by the Florida State Department of Education.

B. THE PROGRAM

Consists of 45 quarter hours, plus an internship of (0-9) hours if and as needed.

1. Specialization (36 hours)

Typically, the student's program will include 36 quarter hours of graduate work in a field of specialization. The specialization sequence to be completed will be worked out in consultation with a designated major field adviser. This "typical" program is based on the assumption that the student has an undergraduate background in his specialization area which is roughly equivalent to the pattern of the appropriate University of South Florida major. Students admitted without such preparation may be required to demonstrate through proficiency tests their readiness to pursue the program as outlined or additional course work may be required to correct deficiencies. By the same token, the unusually well prepared student may be permitted to take



Beta Residence Hall and outdoor pool

fewer courses in his specialization area, substituting approved electives from other fields of study.

2. Professional Education (8-17 hours)

- (a) Courses in Higher Education (9 hours)
 - EDH 651, The Junior College in American Higher Education (4)
 - EDH 653, Seminar in College Teaching (5)
- (b) EDC 691, Internship (0-9 hours) *

Those students who have not met the internship requirement for certification (up to nine hours credit in internship or two years or more of successful full-time teaching experience) must complete EDC 691, Internship. Typically, the internship will consist of full-time supervised teaching for one quarter or part-time teaching for two quarters. At least one-half of the internship must be in a junior college, the other half being left to the discretion of the student's committee. Internship is a function of the College of Education and supervision of the internship is the responsibility of the Education adviser, but the major field adviser should be involved. In some cases students may be placed in salaried internship positions.

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

* This internship has only been developed for the elementary education area.

College of ENGINEERING

Program Information

The College of Engineering takes a modern approach to the education of tomorrow's engineers which provides for individual development both in technical competency and in human values. As our society has become more complex, so has the array of problems to be solved by the engineer. Even now, research engineers are working on such projects as nuclear spin gyroscopes to provide guidance for spacecraft, or on the development of instrumentation for exploration deep in the oceans. Others are engaged in developing artificial body organs such as hearts and kidneys, while some are designing bridges and highways. Still others have become manufacturers and sales engineers and many have assumed top managerial responsibilities in almost all fields of endeavor.

Because of the broad range to today's engineering activity and the increase in scientific knowledge with its many inter-relationships, it is becoming increasingly difficult to maintain the traditional identification of engineering effort such as electrical, mechanical, and so forth. Many users of engineers have abandoned such descriptions of engineering work in favor of more functional descriptions of their activities.

The College, in planning its program, has considered engineering effort in three broad groupings of activity—design, research, and the operation of complex technological systems. It has become obvious that it requires longer than four years to provide an education for engineers who will participate in the advanced design and research activities of the engineering profession; thus, the professional program has been planned to provide flexibility within a fifteen quarter (five-year) experience leading to a Master of Science in Engineering. It is also recognized that some prospective graduates will desire to complete their technical education at the baccalaureate level. For this purpose a Bachelor of Science in Engineering is offered which will provide the student a broad education with sufficient technical background to effectively contribute in the many phases of engineering not requiring the depth of knowledge required for advanced design and research.

Both the Master of Science and Bachelor of Science programs have as their foundation a core of subject material, encompassing humanities, social science, mathematics, science and engineering, which is required of all stu-

dents. In addition to the core material, each student will complete a program of specialization that has been designed in consultation with him and approved by his upper level adviser. Students wishing to pursue course work commonly associated with such traditional degree programs as electrical engineering, civil engineering, industrial engineering, mechanical engineering, and so forth, can do so within the framework of the program. However, the emphasis on flexibility at the upper levels of the program permits the student to explore his individual interests with professional assistance. For the student following the professional program, a design or research project during his senior and advanced year will enable him to focus his attention on an engineering problem of major interest to him.

As specialization in the engineering program is individual in character, it is *most important* that students who are admitted to the upper level and who have completed a substantial portion of their freshman and sophomore course material select and work closely with their upper level adviser.

The program leading to a Master's degree is an integrated program of 246 quarter hours and the baccalaureate degree is a program of 201 quarter hours; both programs include the common course work core of 153 quarter hours.

General Requirements

The College of Engineering is organized as a professional college within the University. Students will normally be admitted to the college upon successful completion of two years of college level work, and following the completion of their third year (junior level) requirements will elect, with the advice and approval of an engineering faculty committee, to pursue either a professional program in engineering leading to the master's degree or to terminate their programs with a baccalaureate degree.

The high school student anticipating a career in engineering should elect the strongest academic program that is available while in high school. Four years each of English, mathematics and science, as well as full programs in the social sciences and humanities, are most important to success in any engineering college. A foreign language, while not a necessity, provides a desirable background for students, many of whom will continue for advanced study.

Junior college students planning to transfer to the University of South Florida's engineering program at the junior level should plan to graduate from their respective junior colleges, thus completing their general education requirements and as much of the mathematics, science and engineering core course work as is available to them. The University's College of Engineering is available to assist junior colleges in the development of course material and in the training of staff for their offering of applicable core pre-engineering course work.

All students admitted to the College should immediately ensure that they are assigned an upper level adviser. As specialization programs are established only with the approval of the upper level adviser, this initial step is most important. Upper level students will be assigned an adviser based upon their indicated interests. Students may change advisers providing the proposed new adviser is willing to accept the student and the change is approved by the Office of the Dean. Students should report to the Office of the Dean to confirm their adviser assignments.



Engineering Building

Some prospective students who are considering pre-engineering at the University of South Florida may lack certain preparation in high school and may elect to follow several programs which will assist them in overcoming their deficiencies. One alternative might be that such a student would select a summer program at the University of South Florida to update himself in mathematics and the physical sciences. Another alternative might be for the prospective engineering student to take some remedial work and a less accelerated program at the University of South Florida. For financial or other reasons, students may wish to avail themselves of the state's system of junior colleges which offer a wide range of course work, and many of which offer full programs in pre-engineering (first two years course work).

The supervision of the academic programs for the College is the function of five organizational units, each having a chairman responsible for the activities of the unit. The student and his adviser become members of one of these units and will rely upon the chairman of the unit for assistance and direction in the development of the student's program.

Pre-engineering is the unit which will assist the student during the period prior to his admission to upper level engineering. This same unit may also assist students who are admitted to the College but who lack lower level pre-requisite course work, as in the case of a student holding a degree but seeking a second degree in engineering.

The four upper level units are responsible for the students, advisers and courses in their respective areas of specialization. These units are:

1. Electrical and Electronics
2. Energy Conversion
3. Structures, Materials and Fluids
4. Industrial Systems

Upper Level Admission Requirements

Students may be admitted to the College of Engineering upon completion of a minimum of 90 quarter hours of college level course work with an average of 2.0 on a 4.0 system ("C" average). All admissions are subject to the regulations of the University and the approval of the academic committee of the College. It is expected that students seeking upper level college admission will have completed their basic studies core requirements (general education requirements for transfer students) and will have made substantial progress in fulfilling their lower division mathematics, science and pre-engineering course work requirements in order to complete their professional program or baccalaureate in minimum time.

Engineering Core and Specialization

Both the professional and undergraduate curricula of the College of Engineering are founded on a common core of course work which is required of all students and provides for a broad education as well as a foundation for the work in the several areas of specialization. Students who meet the requirements for upper level admission but who have a deficit in the lower level material may complete this work while registered in the College and will be assigned to a special adviser who will assist them in problems that may exist in arranging their programs and courses. Course work identified as 400 or higher is considered as professional level work and students enrolling for this work must have either been admitted to the upper level or have received permission from the Office of the Dean to attempt this work.

The core and specialization requirements for both the master's degree and the baccalaureate program are as follows:

1. CORE REQUIREMENTS (152 quarter hours minimum)

BASIC STUDIES CORE REQUIREMENTS (35 quarter hours minimum)

Prospective engineering majors must take CBS 101-102, 301-302-303, any three of CBS 305-306-307-308, and nine quarter hours of Behavioral Science, Biological Science, or a foreign language. Freshmen and sophomores will normally fulfill the additional basic studies requirements in Physical Science and Functional Mathematics by completing the mathematics and science core course work required in the engineering program with a grade of "C" or higher in each. Those not meeting these conditions will be expected to complete CBS 208-210 and 109-110 either by examination or by enrolling in these courses.

MATHEMATICS AND SCIENCE CORE REQUIREMENTS (49 quarter hours minimum)

The student must take MTH 203, 303, 304; CHM 211, 212, 213; PHY 221, 222, 223, 224, 225, 226, 373, and MTH 305, 401 or approved electives in advanced mathematics or engineering analysis.

ENGINEERING CORE REQUIREMENTS (56 quarter hours minimum)

The prospective engineering major must take EGB 101, 102, 201, 203, 301, 302, 303, 304, 305, 308, 309, 311, 316, 317, 318, and 321

HUMANITIES OR SOCIAL SCIENCE CORE REQUIREMENTS (12 quarter hours minimum)

The student must take nine quarter hours of approved electives at the

200 level or above from these areas, and he must also take the Senior Seminar (CBS 401) required of all degree candidates.

2. PROFESSIONAL PROGRAM

This program consists of a minimum of 152 quarter hours of core course material plus 94 quarter hours of specialization including a maximum of 18 hours of design project or research. The program leads concurrently to both the Master of Science in Engineering and the Bachelor of Science in Engineering with the specialization phase of the program being individually arranged and involving course work, design, research and/or operational experience.

3. BACCALAUREATE PROGRAM

The program consists of a minimum of 152 quarter hours of core course material plus 49 quarter hours of specialization approved by the student's upper level adviser. The degree, Bachelor of Science in Engineering, is awarded upon successful completion of the program.

4. ADVANCED TRANSFER STUDENTS

Students who have been awarded baccalaureate degrees from other institutions in engineering, mathematics, or the physical sciences will, upon the approval of the academic committee of the College, be eligible for direct admission into the master's degree program of the College. The planning of their programs and requirements for degree completion will be a matter for individual consideration by the academic committee of the College.

5. NON-THESIS MASTER'S DEGREE PROGRAM

The College of Engineering offers a non-thesis post baccalaureate program in the Tampa Bay area leading to the degree Master of Engineering (Electrical) and Master of Engineering (Administration). This program is primarily for the benefit of industrially employed engineers and requires the completion of 45 quarter hours of approved course work, as well as a comprehensive examination. Further information is available by contacting the Office of the Dean, College of Engineering, University of South Florida.

6. COMPUTER SCIENCE PROGRAMS

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

Undergraduate

FORTRAN IV Programing, EGB 201 (2), and COBOL Programing, EGR 301 (2) are offered every quarter at times compatible to other course work offerings. New computer languages will be offered for credit as they approach operational status. Other computer oriented credit course work is also available for undergraduates. See EGB 309 and 321; EGR 415 and 441.

Graduate

A group of course work is available at the graduate level which provides the student 9 to 15 credits of computer sciences. These offerings are

open to all fields but do require prior knowledge of FORTRAN and COBOL Programming. See Course Series ETK 601 through ETK 606.

Other Requirements

HUMANITIES AND SOCIAL SCIENCE REQUIREMENTS

While the engineering student is expected to complete certain requirements during his first two years of study which are directed toward the humanities and social sciences, and which are fulfilled by the completion of his basic studies requirements at the University (or general education requirements at other institutions), the University of South Florida expects more of its prospective engineering graduates than this minimum. The engineer must not only be a technically competent individual, he must also be a person who can understand, adjust and contribute to his social environment. The undergraduate engineering program at the University requires, in addition to the general education program, twelve credit hours of study in the humanities and social sciences during the engineering student's junior and senior years. Students are encouraged to complete two courses in this subject material area each academic year of his upper level program.

ENGLISH REQUIREMENT

Students who have been admitted to the College of Engineering are expected to take an examination during their first trimester of residency in order to evaluate their preparedness in the use and understanding of the English language. This examination will be administered by the faculty of the University's English program and students evidencing a deficiency will be required to initiate the necessary corrective programs, with the assistance of their advisers. Correction of any deficiency must be effected prior to recommendation of the student for graduation by the faculty of the College.

MATHEMATICS REQUIREMENT

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

CONTINUATION REQUIREMENTS

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

REQUIREMENTS FOR GRADUATION

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

College of LIBERAL ARTS

The College of Liberal Arts, as one of the five colleges of the University, continues the general and liberal education begun in the College of Basic Studies. Here the student may explore further his vocational interests and develop a breadth of knowledge and precision of intellect necessary for responsible leadership in our society.

More specifically, the College seeks:

1. To help students continue the exploration of new subjects affording fresh ideas and talents enriching to life.
2. To enable students to try out several fields as a means of determining the wisest vocational choice.
3. To give sufficient development within the chosen vocational field that the student will be prepared to obtain a job upon graduation or move successfully into a graduate or professional school.
4. To collaborate with the other colleges of the University in providing liberal courses to reinforce required training in those professional schools.
5. To cultivate independent thinking, creative imagination and value commitment in order that students may become constructive leaders in their chosen activities.

Admission to the College

Provisional admission to the College of Liberal Arts is possible with four of the eight areas of Basic Studies completed or waived, and three of the four Physical Education courses completed, with a minimum of 81 quarter hours. Unqualified admission requires six of the eight areas of Basic Studies (including English), four Physical Education courses completed, and a total of 90 quarter hours or more. (A grade point ratio of 2.0 is expected in both instances.) Occasionally students may be admitted without the 2.0 average and they will automatically be on warning status.

Upon admission (by application to the appropriate divisional office in the instance of a departmental major, or the Dean's office when the major is interdivisional) the student will declare his major and will be counseled in his selection of courses by an adviser from the major field. He will then plan the remainder of his college program to fulfill his educational needs and satisfy requirements for the bachelor of arts degree. The Associate Dean of the division will generally supervise his progress and ultimately certify the student for the degree.

Any student of the University may take courses in the College of Liberal Arts even though not officially admitted. Freshmen and sophomores may wish to take liberal arts courses in addition to their basic studies program. Similarly, students in other colleges or adults in the community will elect liberal arts courses of particular interest.

Graduation Requirements

The College of Liberal Arts currently offers one undergraduate degree: Bachelor of Arts. These requirements are referred to on page 23 of this catalog but are briefly summarized here:

1. 180 quarter credits with at least a "C" average (2.0) in work done at the University of South Florida. At least 60 of the 180 credits must be in courses numbered 300 or above.
2. General education requirements of at least seven courses fulfilled in the College of Basic Studies, including CBS 101-102, and CBS 401 (the Basic Studies Functional English course and Basic Studies Senior Seminar), or transferred equivalents. Proficiency must also be shown in four physical education areas.
3. Completion of a major in a subject or an integrated major involving several subjects. There must be at least a 2.0 average in this major. To insure breadth of experience and to preclude undue specialization, a student must earn (or show competence in) a minimum of 120 credits outside his discipline of concentration, 90 of which must be outside the division of his major.
4. Work transferred from other schools will not be included in the grade point average computed for graduation. (However, graduation with honors requires a 3.5 average in USF work and also in the total hours applied toward graduation.)
5. A student must earn the last 45 credits in residence at the University of South Florida:
6. Completion of the Graduate Record Examination Area Test or specified equivalent.

Organization and Special Features

The College of Liberal Arts is organized into four divisions for the administration of staff, courses, and student records. They are: Fine Arts (FAH 110), Language-Literature (FAH 239), Natural Sciences and Mathematics (fifth floor, Science Center), and Social Sciences (first floor, Social Science Building). Each division is headed by an Associate Dean who is responsible for each student's admission to a major, application of regulations, maintenance of student records (including the signing of all official forms), and ultimate certification for the degree.

The College, like the total University, is concerned with the broad development of students' knowledge. Thus, it offers several integrated courses and limits work in any one field. At the same time, the student must learn to work independently. The College emphasizes individual projects in many courses, laboratories, field studies, and the opportunity to earn credit through independent study and examination.

It is important that the student develop basic skills for research and creative scholarship; hence the provision of senior seminars and special courses on research methodology. These skills are important for the critical appraisal of scholarly work even though the student might not go on to graduate study. There is opportunity from time to time for students to collaborate with their professors on research projects and to render essential intellectual services to the community.

CURRICULA AND PROGRAMS

Opportunities for Concentration

The Liberal Arts College offers a major in twenty-two fields as described in the following pages. The student must fulfill all the requirements indicated or receive written permission from the Department Chairman for any substitution or exemption.

In addition to these departmental majors, there are interdisciplinary majors available in several divisions. These include the programs in American Studies, Pre-Law, International Studies, the Social Science Divisional program, and the Natural Science Divisional program.

A general Liberal Arts major is available for students whose plans require still wider training, cutting across divisional lines. Such students (pre-seminary and others) should see the Dean of the College for assignment to an advisor and be prepared to write out for approval a statement of the purposes underlying their program and the combination of courses they deem most relevant.

An interdisciplinary degree is also possible through the College of Basic Studies and (for teachers) through the College of Education.

Division of Fine Arts

The Division of Fine Arts serves a three-fold purpose of providing courses of study, theatres of practice, and programs of events for the University family, the surrounding community and the citizens of the state of Florida.

Its prime objectives are: (1) to provide a broad but thorough training for those highly talented in the fine arts, (2) to offer guidance and training for those preparing for teaching, and (3) to provide curricular studies and extracurricular activities for general University students.

The division offers broad courses in art, music and theatre arts with specific curricular offerings in (1) visual arts, (2) dramatic arts, and (3) music arts. Special programs designed for the preparation of public school teachers include (1) art, grades 1-12; (2) general vocal music, grades 1-12; and (3) general-instrumental, grades 1-12.

MUSIC ARTS

The Music Arts curriculum is designed for those gifted in performance on some instrument or in voice, whose ultimate goal is that of performing artist or studio teacher.

Requirements for the B.A. Degree:

Requirements for a major in piano are listed here; those seeking majors in another instrument or voice should substitute the appropriately numbered ap-

plied music courses.

Piano students: MUS 212, 213, 214, 305, 312, 313, 314, 325 (applied music, 12 credits), 412, 413, 414, 512, 513, 514, 525 (applied music, 12 credits); 571 (required only of those whose objective is studio teaching); FNA 413, 433, 543, and 553 for a total of 72 credits. A minimum of 90 credits (including Basic Studies courses) must be taken outside the Division of Fine Arts.

Placement examinations are required of all new registrants in music courses, and for admission to 300-level courses in applied music. Students should schedule these examinations in the Music Office (FAH 204).

All students seeking the music major are required (1) to successfully complete the piano proficiency requirement defined by the music faculty prior to admission to the College of Liberal Arts, (2) to perform in a major ensemble each quarter, (3) to perform satisfactorily on his major instrument or voice for the music faculty before admission to the College of Liberal Arts, (4) to attend required recitals as scheduled, and (5) to present a faculty-approved public recital before graduation.

Requirements for the M.M. Degree

General requirements for graduate work are given on pages 113-118. In addition, the applicant will need to satisfy the following requirements in music: (1) Applied music audition, (2) placement examination in music theory, (3) placement examination in music history-literature, and (4) piano proficiency requirement as outlined for the undergraduate.

The specific program for each student will vary according to his needs. Each program must be approved by the student's advisory committee, appointed from the music faculty.

A minimum of 54 credits is required. The typical program for the applied music major consists of 27 hours in 600-level applied music and related performance courses, 18 hours in the areas of theory and history-literature, and 9 hours in research and thesis or faculty-approved recital.

Programs for Teacher Education

For bachelor of arts degree for public school teachers in music, see page 69. For master of arts degree for public school teachers in music, see page 77.

THEATRE ARTS

All students will take TAR 101, 111, 201, 221, 339, 451, 501, 502, FNA 413, 423, 543, 533, plus any two of the Theatre Literature courses. Depending upon choice of concentration, additional requirements are—performance majors: TAR 112, 311, 411, 313, 413, 415, 511, plus six hours elected in the discipline; technical majors: TAR 223, 325, 429, any two sequences from 421-422, 423-424, and 425-426, plus six hours elected in the discipline; playwriting majors: TAR 112, 12 hours in 403-404, additional Theatre Literature course, one Design course, plus six hours elected (five of which must be Creative Writing outside the discipline) for a minimum total of 69 hours. A minimum of 90 hours (including Basic Studies courses) must be taken outside the Division of Fine Arts.

VISUAL ARTS

Requirements for the B.A. Degree:

The Visual Arts curriculum is designed for students interested in continuing their education in graduate or technical schools with the objective of college teaching, gallery or museum work, fine or commercial studio work.

The Visual Arts student may elect to emphasize painting, sculpture, graphics, ceramics, cinematography, or art history by selecting the appropriate sequence of courses.

A typical sequence would be: ART 201, 202, 301, 302, 401, 402, 411, 421, 431, 441, 461; FNA 423, 433, 543, and 553; twelve credits in art history; fifteen credits of the studio area to be emphasized (painting, sculpture, graphics, ceramics or cinematography) for a total of 72 hours. A minimum of 90 hours (including Basic Studies courses) must be taken outside the Division of Fine Arts.

All Art majors are required to present a portfolio of their work prior to entrance into upper level. The University reserves the right to retain selected student work done while registered at the University.

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

Requirements for the M.F.A. degree:

General requirements for graduate work are given on pages 113-118. It is additionally required that applicants will submit examples of their work to the Department of Visual Arts before admission to the program will be granted.

A minimum of 72 credits is required. The typical program consists of 18 hours in *one* of the studio areas of painting, sculpture, graphics, ceramics or cinematography, 15 in one or more of the remaining areas, 12 in the history of art and 9 each in research, thesis and a minor.

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

Division of Language and Literature

The Division of Languages and Literature offers courses in American Studies (AMS), Classics and Ancient Studies (CLS), English (ENG), Foreign Languages (FRE, GER, ITA, RUS, and SPA), Journalism (JNM), Linguistics (LIN), Philosophy (PHI), Religious Studies (REL), Speech (SPE) and Interdisciplinary Language-Literature subjects (LLI).

Majors are available in American Studies, Latin, English, French, German, Italian, Russian, Spanish, Philosophy, Religious Studies and Speech.

Four Master of Arts programs are also available: English, French, Spanish and Speech.

AMERICAN STUDIES

The American Studies major is designed for those students interested in studying the relationships between the important elements which shape American civilization. A student majoring in American Studies must take courses in four basic areas: History; Literature; Philosophy and Humanities; and Social Science. The American idea sequence, CBS 301, 302, and 303, is a pre-requisite (or can be taken concurrently) for admission to the major.

To complete the requirements for a major, a student must take the four seminars in American Studies, AMS 391, 491, 492, and 493, one prescribed course from each basic area, HTY 411, ENG 305, HUM 535 or PHI 413 and ECN 371, and 27 hours of related elective courses, no more than 9 in any one area, chosen in consultation with and approved by his major adviser from among the following list of courses: HTY 311, HTY 315, HTY 361, ENG 306, ENG 307, ENG 515, ENG 525, ENG 527, ENG 528, HUM 536, HUM 537, PHI 413, SPE 345, SPE 565, ANT 303, EDF 575, POL 201, POL 431, POL 432, POL 341, POL 345, POL 441, POL 463, SOC 261, SOC 341, SOC 371, SSI 503.

Each student's program must be planned with the American Studies adviser, who may make appropriate substitutions when new related courses are added to present University offerings and he deems such substitutions educationally advisable.

CLASSICS AND ANCIENT STUDIES

The only major in Classical Studies offered at this time is a major in Latin alone or in combination with a modern foreign language. First-year Classical Greek (CLS 331-332-333) and first-year Classical Hebrew (CLS 341-342-343) are available in alternate years. For Latin requirements see FOREIGN LANGUAGES, page 96.

ENGLISH

Requirements for the B.A. Degree:

A major in English requires a sequence of courses in British and American literature. Advanced courses focus on the works of particular authors, genres, or groups of related authors. All English courses attempt to teach students how to think critically about literature and to fit the works studied into the economic, social, political, scientific, and religious contexts.

To accumulate the required 48 credits, all English majors must take the following seven courses: ENG 201, ENG 202, ENG 203, ENG 305, ENG 306, ENG 307, and ENG 411. In addition they must elect one of the following: ENG 319, ENG 321, ENG 335, ENG 336, ENG 437, ENG 459, and ENG 511; two of the following: ENG 501, ENG 503, ENG 505, ENG 507, ENG 515, ENG 519, ENG 520, ENG 521, ENG 529, and ENG 559 (a student cannot use both ENG 519 and ENG 520 in this group); and two of the following: ENG 513, ENG 517, ENG 518, ENG 523, ENG 525, ENG 527, ENG 528, ENG 530, ENG 531, and ENG 535.

Persons wishing to take English courses not on this list, or more than the specified number of courses in the above areas, may include them in the 12 hours allowed under the 60-hour maximum permitted in one department.

Requirements for the M.A. Degree:

Requirements for Admission. In addition to the general requirements of the University, an applicant must have an academic average of B in all English courses above freshman English, a minimum of twenty-eight hours of literature in English above the freshman level, and a score of 620 or higher on the Advanced English Test of the Graduate Record Examination. All applications must be approved by the Graduate Committee of the Department of English.

Course Work. A master of arts degree in English requires 48 hours of course work from the following list of English courses: ENG 623; ENG 691; ENG 515 and ENG 531 (if these courses already have been taken, English 500-level courses may be substituted); one to three other 500-level courses; two courses from ENG 683, Selected Topics; three to five courses from ENG 615, ENG 655, ENG 667, ENG 687, and ENG 695. Students may substitute eight hours of courses acceptable for graduate credit in related areas, subject to approval by the Graduate Committee of the Department of English.

Foreign Language Requirement. All candidates for a master's degree will be required to demonstrate reading proficiency in one of the following foreign languages: Latin, Greek, French, German, Spanish, Italian, or Russian.

Other Requirements. Each student is required to write an extended critical or analytical paper in the field of English studies. In addition, he must also pass a comprehensive examination, both oral and written. Specific information about these requirements is available from the Graduate Committee of the Department of English.

FOREIGN LANGUAGES

Language studies in the College of Liberal Arts fall into two general groupings: (1) Modern foreign languages and literature, providing instruction in French, German, Italian, Russian, and Spanish; and (2) classical languages and literature, providing instruction in Latin and Greek. Instruction in linguistics, language structure and development, is also available.

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

Major programs are offered in French, German, Italian, Latin, Russian, and Spanish, and in combinations of any two of these.

Requirements for the B.A. Degree:

Modern language majors must complete at least 45 credits in the chosen language beyond the functional language courses. Among these 45 credits must be the following:

FRENCH: FRE 301, 303, 305, 306, 307, 521, 522, and 523.

GERMAN: GER 301, 303, 305, 306, 307, 513, and 521.

ITALIAN: ITA 301, 303, 305, 306, 307, 511, 512, and 513.

RUSSIAN: RUS 301, 303, 305, 306, 307, 551, 552, and 553.

SPANISH: SPA 301, 303, 305, 306, 307, 513, 514 or 515, 523, 526, 542, 543.

A native speaker must substitute a literature course for the advanced conversation course (303). Moreover, in cases where a native speaker has received advanced education abroad, he will not be allowed to take the advanced composition course (301) to fulfill his major requirements.

LATIN majors must complete at least 44 credits beyond the 200 level: CLS 301, 302, 303, 321, 371, 401-402-403, 411, 412, 413, 517 and 571. Recommended electives are: CLS 331-332-333 (Greek), CLS 527, CLS 529, LIN 583, ART 313, ART 323, and HUM 423-424.

Combined Majors

Combined majors are offered in any two modern languages or in Latin and a modern language. For a major in two modern languages, a student must take the courses numbered 301, 303, 305, 306, and 307 in each of two languages and an additional 19 credits in his first language and an additional 10 credits in his second language. Students majoring in Latin and a modern language must take CLS 301, 302, 303, 371, 401-402-403, 411-412-413, 517 and 571; and courses numbered 301, 303, 305, 306, and 307 in the modern language, plus 10 additional hours of literature in the modern language.

A student majoring in any one of the Romance languages may count ROM 517 toward his major requirements.

Requirements for the M.A. Degree

General requirements for graduate work are given on pages 113-118.

All students admitted to the M.A. program in foreign languages must have a B.A. degree in their major or they must have completed 18 hours of courses on the 500 level in the language of their major with an average of B (3.00), allowing only one C. The 300 level survey courses are a prerequisite for any 500 level course. However, they can be taken simultaneously with 500 level courses. Six of the student's 18 hours may be counted toward the M.A. degree unless they were taken to fulfill the requirements of the B.A. degree or its equivalent. A satisfactory grade on the Graduate Record Examination is required for admission to the M.A. program.

For a master's degree in French or Spanish the following are required:

- 1) A minimum of 45 credit hours.
- 2) A thesis to be written under the direction of an adviser assigned by the chairman of the department.
- 3) A comprehensive two-hour oral examination, based on the student's course work and the reading list, to be taken after the first six weeks of the term following the one in which the student completed his course work.
- 4) The M.A. candidate must have a reading knowledge of a foreign language other than the one he is studying for his degree. All languages taught by the department of foreign languages or Latin are acceptable. However, Portuguese is excluded for Spanish majors. The student must pass the Graduate School Foreign Language Test, prepared by the Educational Testing Service, within a norm set by the faculty. He cannot take the comprehensive final examination before this requirement is satisfied.

Of the 45 hours required of the student no more than 18 may be on the 500 level and the remaining 27 must be on the 600 level. A student may transfer a maximum of nine hours credit of graduate work from another institution toward his M.A. degree from the University of South Florida.

Any student wishing to do work in a second language will be allowed to count toward his M.A. degree nine hours of 500 or 600 level courses in his second language.

JOURNALISM PROGRAM

There is no major offered in Journalism. Students interested in journalism will major in another field. They may, however, choose journalism electives from among four basic courses, supplemented by practical laboratory work on campus publications.

Those seeking careers in the mass media after graduation will be directed to the various daily and weekly newspapers, radio and television news departments, advertising agencies, magazines, and public relations firms with which the Journalism Program maintains close contact. These students, who have their majors in another field, may elect to become journalism advisees and should schedule their courses preferably in this order: CBS 101 (Functional English-Journalism section), CBS 102 (Functional English: Mass Media), JNM 341-342, 343, 347 and 349, along with related electives, after consultation with the Journalism Program office.

Students in the Secondary Education program with a major in English are referred to the College of Education section in this Catalogue under the English-Journalism heading.

LINGUISTICS PROGRAM

There are a number of linguistics courses offered both under the Linguistics Program and under a number of other departments, but there is no linguistics major. While some of these courses are required for majors under various departments, most of them are also available to non-majors interested in linguistics courses as electives. In addition to those courses offered under the Linguistics Program, LIN 411, LIN 412, LIN 520, LIN 530, LIN 581, LIN 583 and LIN 585, the departments of Anthropology, Classics and Ancient Studies, English, Foreign Languages and Speech offer a number of linguistics courses. Students interested in linguistics electives should also refer to the course offerings of these departments.

PHILOSOPHY

The philosophy program includes five areas of study: logic and scientific method, history of philosophy, theory of knowledge, theory of reality, and theory of values. Majors in philosophy must complete at least 45 credit hours in the program, including PHI 303, 333, 334, 335 and at least nine credits above the 570 level.

Credit toward a major in philosophy will be extended for LLI 315.

RELIGIOUS STUDIES

The major in religious studies is offered to those students who are interested in the vital role of religious thought in shaping the cultural patterns of historical peoples and in its relationship to the merging patterns of contemporary life. Such a major might be elected out of personal interest in religious thought, as the undergraduate preliminary for a master's and doctoral program of religious studies, or as a valuable background for semi-professional or professional work in religious institutions: public schools, junior colleges, universities, the religious education departments of local churches, etc. (The student who is planning to enter a divinity school or theological seminary should write to the institution of his choice to get specific undergraduate requirements for entrance).

The program is as simple and practical as possible, giving the student a substantial background for further study in the field, while at the same time allowing considerable freedom for outside electives. There are three major divisions to the program; each of which answers one of the following questions: (1) What is religious thought? (2) How can we analyze it? (3) What are its applications?

A total of 49 quarter hours are required for the major, divided as follows:

- I. *The Basic Documents Underlying Religious Thought* (17 quarter hours required): REL 310, REL 315, REL 325 or 327, and REL 350.
- II. *Analysis of Religious Thought* (12 quarter hours required): PHI 411 and two of the following three courses: SOC 373, anthropology of religion, or psychology of religion.
- III. *Applications of Religious Thought* (20 quarter hours required, no more than 9 in any one department): ENG 319, ENG 507, ENG 511, ENG 583 (Myth and Literature), CLS 321, CLS 341, 342, 343, LLI 301, LLI 302, PHI 321, PHI 333, PHI 521, ART 323, HUM 427, HUM 428, HTY 426, HTY 432, HTY 591.

Each student's program must be planned with the Religious Studies adviser, who may make appropriate substitutions when he deems these educationally advisable.

SPEECH

The Speech curriculum provides courses for all students interested in increasing their understanding and skills of oral communication, and offers major programs in general speech, rhetoric and public address, and broadcasting. In addition, two combination major programs are available: an English-Speech program, designed primarily, though not exclusively, for those preparing to teach in the secondary schools; and a Speech-Theatre Arts program offered jointly by the Language-Literature and Fine Arts Divisions.

A major in Speech requires a minimum of 45 credits; the combination English-Speech program requires 67 credits in English and Speech, and five credits in Theatre Arts; and the joint Speech-Theatre Arts program requires 61 credits.

Speech 201, 203, 491, and 492 are required of all majors.

General Speech sequence: SPE 201, 203, 321, 363, 491, 492, and 20 credits of Speech electives.

Rhetoric and Public Address sequence: SPE 201, 203, 363, 491, 492, 565, and 20 credits of Speech electives, 15 of which must be in rhetoric and public address and discussion.

Broadcasting sequence: SPE 201, 203, 241, 321, 491, 492, and 20 credits of Speech electives, 15 of which must be in broadcasting.

English-Speech sequence: SPE 201, 203, 321, either 361 or 365, 491, 492, and ten credits of Speech electives; ENG 201, 202, and 203; either 305 or 306; 307, 321, 411, and 517; and TAR 303.

Speech-Theatre Arts sequence: SPE 201, 203, 321, 491, 492, 521, and one 300, 400 or 500 elective in Speech; TAR 111, 221, 303, 311, 313, 411, and any two courses chosen from 431, 432, 433, 435, and 437.

Requirements for the M.A. Degree:

Requirements for Admission. In addition to the general requirements of the University, an applicant must have an academic average of B in all Speech courses, a minimum of 18 quarter hours in Speech, and a score of 560 or higher on the verbal aptitude section of the Graduate Record Examination. All applications must be approved by the Department of Speech.

Course Work. A master of arts degree in Speech requires 45 quarter hours of course work distributed in the following manner: 15 hours in Rhetoric and

Public Address (to be selected from SPE 661, 662, 665, 667), 10 hours in Oral Interpretation of Literature (to be selected from SPE 521, 621, 623), and 10 to 20 credits in graduate Speech electives. For graduate Speech electives, students may substitute two courses acceptable for graduate credit in related areas, subject to approval by the Department of Speech.

Other Requirements. Each student is required to write an extended critical or analytical paper in the field of Speech studies. In addition, he must also pass a comprehensive examination, both oral and written. Specific information about these requirements is available from the Department of Speech.

INTERDISCIPLINARY LANGUAGE LITERATURE

While some departments give credit toward a major for some interdisciplinary language literature courses, all LLI courses are designed as electives for students wishing to extend their understanding of a particular field in the Division and of its relationships to other fields. The courses are generally of two types:

- I. those in the history of ideas
 - LLI 301, 302 Main Currents of Western Thought
 - LLI 305, 306 The Idea of Progress
 - LLI 313 The Idea of Freedom, and
- II. those relating a field outside the Division to work in it
 - LLI 311 Literature and the Film
 - LLI 312 Philosophy and the Film
 - LLI 313 Introduction to Film Writing
 - LLI 540 The Social Structure of Language
 - LLI 541 Psycho-linguistics

The courses in group one combine literature, philosophy and criticism to provide broad perspectives. Those in group two are more specialized, but still combine ideas in at least two specific fields.

Division of Natural Sciences

The Division of Natural Sciences offers courses in astronomy (AST), bacteriology (BOT), botany (BOT), chemistry (CHM), geology (GLY), mathematics (MTH), physics (PHY), zoology (ZOO), interdisciplinary courses in botany and zoology (BIO) and oceanography (OGY).

The courses are designed for students planning scientific careers or those technical careers having a considerable component of science, such as engineering or medicine. 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. Those seeking to transfer to another university to complete a course in agriculture, home economics, pharmacy, or one of the medical professions may begin their science work here before transferring.

Students seeking a general understanding of science but not technical competence will normally wish to take the basic studies courses in biological science, physical science, and functional mathematics, and augment their understanding by adding upper level courses designed for non-scientists.

THE B.A. DEGREE PROGRAMS

The division offers the bachelor of arts degree in the following departments:

Astronomy, Botany and Bacteriology, Chemistry, Geology, Mathematics, Physics, and Zoology.

Candidates for the bachelor's degree must be admitted to the upper level as early as possible upon completion of their basic studies requirements and before the end of their junior year.

Even before admission to the division, students preparing for a science or mathematics career must plan their courses from their freshman year because of the sequential nature of the science curriculum.

If students enter the University well prepared from high school, they may qualify for waiver in the basic sciences and/or mathematics courses as described in the section on the College of Basic Studies. To qualify for the basic studies Natural Science or Mathematics waiver, students must have a grade of 425 or higher on the Twelfth Grade Placement Test and three years in high school science or mathematics respectively with a grade of "C" or higher.

Students who do not qualify for a waiver but have good preparation in science and/or mathematics on the basis of the proficiency test and other evidence, are advised to begin their liberal arts science and mathematics courses early and postpone basic studies science and mathematics to be waived later either by examination or as provided below.

A student passing liberal arts mathematics courses through MTH 304 with a grade of "C" or higher in each course can receive an automatic waiver of CBS 109-110.

A student passing two eight-hour liberal arts sequences in separate physical science disciplines with a grade of "C" or higher in each course can receive an automatic waiver of CBS 208-209-210.

A student passing BIO 201-203 with a grade of "C" or higher in each course can receive an automatic waiver of CBS 205-207.

A student admitted to the upper level will be assigned an adviser in his field who will guide the student in planning his program and meeting the requirements for the degree.

MASTER'S DEGREE PROGRAMS

The Natural Sciences Division operates graduate programs leading to the Master of Arts Degree in the fields of Astronomy, Bacteriology, Botany, Geology, Mathematics, Physics and Zoology and a Master of Science in Chemistry.

Students apply for graduate work through the Natural Sciences and Mathematics Division 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 admission requirements for graduate work are given on page 114. The specific requirements for each department are listed under that department below. Further information regarding admission and available fellowships and assistantships may be obtained by writing to the proper departmental chairman.

DOCTOR'S DEGREE PROGRAM

There is a program leading to the Doctor of Philosophy degree in the field of Biology. The initial emphasis is in the area of Marine Biology. The doctorate is offered as a cooperative effort by the Departments of Zoology and Botany. Biologists on the faculty of the Marine Science Institute also participate in the program. University regulations governing graduate study

at the doctoral level are given on page 117. Specific requirements for the Ph.D. in Biology are given on page 103.

MAJOR REQUIREMENTS

ASTRONOMY

Requirements for the B.A. Degree:

A major in astronomy will normally consist of a minimum of 37 credits in the discipline, including AST 201, 202, 413 and 443; a selection of three courses from AST 521, 522, 533, 536, and at least three credit hours of AST 361 or at least three credits in AST 481. In addition, the student will take PHY 221 through 226; or PHY 211 through 216, PHY 315 and a total of at least nine credit hours in Physics above the 200 level in consultation with the adviser. The total number of physics credits must in any case be at least 21.

The student will also take MTH 203, 303, 304, 305 and at least nine credits in mathematics at least on the 400 level, preferably MTH 405, 406 and 407.

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

Additional courses will be selected in consultation with the adviser. Selection of at least one foreign language (German, French or Russian) is strongly recommended, especially for those students who intend to enter graduate school.

Requirements for the M.A. Degree:

General requirements for graduate work are given on pages 113-118. A minimum of 45 credits must include at least 23 for courses numbered 600 or higher and at least 18 for structured astronomy courses numbered 500 or higher. It will be assumed that the student knows enough mathematics and physics to follow any astronomy courses required in his curriculum. No credit is available for courses numbered 499 or lower which the student takes in order to make up for initial deficiencies in this respect. Since candidates for the graduate degrees in astronomy may have a variety of backgrounds, including majors in astronomy, mathematics, physics, the required course of studies may vary considerably among students.

A thesis is required, which must be based on original work. The student must also demonstrate, before the degree is granted, his ability to translate into English the pertinent scientific literature in at least one of the foreign languages, German, French or Russian.

BIOLOGICAL SCIENCES-BOTANY AND BACTERIOLOGY; ZOOLOGY

The Department of Botany and Bacteriology and the Department of Zoology offer programs leading to the bachelor of arts and master of arts degrees.

Requirements for the B.A. Degree:

Major in Botany: A botany major must include the following courses: BIO 201-203, BIO 331-332, BOT 311, BOT 419, BOT 421, BOT 446 or 447, BOT 491. In addition at least 3 elective, structured courses in BOT or BIO are required. Also required are CHM 211-213 and CHM 331-336. Electives in physics, mathematics, geology and a foreign language (preferably German, French, or Russian) are strongly recommended. In addition

to serving as a terminal degree, the B.A. in botany provides good preparation for training in conservation, forestry and agriculture, as well as graduate work in the plant sciences.

Students are advised to enroll in BIO 201 and CHM 211 during their freshman year and to seek completion of basic studies science requirements by obtaining an automatic waiver of CBS 205-207 by taking BIO 201-203. Prospective majors must seek early curriculum counseling from the department chairman.

Major in Bacteriology: A bacteriology major must include the following courses: BIO 201-203, BIO 331-332, BIO 351, BIO 421-422, BOT 417 or 418, and BOT 551 or 557. Also required are CHM 211-213, CHM 331-336 and MTH 101. In selecting courses in conference with the advisee, the adviser will consider the student's individual interests and professional goals.

Students wishing to major in bacteriology are strongly advised to enroll in BIO 201, CHM 211, and MTH 101 during their freshman year and to seek the advice of the department chairman as soon as the student has made a decision to major in bacteriology. Prospective majors should obtain an automatic waiver in CBS 105-107 by taking BIO 201-203.

Major in Zoology: A zoology major must include the following courses: BIO 201-203, ZOO 311 or 312, BIO 331-332 or BIO 421-422. In addition, five elective, structured courses in biology (BIO, BOT, or ZOO prefixes) are required. Also required are CHM 211-213, and CHM 331-336. Electives in physics, mathematics, and a foreign language (preferably German, French, or Russian) are strongly recommended. It is imperative that freshmen complete the BIO 201-203 and the CHM 211-213 series during their first three quarters. In addition to serving as a terminal degree, the B.A. in Zoology provides a good preparation for advanced training in Medicine and Dentistry, as well as graduate work in Zoology.

General requirements for graduate work at the Master's Degree level are given on pages 115-116.

Requirements for the M.A. Degree:

Major in Botany or in Bacteriology: Students are admitted for graduate work in Botany or in Bacteriology if they present the requisite background in the biological sciences. The bachelor of arts or bachelor of science degree with a major in botany, zoology, or biology is recommended in addition to a satisfactory grade on the Graduate Record Examination.

For a Masters degree in Botany or in Bacteriology, a minimum number of 45 credits is required of which: (1) a minimum of 24 credits in courses numbered 600 or above, (BOT, BIO or ZOO prefix) no more than 9 of which may be given for research (BOT 681) graduate seminar (BOT 691) or thesis (BOT 699); and (2) the remaining credits must be taken in courses numbered 400, 500 or above to meet the requirement of a minimum of 45 credits. Other requirements are: (3) completion of a Master's thesis approved by the student's committee or an equivalent amount of course work approved by the student's major advisor, and (4) satisfactory performance on a final oral examination administered by the student's committee within the department.

Major in Zoology: A minimum of 45 credits must include 22 in biology courses (BIO, BOT, or ZOO prefixes) numbered 600 or above, not more than nine of which may be for the thesis. Other requirements are demonstration of

ability to translate into English the pertinent scientific literature in one foreign language (preferably German, French, or Russian), completion of a Master's thesis approved by the student's committee or an equivalent amount of approved course work, and satisfactory performance on a final oral examination given by the Department.

Requirements for the Ph.D. Degree:

Major in Biology: The Ph.D. in biology will be a cooperative effort involving both the Zoology and Botany Departments. Each doctoral committee will include at least one faculty member from each department. Students may be admitted to the graduate program by either department. The department concerned would also be responsible for advising the student to (a) work toward the M.A. first or (b) work directly toward the Ph.D.

Students advised to work toward the Ph.D. will have a supervisory committee appointed as soon as possible. The committee shall approve the course of study to be followed by the student, supervise his research, conduct his qualifying and final oral examinations, and approve his doctoral dissertation. The student's major professor will serve as chairman of his committee until the final oral examination.

The Admission to Candidacy will be issued by the Dean of the College upon receipt of a statement from the supervisory committee indicating that the student has successfully completed his language and qualifying examinations. In order to gain the experience that comes from teaching, satisfactory service as a teaching assistant for one academic year is required (unless a specific exemption is recommended by the supervisory committee). The student is expected to complete all course work stipulated by his committee with at least a B (3.00) overall average.

In general, the final oral examination will be a defense of the dissertation; however, other areas of the student's work may also be included. After all the above requirements are completed, the chairman of both departments will certify to the Dean of the College that the candidate is eligible for the degree.

Marine Biology

The field of marine biology is especially important in Florida and there is a good demand for trained personnel. Faculty members in both the Zoology and Botany Departments teach courses and conduct research in this area. Summer courses are given at the Bay Campus in St. Petersburg and include ZOO 313—Invertebrate Zoology, BOT 447—Marine Botany, ZOO 519—Ichthyology, ZOO 523—Physiology of Marine Animals, and ZOO 533—Physiology of Fishes. Interested students should elect to major in either Zoology or Botany and, in addition to taking the major requirements, need to complete OGY 311—Introduction to Oceanography, ZOO 313, and BOT 447. This curriculum will provide a good foundation for graduate work in marine biology or oceanography.

Programs for Teacher Education:

For bachelor of arts degree secondary school teachers in biology, see page 72. For teachers in Junior College the M.A. degrees in Botany and Zoology are recommended. For an alternative degree, see pages 80-81.

CHEMISTRY

Requirements for the B.A. Degree:

A chemistry major must include the following chemistry courses: CHM 211, 212, 213, 321, 322, 331, 332, 333, 334, 335, 336, 441, 442, 443, 444, and 491. Other required courses include MTH 203, 303, 304, 305, and either PHY 221-222, 223-224, 225-226, or PHY 211-212, 213-214, 215-216, and 315. Two years of college level German, Russian, or French is strongly recommended. The above courses constitute a minimum curriculum for a major in chemistry. It is recommended that this program be strengthened with additional courses to be selected by the student in consultation with his chemistry faculty adviser. To qualify for admission to graduate schools, a student should take additional courses which will emphasize his major interest. Two programs for this purpose are as follows:

Emphasis in Organic Chemistry: CHM 431, 433, 511

Emphasis in Physical Chemistry: CHM 511, 521, MTH 401 or 405, and advanced physics elective.

Requirements for the M.S. Degree:

General requirements for graduate work are given on pages 114-118.

The curriculum for a chemistry major will vary with the area of his thesis. The thesis will carry not less than four nor more than nine credits. A minimum of 45 credits including the thesis is required and one-half of these credits must be in chemistry courses numbered 600. No more than 15 credits in research and thesis may be counted toward the 45 credits required for the degree. The specific course requirements will be determined by his advisory committee on the basis of his diagnostic examination results and his proposed research.

In addition to the course requirement, each student will present an oral defense of his thesis for approval of his advisory committee.

Programs for Teacher Education:

For bachelor of arts degree secondary school teachers in chemistry, see page 72. For master of arts degree for secondary school teachers in chemistry, see page 76.

For teachers in Junior College the M.S. degree in Chemistry is recommended. For an alternative degree, see pages 80-82.

DIVISIONAL MAJOR

The bachelor of arts divisional major is designed to serve students desiring a broad background, such as science teachers, pre-medical students, and other pre-professional students. Major requirements in the Division of Natural Sciences are a minimum of 36 credits in the discipline of major concentration and a minimum of 24 credits in the division outside that discipline. These 24 credits must be approved by the student's adviser and must include a minimum of three at the 300 level or above. Prospective teachers should also consult the College of Education section of this catalog for information about certification requirements in the science field. Pre-medical and pre-dental students should contact the chairman of the Pre-Medical Advisory Committee.

The divisional major is not necessarily an adequate preparation for entrance into a graduate program in the natural sciences. To strengthen the preparation, additional science and mathematics electives beyond the minimum requirements may be recommended by the faculty adviser. By the proper addition of science and mathematics electives beyond the minimum requirements, the divisional major can serve as a strong preparation adapted for graduate work in a wide range of interdisciplinary fields such as biochemistry, microbiology, biophysics, bacteriology, space sciences, oceanography, geochemistry, and geophysics.

GEOLOGY

Requirements for the B.A. Degree:

A major in geology will normally include GLY 201, 301, 302, 303, 311, 312, 313, 361, 503, 504, and nine elective credits in Geology. In addition, the program must include CHM 211, 212, 213; PHY 211, 212, 213, 214, 215, 216, and MTH 101. The student will choose, in consultation with his geology adviser, such additional courses in the Division of Natural Sciences and Mathematics that support his major interest within the field of Geology. Selection of a foreign language, preferably French, German, or Russian, is strongly recommended, especially for those students who intend to enter graduate school.

An entering student anticipating a major in geology is advised to enroll in GLY 201, 301, and CHM 211, 212, 213 in the freshman year and to seek curriculum counseling with a Geology adviser early in his college career.

Requirements for the M.A. Degree:

General requirements for graduate work are given on pages 114-118.

Students are admitted for graduate work in Geology if they present the requisite background in geology and supporting sciences. The bachelor of arts or bachelor of science degree with major in geology, or major in other natural science with strong supporting program in the geosciences is recommended in addition to a satisfactory grade on the Graduate Record Examination.

The curriculum for a geology major will vary with the area of his thesis but will include the following: a minimum of 23 credits in courses numbered 600 or above, including GLY 673, no more than nine of which may be given for the thesis; either a written thesis in a field of specialization approved by the advisory committee (2-9 credits) and an examination based on the results of an original study, or an equal number of credits of graduate level courses in geology; and additional credits in geology from the upper level may be scheduled to make a minimum of 45 credits beyond the bachelor's degree and exclusive of prerequisites.

Teacher Education:

For bachelor of arts degree secondary school teachers desiring to teach science at the secondary level should include basic courses in Geology and Earth Science as part of their curriculum. Some courses also give graduate credit.

For teachers in Junior College the M.A. degree in Geology is recommended. For an alternative degree, see pages 80-82.

Marine Geology

One of the major divisions of marine study, marine geology, is a part of the program of the Geology Department. Courses and research in marine geoscience are conducted in the department, or on nearby waters. A geology major may, as a part of his program and with the guidance of his adviser, select electives from among GLY 411 Marine Geology, GLY 521 Geophysics, GLY 571 Geochemistry, and others that prepare him for graduate work in marine geological environments or for some phases of professional work. A major interested in marine geology should contact the chairman of the department for further details.

OCEANOGRAPHY PROGRAM

The program in Oceanography offers one undergraduate course (OCY 311) and one graduate course (OCY 521). There are plans to offer additional courses at the graduate level and, eventually, a master's degree in Oceanography. Undergraduates with an interest in oceanography are urged to major in a field of their choice (Zoology, Botany, Geology, Chemistry, Physics or Engineering). After receiving the bachelor's degree, the student should seek a broad training in oceanography at the graduate level.

MATHEMATICS

Requirements for the B.A. Degree:

Majors must have 47 credits in mathematics, including MTH 101, 203, 303, 304, 305, 409, 421, and 422. (MTH 101 is not required of those who begin with MTH 203.) Suggested upper level courses for a major in mathematics and for a major in mathematics for teaching in secondary school are as follows:

Major in Mathematics: MTH 405, 406, 407, 513, 514, 515, 523, 524, 525, 531, 532, and 533.

Major in Mathematics for Teaching: MTH 345, 405, 423, 445, 523, and 531.

Variation in course selection for special needs is to be done in consultation with the appointed adviser.

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

Freshman		
I	II	III
MTH 101	MTH 203	MTH 303
		MTH 409
Sophomore		
I	II	III
MTH 304	MTH 305	MTH Elective
MTH 421	MTH 422	MTH Elective

Requirements for the M.A. Degree:

General requirements for graduate work are given on pages 110-111.

A thesis is optional. The thesis program requires a minimum of 36 credits of course work, plus the thesis carrying three to nine credits. The non-thesis

program requires 45 credits of course work. In either case, one-half of the course work must be taken in courses numbered 600.

For each of the above programs, one of the following three 9-hour courses is required: MTH 614-615-616, 624-625-626, 632-633-634, and nine hours in each of the disciplines-analysis, algebra, and topology. MTH 691 is required each quarter, and may be omitted or taken more than six times only with the permission of the chairman. A reading knowledge of either French, German, or Russian is required. A comprehensive examination will be given to candidates before recommending that the degree be granted.

For bachelor of arts degree secondary teachers in mathematics, see page 72. For master of arts degree for teachers in mathematics, see page 76. For teachers in Junior College, the M.A. degree in Mathematics is recommended. For an alternative degree, see pages 80-82.

PHYSICS

Requirements for the B.A. Degree:

Majors must have one year of general physics (consisting of either PHY 211 through 216 and 315, or PHY 221 through 226), PHY 307, 341, 407, 409, plus one advanced laboratory. Additional physics courses sufficient to total 42 credits are required; 30 of these credits must be in courses numbered 300 or above. The student will also take MTH 401 and CHM 213.

Students registering for a physics course which has an associated laboratory must also register for the laboratory or obtain written permission from the chairman of the Physics Department to register for the course only. A student may present for graduation no more than twelve credits in physics courses numbered below 300. Selection of a foreign language, preferably French, German, or Russian, is also strongly recommended.

Requirements for the M.A. Degree:

General requirements for graduate work are given on pages 114-118.

A minimum of 45 credits, not more than nine of which may be for thesis research and writing. Of these 45 credits, 24 must be in courses numbered 600 or above. The mathematics proficiency test is also required.

When a student is admitted to the graduate program in physics, an advisory committee will be appointed by the chairman for each student. This committee will serve in the capacity of an advisor and will also keep close check on the progress of the student in his work. The committee will have the right to add any special requirement to meet any deficiency in background and will administer a comprehensive examination to the student before recommending that a degree be granted.

Programs for Teacher Education:

For a B.A. Degree secondary school teacher in physics, see page 72. For M.A. Degree for teacher in physics, see page 76. For teachers in Junior College, the M.A. degree in physics is recommended. For an alternative degree, see pages 80-82.

Division of Social Sciences

The social sciences are concerned with man, his development, problems and institutions. They help the student to understand the world around him and

to become a more informed citizen. In addition, the social sciences can prepare a student for employment in business, government and social service professions, either upon graduation or upon completion of additional graduate study.

Students in the Social Science Division take majors in the departments of Anthropology, Geography, History, Political Science, Psychology and Sociology. Economics offers two majors, one in Liberal Arts and the other in the College of Business. In addition to these departmental majors, there are several kinds of interdisciplinary majors, such as International Studies and the social studies major for high school teachers.

Most social science majors require statistics. The student would do well to take elementary college mathematics courses to prepare him for statistics. All social sciences require clarity and accuracy of English expression. The student should take such English, speech and journalism courses as might contribute to this skill. Typing is not essential but is a useful skill and should be cultivated. The specific requirements of each major are outlined below.

A few graduate level courses are now offered in several social science departments and the Master of Arts degree is offered in Psychology and Sociology.

ANTHROPOLOGY

The major in Anthropology consists of a minimum of 44 quarter hours in the field. This must include ANT 201, 202, and 203 which are pre-requisite to all subsequent anthropology courses. ANT 302, 311, 313, and 325 are required as intermediate level training in the main sub-divisions of the field and ANT 491, the Senior Seminar, completes the specific course requirements. The remaining 12 hours may be elective ANT courses determined by interest and availability.

Exceptions to course pre-requisites require the consent of the chairman.

ECONOMICS

The liberal arts major in economics requires 51 credits in economics, including ECN 201-202, 301, 323, 331, 401, 423, and two additional upper level economics courses; and, in addition, ACC 201-202-203.

GEOGRAPHY

A major in geography consists of a minimum of 45 quarter hours in geography courses, including GPY 201, 301-302, and nine hours in *each* of the following: GPY 403, 405, 409. The latter three courses are to be planned and coordinated with the adviser, inasmuch as several different courses are included under each number. In addition, majors are required to take GLY 473 or 533, and a course in statistics (SSI 301 or MTH 345 or ECN 331).

HISTORY

A minimum of 43 credits is required for a major. From Part I, requirements are HTY 100, HTY 211, 212, and HTY 231, 232; from Part II, at least 16 credits from courses numbered 300 and above; from Part III, at least one pro-seminar (HTY 591) and HTY 592 and 587 (HTY 592 and HTY 587 should be taken during the senior year).

Majors intending to pursue graduate work should take a minimum of two

years of a modern foreign language (French, German, Russian, or Spanish), SPE 201 (Fundamentals of Speech), ENG 325 (Advanced Expository Writing), and at least 27 credits drawn from the following areas: anthropology, sociology, economics, psychology, geography, political science, philosophy and literature or humanities.

History majors, whether intending graduate or professional work, should have at least two courses drawn from the Interdisciplinary Social Science program, and they should also include CLS 321—Ancient Civilizations, or HTY 323—Medieval Civilization.

INTERNATIONAL STUDIES

Three programs are currently offered in the International Studies Program: International Relations, Non-Western Studies, and Latin American Studies. The core curriculum common to the three includes five courses: ANT 201-203, ECN 201-202, GPY 201. Eighteen credits of an appropriate foreign language above the 100 level (or equivalent proficiency) are required.

Each student's program must be planned with the international studies adviser, who is empowered to make appropriate substitutions when educationally justified. All three majors are encouraged to take ENG 325 (4) and SPE 201 (5) or 363 (5).

Additional special requirements in the three programs follow. Up to nine credits may be substituted for these requirements by successfully passing CBS 395, Overseas Study.

International Relations Program

International Relations majors must select 10 courses from the list below, from at least three departments, and including a minimum of 6 courses of International Relations content (indicated by asterisks): ANT 302, 303* (any foreign region), 415, 461; ECN 351*, 405*; GPY 301, 302, 407* (any foreign region); HTY 311*, 331*, 335-336, 337-338, 341-342, 351-352, 361*, 371; POL 311*, 331*, 333*, 411*, 421*, 445*, 561*, 581*; SSI 311*, 315*, 341, 343, 345, 347, 361*, 449*.

Non-Western Studies Program

Non-Western Studies majors must select 10 courses from the list below, from at least three departments, and including a minimum of 6 courses of Non-Western content (indicated by asterisks): ANT 302, 303* (Asia or Africa), 415, 461*; ECN 351, 405; GPY 301, 302, 407* (Asia or Africa); HTY 311, 361, 371*; HUM 539*, 541*, 542*, 543*; POL 331, 411*, 421*, 561*, 581*; SSI 343*, 345*, 347*, 361, 449*.

Latin American Studies Program

Latin American studies majors must select 10 courses from the list below, from at least three departments, and including all of the courses indicated by asterisks (or authorized substitutions): ANT 302, 303* (Latin America), 415, 461; ECN 351, 405; GPY 301, 302, 407* (Latin America); HTY 311, 351*, 352*, 361; HUM 545*; POL 331, 561; SSI 311, 315, 341*, 361, 449. The language credit must be in Spanish or Portuguese.

POLITICAL SCIENCE

Majors must have at least 40 credits in the field. Each major must pursue a core program, including POL 199, 201, 203 or 453, 431 or 432, 461 or 462 or 463, 311 or 331, 351, 491, and SSI 301.

PRE-LAW

The American Association of Law Schools suggests that students preparing for law school should acquire the following basic skills: (1) effective expression, both written and oral, in English language; (2) critical practice in the use of creative and analytical reasoning in a variety of problem solving situations.

Students wishing to major in pre-legal studies should consult with the pre-law adviser.

PSYCHOLOGY

Requirements for the B.A. Degree:

Majors must complete at least 40 credits in the field. All majors must complete PSY 201, 311, SSI 301 and select *three* of the following courses: PSY 323, 331, 433, 501, and either 505 or 506. In addition, 16 elective credits in Psychology courses must be completed. Functional mathematics and biological science in the College of Basic Studies are recommended. Otherwise students majoring in psychology are encouraged to complete a varied undergraduate program.

Requirements for the M.A. Degree:

General requirements for graduate study are given on pages 114-118.

The student must complete 45 credit hours of graduate psychology courses. Approval of undergraduate courses for college credit must be given by both the student's adviser and department chairman. The following courses are required of all graduate students in this program: PSY 601, 602. The student also selects *three* of the following courses: PSY 501, either 505 or 506, 603, 605, 607. The remaining credits will be selected from available psychology courses at the graduate level. A thesis is required and the student must successfully complete an oral examination on the thesis and courses which he has completed in the program.

SOCIAL SCIENCE DIVISIONAL MAJOR

This major is designed to provide broad training for superior students whose interests or vocational objectives cross disciplinary lines. (Students who have difficulty maintaining a B average or students with restricted interests should not attempt it.) It requires 64 credits in the division, with at least 20 credits in one discipline, to be selected with the consent of the major adviser. At least three courses are required in Interdisciplinary Social Sciences (Prefix "SSI"), one of which shall be SSI 301. At least 40 hours must be upper level.

A different kind of divisional major for prospective teachers of social studies is described under the College of Education requirements on page 72.

SOCIOLOGY

Requirements for the B.A. Degree:

The major consists of a minimum of 40 quarter hours which must include SOC 201, 321, 491, 515 and SSI 301. In addition, at least one course from SOC 331, 533, 535; and at least one from SOC 341, 345, 543.

The following courses may not be counted in the 40 hour minimum for the major but may be elected as additional courses: SOC 251, 261, 481,

and 505. A model program of recommended sequences may be obtained from the Sociology Department.

Requirements for the M.A. Degree:

Minimum of 45 credits including SOC 523, 611, 621, 691 and 692.

Admission to the M.A. Program: Score of 900 on the Graduate Record Examination; two letters of reference from previous instructors; four courses in Sociology including Statistics and Methods of Research (SSI 301 and SOC 321) or equivalent. Documents are sent to the Registrar. Instructions for applicants are available from the Sociology Department.

GRADUATE STUDY

Master's Degree Programs Offered

COLLEGE OF BUSINESS ADMINISTRATION

Master of Business Administration. (See page 63.)

COLLEGE OF EDUCATION

Master of Arts degree programs. (See pages 73-82.)

Elementary Education (with emphasis on Curriculum, Supervision or Reading)

Secondary Teaching Fields:

Distributive Education

English Education

English/Humanities Education

French Education

Mathematics Education

Science Education (Biology, Chemistry, Earth Science, Physics)

Social Science Education

Spanish Education

K-12 Certification Areas:

Art Education

Guidance

Library and Audio Visual

Music Education

Reading Education

Special Education: Emotionally Disturbed Children,

Gifted Children and Youth,

Mental Retardation or Speech Pathology,

Varying Exceptionalities

Junior College Teaching:

Astronomy

Biology

Chemistry

English

French

Geology

Mathematics

Music

Physics

Psychology

Sociology

Spanish

Speech

Visual Arts

COLLEGE OF ENGINEERING

A Master of Engineering (Electrical) and a Master of Engineering (Administration), Master of Science in Engineering. (See page 83)

COLLEGE OF LIBERAL ARTS

Master of Arts degree programs. (See pages 93-112.)

Astronomy	Physics
Bacteriology	Psychology
Botany	Sociology
English	Spanish
French	Speech
Geology	Visual Arts
Mathematics	Zoology

Master of Fine Arts degree in Visual Arts. (See page 94.)

Master of Science degree in Chemistry. (See page 104.)

Ph.D. Programs Offered

COLLEGE OF LIBERAL ARTS

Ph.D. degree in Biology. (See page 103).

Requirements for Admission to Graduate Study

1. DEGREE SEEKING GRADUATE STUDENTS

Admission requirements for a degree-seeking graduate student shall include:

- (a) A Baccalaureate degree from an approved college or university with an academic average of "B" in the last half of all credits earned as an undergraduate prior to receiving a degree, or other acceptable evidence of ability to perform at the "B" level in his graduate program.
- (b) Satisfactory scores on the Graduate Record Examination aptitude test. A student may be provisionally admitted by presenting satisfactory scores on such examinations as the National Teacher Examination or Business Administration Examination, with the understanding that the GRE will be taken during the first term of enrollment. These examinations must have been taken within five years preceding application for admission.
- (c) Approval by an official of the program for which the student is applying.
- (d) Any additional requirements which are specified by his program.

2. NON-DEGREE SEEKING GRADUATE STUDENTS

Students who are qualified to enroll in specific graduate courses but who either do not desire to enroll in a degree program, or do not meet all admission requirements for a degree program, or who are awaiting admission processing may be admitted as "non-degree graduate students." Up to 12 hours of credit earned while in this status may be applied to master's requirements under the following conditions:

- (a) At the time of enrollment in the course, the student must have a Baccalaureate degree, or he must complete degree requirements during that term and the course must be beyond those requirements.
- (b) The course must be of such level and relevance as to be included in the degree program approved for this student should he seek admission to candidacy.

REGULATIONS GOVERNING GRADUATE STUDY

Master's Degree

MAJOR PROFESSOR

A major professor or adviser will be named for the student in his first term of work. The major professor is named by the division of the University concerned, with the consent of both student and professor.

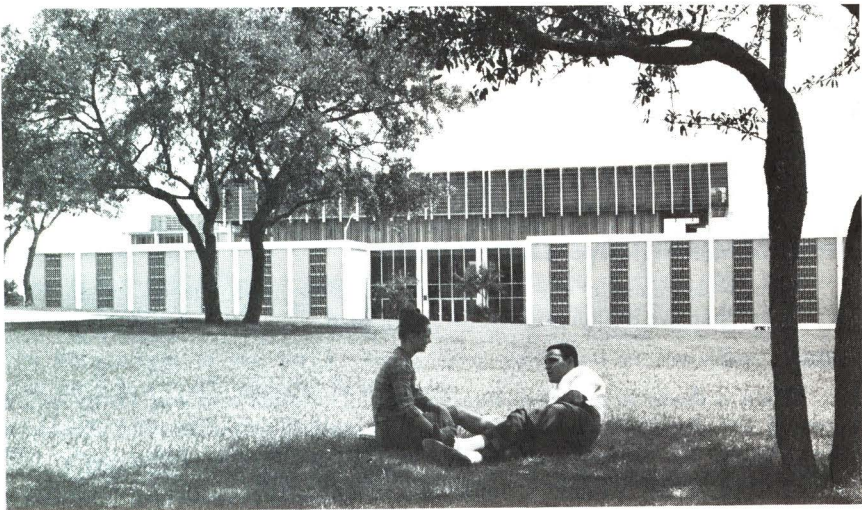
PROGRAM OF STUDY AND COURSE REQUIREMENTS

During the first term of study, in consultation with his adviser, the student should plan a program of work to be completed for satisfaction of degree requirements.

A minimum of 45 quarter hours is required for a Master's degree, at least 24 hours of which must be at the 600 level. At least 30 hours must be in formal, regularly scheduled course work, 15 of which must be at the 600 level. Courses at the 500 level are acceptable for credit towards the Master's degree when taken as a part of a planned degree program.

Graduate credit may be earned in 300 or 400 level courses only if specifically approved by the appropriate Dean and reported to the Graduate Council and the Dean of Academic Affairs. Students enrolled in such courses as a part of their planned degree program will be expected to demonstrate a superior level of performance.

University Center



QUALITY OF WORK

Graduate students must attain an overall average of 3.0 (B) in all courses taken for graduate work. No grade below "C" will be accepted toward a graduate degree but all grades will be counted in computing the overall average (GPA).

LOAD

A student taking nine or more hours of graduate work in a full quarter or five or more hours in a summer term will be classified as a full-time student. The normal maximum load is 13 hours in a full quarter and six hours in a summer session.

RESIDENCY

A minimum of one-half of the Master's degree program must be completed on campus. The student must be registered as a full-time graduate student for one quarter or two summer sessions.

TRANSFER CREDIT

Transfer of credit from another recognized graduate school is limited to nine quarter hours. All transferred credit must (1) be evaluated as graduate credit by the Registrar, (2) be approved by the program or college concerned, and (3) have been completed with grades of "B" or better.

TIME LIMIT

All work applicable to the Master's degree requirements must be completed within the seven years immediately preceding the awarding of the degree.

ADMISSION TO CANDIDACY

The student will apply for admission to candidacy after completing 12 quarter hours of graduate credit at the University of South Florida. His committee will review his record to date, guidance test scores and other pertinent data, and recommend to his dean whether or not he should be admitted to candidacy. If he has not been admitted to candidacy by the time he has completed 24 quarter hours, he may not re-register.

APPLICATION FOR DEGREE

During the first two weeks of the term in which he expects to receive a degree, the student must file an application for a diploma with the Office of the Registrar. At least one quarter must elapse between admission to candidacy and the granting of the degree.

FINAL COMPREHENSIVE EXAMINATION

Prior to clearance for the degree, the candidate must perform satisfactorily on a comprehensive examination in his major field.

THESIS

When a thesis is required, two copies, an original and one other legible copy, of the approved thesis must be submitted to the Dean of Academic Affairs before the student may be certified for his degree. These copies will serve for appropriate filing in the Library of the University.

Ph.D. Degree

The degree of Doctor of Philosophy is granted in recognition of high attainment in a specific field of knowledge. It is a research degree and should not be conferred solely on the completion of credits and a sequence of courses or by the acquiring of a number of terms of residency. The amount of residence and the requirements suggested below are a minimum. The degree shall be granted on evidence of proficiency and distinctive achievement in a specified field, by the demonstration of the ability to do original independent investigation and the presenting of these findings with a high degree of literary skill in a dissertation.

SUPERVISORY COMMITTEE

A student working for his Ph.D. degree must elect to do the majority of his work in a specifically approved area or department, and the remainder of his work in related fields. As soon as possible after starting work leading toward a Ph.D. degree, a supervisory committee shall be appointed for the student by the Dean of his college on recommendation of the chairman of the department or area in which the degree is sought. This committee shall approve the outline of the course of study to be followed by the student, conduct qualifying examinations for the student, supervise the research of the student and conduct final oral examinations for the student. The director of the research shall serve as chairman of the committee up to the final oral examination. This committee shall certify to the Dean of its college when all requirements have been met and the degree is to be granted. The supervisory committee shall consist of at least five members, at least three of which must come from the area in which the major work for the degree will be done.

LANGUAGE REQUIREMENT

Before a student is eligible to take the qualifying examination, he must have completed a reading knowledge of two foreign languages (except for substitutions noted below.) Special work done outside the student's field of concentration and related subjects may be substituted for one language, provided this exception is recommended by the student's advisory committee and is approved by the Dean of Academic Affairs.

RESIDENCE

The minimum requirement shall be three academic years of work above the Bachelor's degree. At least one academic year of residence must be on the campus at the University of South Florida. An academic year's residency shall be defined as carrying a minimum of nine hours of graduate work per term or be certified by the chairman of the advisory committee that the student is doing full time research or a combination of these two. Whenever a student wishes to be considered as in full time residence, he must pay the full registration fee. Any graduate work counted toward the fulfillment of the requirement of the Ph.D. degree after admission to candidacy must be done within a seven calendar year period.

QUALIFYING EXAMINATION

At least one academic year before the degree may be granted, the student must pass a written qualifying examination over the subject matter of his

major and related fields. An oral examination may also be required by his committee. The completion of the qualifying examination before mid-term will allow that term to be counted in full toward the academic year required. If the degree is not conferred within five calendar years of the qualifying examination, the qualifying examination must be taken again.

ADMISSION TO CANDIDACY

A graduate student does not become a candidate for the Ph.D. degree until he is formally admitted to candidacy. This admission may not be granted until a certified statement from his advisory committee to the Dean of his college is submitted stating that he has successfully completed his qualifying examinations and in the opinion of his advisory committee he has demonstrated the qualifications necessary to successfully complete his requirements for the degree. The certificate of admission shall be issued by the Dean of his college, and the degree shall not be granted in less than one academic year after formal admission to candidacy (a school term shall be considered as part of this academic year, provided the admission is before mid-term).

DISSERTATION

At least two weeks prior to the final oral examination, a candidate must submit to the Dean of his college, for approval of mechanical form and content, a typewritten copy of a completed dissertation and abstract signed by the committee. The dissertation must be the candidate's own work and must result from research done primarily by the candidate. The research from this dissertation must be original and subject to publication in a scholarly journal or book. It is understood, however, that the work of two or more people may be included in a publication and that the results of the research may be published in more than one article.

FINAL ORAL EXAMINATION

The final oral examination in general should be a defense of the student's dissertation; however other areas of the student's work may also be included as part of this examination. It should be conducted by his advisory committee, but shall be chaired by a person, appointed by the Dean of his college, from a field outside of the student's major or related fields.

FINAL FILING OF DISSERTATION

Two copies, an original and one other legible copy, of the approved dissertation must be submitted to the Dean of Academic Affairs before the student can be certified for his degree. These copies will serve for appropriate filing in the Library of the University.

COURSE DESCRIPTIONS

All courses offered for credit by the University of South Florida are listed on the following pages in alphabetical order according to subject area.

The first line of each description includes the prefix and course number, title, and number of credits. Credits separated by a colon indicate concurrent lecture and laboratory courses taught as a unit:

PHY 211-212. GENERAL PHYSICS (3:1)

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

HTY 211, 212. AMERICAN HISTORY (3,3)

Credits separated by a hyphen indicate variable credit:

CBS 395. OVERSEAS STUDY (1-9)

The following abbreviations are utilized in various course descriptions:

PR	Prerequisite
CI	With the consent of the instructor
CC	With the consent of the chairman of the department or program
CR	Corequisite
lec-lab.	Lecture and laboratory

Course descriptions are listed under the following headings (prefix in parentheses):

Accounting (ACC)	Engineering Specialization (EGR)
American Studies (AMS)	Laboratory Courses (ERL)
Anthropology (ANT)	English (ENG)
Art (ART)	Finance (FIN)
Astronomy (AST)	Fine Arts, Intradivisional (FNA)
Basic Studies (CBS)	French (FRE)
Biology, Interdisciplinary (BIO)	General Business Administration (GBA)
Botany and Bacteriology (BOT)	Geography (GPY)
Chemistry (CHM)	Geology (GLY)
Classics and Ancient Studies (CLS)	German (GER)
Cooperative Education (COE)	History (HTY)
Developmental Mathematics (DMA)	Humanities (HUM)
Developmental Reading (DRE)	Interdisciplinary Language-Literature (LLI)
Economics (ECN)	Italian (ITA)
Education:	Journalism (JNM)
Art Education (EDA)	Linguistics (LIN)
Business Education (EDB)	Management (MGT)
Curriculum (EDC)	Marketing (MKT)
Distributive Education (EDD)	Mathematics (MTH)
Elementary Education (EDE)	Music (MUS)
English Education (EDT)	Oceanography, Interdisciplinary (OGY)
Foreign Language Education (EDX)	Office Administration (OAD)
Foundations (EDF)	Philosophy (PHI)
Guidance (EDG)	Physical Education, Basic (PED)
Humanities Education (EDY)	Physics (PHY)
Junior College Education (EDH)	Political Science (POL)
Library-Audio Visual Education (EDL)	Psychology (PSY)
Music Education (EDM)	Religious Studies (REL)
Natural Science-Mathematics Education (EDN)	Romance Languages (ROM)
Physical Education for Teachers (EDP)	Russian (RUS)
Reading Education (EDR)	Social Sciences, Interdisciplinary (SSI)
Social Studies Education (EDW)	Sociology (SOC)
Special Education (EDS)	Spanish (SPA)
Engineering:	Speech (SPE)
Basic Engineering (EGB)	Theatre Arts (TAR)
	Zoology (ZOO)

NOTE: Courses numbering 500 through 599 are open only to upper division and graduate students. Courses numbering 600 and above are open to graduate students only.

ACCOUNTING

Faculty: L. C. Jurgensen, chairman; Deyo, Hubbard, McClung, McCormick, Merriam, Merritt, Lasseter, Roberson, Valiente, West.

ACC 201. ELEMENTARY ACCOUNTING (3)

Study of basic accounting principles including the recording and reporting of financial activity. The preparation and interpretation of financial statements.

ACC 202. ELEMENTARY ACCOUNTING (3)

PR: ACC 201. Accounting theory and practices for various equity structures.

ACC 203. ELEMENTARY ACCOUNTING (3)

PR: ACC 202. Financial statements, reports, and other analytical tools used by management.

ACC 301. INTERMEDIATE ACCOUNTING I (3)

PR: ACC 203. Principles underlying financial statements; current assets; current liabilities.

ACC 302. INTERMEDIATE ACCOUNTING II (3)

PR: ACC 301. Continuation of principles underlying financial statements; present values; long-term investments; plant and equipment; intangibles; long-term liabilities.

ACC 303. INTERMEDIATE ACCOUNTING III (3)

PR: ACC 302. Continuation of principles underlying financial statements; capital structure; analysis and interpretation of accounting data; funds flow analysis.

ACC 305. MANAGERIAL ACCOUNTING (3)

PR: ACC 203 and ECN 201. The use of accounting data in planning and controlling business operations. Special emphasis is placed on budgetary controls, cost-volume-profit analysis, long-range planning, and tax considerations.

ACC 323. GOVERNMENTAL ACCOUNTING (3)

PR: ACC 203. Study of the application of fund accounting principles to governmental units and agencies including preparation, administration, and interpretation of budgets and financial statements.

ACC 401. ADVANCED ACCOUNTING (3)

PR: ACC 303. The study of special problems in accounting related to partnerships, sales procedures, fiduciaries, and insolvencies.

ACC 402. ADVANCED ACCOUNTING (3)

PR: ACC 303. Special topics including consolidations and foreign operations.

ACC 411. FEDERAL TAXES (3)

PR: ACC 203. An introduction to the federal income tax structure. Use of tax services and the concept of taxable income as applies to individuals.

ACC 412. FEDERAL TAXES (3)

PR: ACC 411. Continued study of the federal income tax structure. Special topics and the concept of taxable income as applied to corporations.

ACC 413. FEDERAL TAXES (3)

PR: ACC 411. The concept of taxable income as applied to partnerships and fiduciaries. Introduction to estate, gift and social security taxes.

ACC 421. COST ACCOUNTING I (3)

PR: ACC 203. Deals with the identification of costs relevant for decision-making and the accounting techniques used in determining, analyzing, and allocating these costs.

ACC 422. COST ACCOUNTING II (3)

PR: ACC 421. A continuation of accounting for, and analysis of, costs as related to departments, products, or issues for management decisions.

ACC 423. AUDITING (3)

PR: ACC 303 and 421. Principles and procedures of internal and public auditing. The ethics, responsibilities, standards, and reports of professional auditing.

ACC 424. ADVANCED AUDITING (3)

PR: ACC 423. Continuation of ACC 423. Emphasis directed towards the application of auditing standards and techniques in achieving audit objectives. Relationship of professional auditing to regulatory authorities.

ACC 425. BUDGETING (3)

PR: ACC 421. The development of budgets and their relation to expense and cost control, including the use of standard cost as a budgetary tool.

ACC 431. CONTROLLERSHIP (3)

PR: CI. The problems of financial officers of business organizations and the theory and techniques used in solving these problems.

ACC 433. C.P.A. REVIEW (3)

PR: CI. A review of the various areas of accounting, including concepts; cost, governmental, asset, liability, and equity accounting; consolidations; financial statements; and budgeting.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

ACC 501. 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.

ACC 502. ACCOUNTING CONCEPTS AND METHODOLOGY II (3)

PR: ACC 501. A continuation of ACC 501. 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.

FOR GRADUATE STUDENTS ONLY

ACC 601. MANAGERIAL ACCOUNTING AND CONTROL (3)

A study of the relevancy and limitations of accounting measurement as a basis for business decision-making. Includes a review of fundamental accounting measurement theory and related tax implications.

ACC 602. MANAGERIAL ACCOUNTING AND CONTROL (3)

PR: ACC 601. 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; and (3) inventory valuation and income determination.

ACC 605. ADVANCED ACCOUNTING THEORY (3)

A study and evaluation of the development and evolution of current accounting theory and measurement concepts. The definition of accounting objectives and goals and the development of measurement models.

ACC 607. SYSTEMS DESIGN AND DATA PROCESSING (3)

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 609. CONTEMPORARY PROBLEMS IN ACCOUNTANCY (3)

PR: ACC 605 or CI. Concentrated study of current problem areas in the field of accountancy.

ACC 611. RESEARCH IN FEDERAL TAXATION (3)

A study of the development of tax law and its implications in business decisions. Tax planning and tax research are emphasized.

ACC 621. MANAGERIAL COST ANALYSIS (3)

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 623. CASE PROBLEMS IN PROFESSIONAL ACCOUNTANCY (3)

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.

AMERICAN STUDIES

Faculty: E. Stanton, chairman; Davis, Gould, Harkness, Moore, O'Hara, Robertson, Warner.

AMS 391. INTRODUCTION TO AMERICAN STUDIES (3)

Integrated approach to American civilization between 1890 and 1914.

AMS 491, 492, 493. SENIOR SEMINARS IN AMERICAN STUDIES (3,3,3)

Intensive study designed to help majors pull together what they have learned in American Studies.

HTY 411. AMERICAN SOCIAL AND INTELLECTUAL HISTORY (4)

See course description under History.

ENG 305. MAJOR AMERICAN WRITERS TO 1865 (4)

See course description under English.

HUM 535. HUMANITIES IN AMERICA (3)

See course description under Humanities.

PHI 413. AMERICAN PHILOSOPHY (5)

See course description under Philosophy.

ECN 371. AMERICAN ECONOMIC HISTORY (4)

See course description under Economics.

ANTHROPOLOGY

Faculty: Grange, chairman; Bonney, Kessler, Waterman

ANT 201. INTRODUCTION TO ANTHROPOLOGY (4)

A general survey of anthropology emphasizing basic concepts, outlining the development of the field and illustrating current problems and applications.

ANT 202. HUMAN ORIGINS (4)

PR: ANT 201. A study of human biological and cultural origins with emphasis on human evolution and paleolithic archaeology.

ANT 203. SOCIAL ANTHROPOLOGY (4)

PR: ANT 201. A study of the elements of functioning cultures including kinship systems, patterns of marriage, social and political structure and economic organization.

ANT 302. ETHNOLOGY (4)

PR: ANT 201-202-203. A survey of cultures of the world using the culture area concept and/or comparative analysis to illustrate cultural distributions and levels of socio-cultural complexity.

ANT 303. REGIONAL ANTHROPOLOGY (3-6)

PR: ANT 201-202-203. A survey of cultures and anthropological problems in a limited area or region. May be repeated as topics vary. (1) Indians of North America (2) Cultures of Africa (3) Cultures of the Pacific (4) Indians of Latin America (5) Specified area such as Asia, Southwestern U. S. or Florida depending on current interest and staff.

ANT 311. PHYSICAL ANTHROPOLOGY (4)

PR: ANT 201-202-203. An advanced course in the scope and methods of physical anthropology with emphasis on current research topics.

ANT 313. LANGUAGE AND CULTURE (4)

PR: ANT 201-202-203. A review of the scope and methods of anthropological linguistics and the role of language in human behavior and cultural development.

ANT 325. ARCHAEOLOGY AND CIVILIZATION (4)

PR: ANT 201-202-203. An examination of the archaeological and ethnological data and theory concerning the development of food producing cultures and complex societies.

ANT 403. HISTORY OF ANTHROPOLOGICAL THEORY. (4)

PR: ANT 201-202-203; ANT 302. Intensive reading of classics in the development of anthropological thought, and periodic seminar discussion and analysis.

ANT 411. METHODS IN ANTHROPOLOGY (3-6)

PR: ANT 201-202-203; and CI. Study and application of a selected field or laboratory method in anthropology. Prerequisites beyond ANT 201-202-203 will depend on area of study and will be determined by consultation with instructor in advance of registration. May be repeated as topics vary. (1) Archaeological Field Methods (2) Laboratory Methods in Archaeology (3) Laboratory Methods in Physical Anthropology (4) Field Methods in Cultural Anthropology (5) Etc., as specified.

ANT 415. ACCULTURATION AND CULTURE CHANGE (4)

PR: ANT 201-202-203. A study of theories of culture change and a consideration of the role of the anthropologist in applied or action anthropology.

ANT 423. PROBLEMS IN NEW WORLD ARCHAEOLOGY (3-5)

PR: ANT 201-202-203. A general review of new world archaeology or a detailed consideration of the archaeology of a specific area or time period in North or South America. May be repeated as topics vary.

ANT 461. THE COMMUNITY IN ANTHROPOLOGICAL PERSPECTIVE (4)

PR: ANT 201-202-203. The anthropological approach to the analysis and study of modern communities and peasant societies.

ANT 471. SPECIAL TOPICS IN ANTHROPOLOGY (2-6)

PR: ANT 201-202-203; ANT 302. A detailed study of current knowledge and problems in an area of topical interest such as ethnomusicology, primitive religion, or cultural ecology. May be repeated as topics vary.

ANT 491. SENIOR SEMINAR IN ANTHROPOLOGY (4)

PR: Senior Standing with Major in Anthropology, or equivalent. A seminar approach to the integration of the fields of anthropology. Designed to help the student refocus and come to a better understanding of the nature of anthropology.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

ANT 501. CULTURE AND PERSONALITY (4)

PR: 20 hours in Anthropology; PSY 331 or CI. An intensive examination of the development of psychological anthropology and consideration of various theories concerning the relationship between personality and culture.

ANT 581. INDIVIDUAL RESEARCH (3-6)

PR: 24 hours in Anthropology or CI. Individual guidance in a selected research project.

ANT 585. DIRECTED READINGS (1-6)

PR: 24 hours in Anthropology or CI. Individual guidance in concentrated reading on a selected topic in anthropology.

ART

Faculty: Saff, chairman; H. C. Bryant, J. R. Camp, Coley, Covington, Cox, Fager, Gelinis, Houk, Kronsoble, Manley, McCracken, Larsen, Pappas.

ART 201. VISUAL FUNDAMENTALS—DRAWING I (3)

Introduction to problems in drawing techniques and media.

ART 202. VISUAL FUNDAMENTALS—DESIGN I (3)

Introduction to problems primarily in two-dimensional design.

ART 301. VISUAL FUNDAMENTALS—DRAWING II (3)

PR: ART 201. Further exploration of drawing techniques and media.

ART 302. VISUAL FUNDAMENTALS—DESIGN II (3)

PR: ART 202. Further exploration of two and three-dimensional design, including letter forms as design elements.

ART 310. INTRODUCTION TO ART (3)

An introductory course for the student who does not intend to major in art.

ART 313. PREHISTORIC THROUGH HELLENISTIC ART (3)

A consideration of cave painting and works produced during the Egyptian, Mesopotamian Valley and Hellenic periods.

ART 323. ROMAN THROUGH GOTHIC ART (3)

Etruscan, Roman, Early Christian, Byzantine, Romanesque and Gothic Art.

ART 401. VISUAL FUNDAMENTALS—DRAWING III (3)

PR: ART 301. Continuation of ART 301. May be repeated.

ART 402. VISUAL FUNDAMENTALS—DESIGN III (3)

PR: ART 302. Continuation of ART 302. May be repeated.

ART 411. PAINTING TECHNIQUES (3)

PR: ART 401 and ART 402

ART 413. RENAISSANCE THROUGH ROCCOCO ART (3)

Italian and Northern Renaissance, Mannerism, Baroque, and Rococo.

ART 421. SCULPTURE TECHNIQUES (3)

PR: ART 401 and ART 402

ART 423. NEOCLASSICISM THROUGH CONTEMPORARY ART (3)

A consideration of 19th century and 20th century works.

ART 431. CERAMIC TECHNIQUES (3)

PR: ART 401 and ART 402

ART 441. GRAPHIC TECHNIQUES (3)

PR: ART 401 and ART 402

ART 451. JEWELRY AND CRAFTS (3)

PR: ART 401 and ART 402. Introductory course in the design and execution of jewelry and craft objects.

ART 461. PHOTOGRAPHY I (3)

PR: ART 401 and ART 402, or CI. Consideration of basic technical and aesthetic factors involved in using black and white, still photography as a vehicle for visual, artistic expression.

ART 462. PHOTOGRAPHY II (3)

PR: ART 461. Consideration of basic technical and aesthetic factors involved in using color, still photography as a vehicle for visual, artistic expression.

ART 465. CINEMATOGRAPHY I (3)

PR: ART 462. Consideration of basic technical and aesthetic factors involved in using black and white, silent motion pictures as a vehicle for visual, artistic expression.

ART 466. CINEMATOGRAPHY II (3)

PR: ART 465. Consideration of basic technical and aesthetic factors involved in using color and sound motion pictures as a vehicle for visual, artistic expression.

ART 481. DIRECTED STUDY (1-6)

PR: CC. May be repeated. Independent studies in the various areas of Visual Arts. Course of study and credits must be assigned prior to registration.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

ART 511. PAINTING (3)

PR: ART 411. May be repeated. Advanced problems in the various painting techniques. Emphasis on individual creative expression.

ART 513. SPECIAL STUDIES IN ART HISTORY (3)

PR: CI. An intensive study of a particular period or problem in art history. May be repeated.

ART 521. SCULPTURE (3)

PR: ART 421. May be repeated. Advanced problems in the various techniques of

sculpture. Emphasis on individual creative expression.

ART 531. CERAMICS (3)

PR: ART 431. May be repeated. Advanced problems in the various ceramic techniques, including throwing and glaze calculation.

ART 541. GRAPHICS (3)

PR: ART 441. May be repeated. Advanced problems in the various graphic techniques. Emphasis on individual creative expression.

ART 561. PHOTOGRAPHY III (3)

PR: ART 462. Advanced work in color and black and white photography culminating in development of personal photographic artistic statement.

ART 565. CINEMATOGRAPHY III (3)

PR: ART 466. Advanced studio work using black and white, color, and sound as technical and aesthetic factors in visual, artistic productions.

ART 569. PURE CINEMA AS AUTONOMOUS VISUAL EXPRESSION (3)

PR: ART 461 or CI. Consideration of historical developments in cinematography emphasizing uses of special technical and visual possibilities unique to the aesthetics of the film art.

ART 581. RESEARCH (1-6)

PR: CC. May be repeated.

FOR GRADUATE STUDENTS ONLY

ART 611. PAINTING (3)

PR: CI. May be repeated.

ART 613. ART HISTORY (3)

PR: CI. Special intensive studies in assigned areas. May be repeated.

ART 621. SCULPTURE (3)

PR: CI. May be repeated.

ART 631. CERAMICS (3)

PR: CI. May be repeated.

ART 641. GRAPHICS (3)

PR: CI. May be repeated.

ART 681. RESEARCH (1-6)

PR: CI. May be repeated.

ART 699. THESIS (1-6)

PR: CI. May be repeated.

ASTRONOMY

Faculty: Eichhorn-von Wurmb, chairman; J. Carr, Robinson, Sofia, Wilson.

AST 201. INTRODUCTORY ASTRONOMY (5)

Aspects of the sky, the earth's motion and time-keeping, the moon, eclipses, astronomical instruments, motions and physical features of planets, comets and satellites.

AST 202. INTRODUCTORY ASTRONOMY (5)

PR: AST 201. The stars, stellar atmospheres and interiors, interstellar matter, the local and exterior galaxies, cosmology.

AST 361. ASTRONOMICAL OBSERVING AND MEASURING (1-3)

PR: AST 201 and 202. Actual measurements at the telescope and in the laboratory; evaluation of the data. May be repeated up to three credit hours.

AST 371. CONTEMPORARY THINKING IN ASTRONOMY (for non-specialists) (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 stars; cosmology.

AST 413. GEOMETRY AND KINEMATICS OF THE UNIVERSE (4)

PR: AST 202. CR: MTH 303. Astronomical coordinate systems and their mutual relationships, navigation, time, motion of the planets.

AST 443. STELLAR ASTROPHYSICS (5)

PR: AST 202 or C.I., MTH 303. The physical characteristics of stars, their measurement, and their distribution. Analysis of stellar radiation. Double stars, associations, clusters, galaxies.

AST 481. UNDERGRADUATE RESEARCH (1-6)

PR: Senior or advanced junior standing and CI. Participation in professional research with a view to publication of results.

AST 491. ASTRONOMY SEMINAR (1)

PR: Senior or advanced junior standing and CI. May be repeated twice.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

AST 521. INTRODUCTION TO ASTRODYNAMICS (5)

CR: MTH 405. The two-body problem, artificial satellites, elements of perturbation theory.

AST 522. BINARY STARS (4)

PR: AST 202 or C.I., MTH 305. Principles used to find the properties of astrometric, eclipsing, spectroscopic and visual binaries.

AST 533. STELLAR CONSTITUTION AND EVOLUTION (4)

PR: PHY 405. CR: MTH 405. Internal constitution of stars, physics of gas spheres, energy generation in stars, theories on stellar evolution.

AST 536. INTRODUCTION TO RADIO ASTRONOMY (4)

PR: AST 202 or C.I., MTH 303. Radio telescopes: principles and applications. Main results in planetary, solar, galactic and extra-galactic radio-astronomy. Radio-galaxies and quasars.

AST 583. SELECTED TOPICS IN ASTRONOMY (1-6)

PR: Senior or advanced junior standing and CC. Intensive coverage of special topics to suit needs of advanced students.

FOR GRADUATE STUDENTS ONLY

AST 611. POSITIONAL ASTRONOMY (6)

PR: AST 413 and CC. The accurate determination of relative and absolute star positions and related problems.

AST 621. ASTRODYNAMICS (6)

PR: AST 521 and CC. Dynamics of the planetary system, space flight, theory of artificial satellites.

AST 631. STELLAR ATMOSPHERES (4)

PR: AST 443 & MTH 406 or C.I. Basic observational data. Thermodynamics of the gaseous state. Elements of spectroscopy. The transfer equation (continuum and lines). The problem of calculation of atmospheres.

AST 661. PHOTOMETRY (4)

PR: AST 202 or C.I., MTH 305. Theoretical, observational and instrumental concepts required in astronomical photometry.

AST 663. STATISTICAL REDUCTION OF OBSERVATIONS (6)

PR: MTH 421, 445, or equivalents and CC. The theory of statistical adjustments (least squares) and applications.

AST 681. GRADUATE RESEARCH (1-9)

PR: and CC.

AST 683. SELECTED TOPICS IN ASTRONOMY (1-6)

PR: and CC.

AST 691. GRADUATE SEMINAR (2)

and CC.

AST 699. MASTER'S THESIS (1-9)

and CC.

BASIC STUDIES

Faculty: **American Idea:** Warner, chairman; P. Adams, Arnade, Bosserman, Harkness, Martenet, Obermeyer, Reilly, Robertson, Stevenson, P. Wright.

Behavioral Science: Rich, chairman; Bayne, Blau, Brown, Dickey, J. Garcia, J. L. Garcia, Gessner, Gilmore, Grubb, Guest, Hardy, Kinde, McCormick, Mitchell, Newcomb, Norton, Pinkard, A. Powell, R. W. Powell, Ricker, Reed, Saxon, Vega, Villa, Waterman, Webb, Whitney, J. Williams, Wilson.

Biological Science: Ray, chairman; Latina, Maw, Nelson, G. Robinson, Tipton, Wagner.

Functional English: Parrish, chairman; Beauchamp, Figg, W. Garrett, R. Hall, Harmon, Hartley, Holland, Iorio, O'Hara, Palmer, Parker, Reader, Wyly, Zbar.

Functional Foreign Languages: W. Hunter, chairman; Artzybushev, de la Menardiére, Gleaves, Glenisson, Grothman, Karklins, Milani, Neugaard, Payas, Price, Spurlock, Tatum, Wall.

Functional Mathematics: Rose, chairman; Cleaver, Fairchild, Greer, Hart, S-Y. Lin, Luckenbach, McWaters, Moon, J. G. Reed, W. Williams.

Humanities: Kiefer, chairman; J. B. Camp, H. Deer, Frantz, Gowen, Hoffman, Juergensen, Kashdin, Koenig, MacKay, Peizer, Rutenberg, Shackson, W. Smith, Spillane, Stanton, Watkins.

Physical Science: J. H. Robinson, chairman; F. Agens, Berkley, J. Carr, Boulware, C. Clark, Dudley.

CBS 100. ENGLISH FOR FOREIGN STUDENTS (0)

Practice and drill in basic English sentence patterns; emphasis is on writing, punctuation, vocabulary, and idiom.

CBS 101-102. FUNCTIONAL ENGLISH (4,4)

Instruction and practice in the skills of writing, reading, and listening. CB 101 is prerequisite to CB 102.

CBS 109-110. FUNCTIONAL MATHEMATICS (5,5)

Designed as a terminal course for general cultural purposes, as a foundation for further study of mathematics and science, and as a preparatory course for prospective elementary school teachers.

CBS 111-128, CBS 211-225. FUNCTIONAL FOREIGN LANGUAGES (3,3,3)**FIRST YEAR (I)**

CBS 111-112-113

CBS 114-115-116

CBS 117-118-119

CBS 120-121-122

CBS 123-124-125

CBS 126-127-128

FRENCH

GERMAN

RUSSIAN

SPANISH

ITALIAN

PORTUGUESE

SECOND YEAR (II)

CBS 211-212-213

CBS 214-215-216

CBS 217-218-219

CBS 220-221-222

CBS 223-224-225

CBS 111 to 128. FUNCTIONAL FOREIGN LANGUAGES I (3,3,3)

Initiate development of speaking, understanding, reading, and writing of the foreign language at the elementary level together with a study of the foreign culture.

CBS 211 to 225. FUNCTIONAL FOREIGN LANGUAGES II (3,3,3)

Continue development of language skills at the intermediate level, including grammatical framework of the language and a comprehensive study of the foreign culture.

CBS 201-202-203. BEHAVIORAL SCIENCE (3,3,3)

Draws on information from behavioral sciences (human biology, psychology, anthropology, sociology, and philosophy) to demonstrate how human behavior develops and means by which personal, social, and ethical problems are dealt with. The third quarter will deal with special topics selected for study in depth by the student.

CBS 205-206-207. PROBLEMS IN BIOLOGICAL SCIENCE (3,3,3)

The use of information and principles from botany, zoology and physiology to teach students the basic operations of biological systems and the application of critical thinking to scientific problems.

CBS 208-209-210. EXPLORATIONS IN PHYSICAL SCIENCE (3,3,3)

The development of great scientific ideas, their historical and contemporary significance. Selected topics of astronomy, chemistry, earth science, physics, and philosophy of science—approached via textbook and popular readings. lec-lab-disc.

CBS 283. SELECTED TOPICS IN BASIC STUDIES (1-5)

PR: CI. The subject matter covered in each topic will depend upon the interest of the faculty member. Some may be experimental courses in Basic Studies; others may be offered under the direction of a visiting faculty member.

CBS 301-302-303-304. THE AMERICAN IDEA (3,3,2,1)

Uses history, political science, sociology and economics to focus on major ideas characterizing American society, on our relations with other nations, and on contemporary, domestic and international problems.

CBS 305-306-307-308. THE HUMANITIES (3,3,3,3)

PR: CBS 101-102. Analysis of works in the visual arts, music, theatre, literature, and philosophy. Workshops for creative experience.

CBS 311-312-313. HUMANITIES AND HUMANE VALUES (3,3,3)

PR: CBS requirement in humanities or CI. Masterpieces of music, visual arts, theatre, literature, and philosophy in varying cultural and historical situations.

CBS 395. OVERSEAS STUDY (1-9)

A program of individual or group research in a foreign country. Selection of the student, his preparation for the study, and subsequent evaluation to be supervised by a faculty committee.

CBS 401. SENIOR SEMINAR: FREEDOM AND RESPONSIBILITY (3)

Required of all seniors. Contemporary issues affecting social and personal values. Visiting lecturers, readings and discussions interrelating the behavioral natural and social sciences and the humanities. Designed to focus the university education upon contemporary problems.

CBS 403-404. THE UNIVERSE OF MAN (3,3)

A search for the universals of human life today; the nature of man, the world community, human needs and values, available instruments of science and technology, and the limiting facts and forces.

CBS 405-406-407. BEHAVIORAL SCIENCE (3,3,3)

A comprehensive analysis and evaluation of man's behavior. Emphasis on understanding of mechanisms involved in individual and social behavior, along with consideration of social and ethical problems related to means for controlling behavior. Laboratory experience will be provided on special research topics.

CBS 409-410-411. SCIENCE AND HUMAN LIFE (3,3,3)

The three phases of the course will involve the role of science in society; the quantitative factors operating within science; and the conflicting factors operating between science and other fields of knowledge.

CBS 471. COOPERATIVE EDUCATION RESEARCH REPORT (1-5)

PR: COE 171. A course designed specifically for Cooperative Education students in which the student pursues a research project dealing with his Cooperative Education assignment and his major area of professional interest. (See page 29)

CBS 483. SELECTED TOPICS IN BASIC STUDIES (1-5)

PR: CI. The subject matter covered in each topic will depend upon the interest of the faculty member. Some may be experimental courses in Basic Studies; others may be offered under the direction of a visiting faculty member.

BIOLOGY (Interdisciplinary)

(See also Botany and Zoology)

Offered by the Departments of Botany & Bacteriology and Zoology. For faculty and additional offerings see respective departments.

BIO 201.* FUNDAMENTALS OF BIOLOGY I (4)

A phylogenetic survey of the major animal groups and organ systems accompanied by dissection of selected types. lec-lab.

BIO 202.* FUNDAMENTALS OF BIOLOGY II (4)

An introduction to plant science; survey of plant groups; fundamentals of plant biology. lec-lab.

BIO 203.* FUNDAMENTALS OF BIOLOGY III (4)

Emphasis on fundamental properties of both plant and animal life. lec-lab.

BIO 315.* MICROTECHNIQUE (3)

PR: BIO 201-203. Theory and practice of tissue fixation, imbedding, sectioning and staining; chromosomal squash preparations; nuclear isolation techniques; photomicrography. lec-lab.

BIO 331. GENERAL GENETICS I (3)

PR: BIO 201-203. Principles of Mendelian "transmission" and evolutionary genetics. lec-lab.

BIO 332. GENERAL GENETICS II (3)

PR: BIO 331. Introduction to the study of gene action. lec-lab.

BIO 351.* INTRODUCTION TO MICROBIOLOGY (5)

PR: BIO 201-203. Introduction to the biology of microorganisms; structure and physiology of bacteria, algae, viruses, rickettsiae and protozoa; basic lab; methods in bacteriology. lec-lab.

BIO 421. CELL BIOLOGY I (4)

PR: BIO 201-203, CHM 331-333 or equivalent. An integrated approach to the structure and function of the cell. Biochemistry of cell constituents, relation of the cell to its environment, cellular energy conversion systems. lec-lab.

BIO 422. CELL BIOLOGY II (4)

PR: BIO 421. A continuation of BIO 421. Fine structure of cell organelles, membrane transport, irritability and contraction, cytogenetics and control mechanisms. lec-lab.

BIO 445. PRINCIPLES OF ECOLOGY (3)

PR: BIO 201-203. Organisms and their relationship to the environment, biogeography.

BIO 485. RESEARCH METHODS IN BIOLOGY I (2)

PR: CI. A laboratory course for advanced students to become acquainted with contemporary biological research instrumentation and techniques.

BIO 486. RESEARCH METHODS IN BIOLOGY II (2)

PR: CI. See Bio 485.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

BIO 565. ORGANIC EVOLUTION (4)

PR: BIO 331 or CI. An introduction to modern evolutionary theory. Lectures on population genetics, adaptations, speciation theory, phylogeny, human evolution, and related areas.

FOR GRADUATE STUDENTS ONLY

BIO 601. HISTORY OF BIOLOGY (3)

PR: CI. The historical development of biology with emphasis on the origin of important theories and principles.

BIO 645. MAN VERSUS HIS ENVIRONMENT (4)

PR: CI. Current and future biological problems facing mankind. Topics include pollution, biocides, the population explosion, eugenics, and food for the future.

BIO 799. PH.D. DISSERTATION (1-12)

PR: CI. May be repeated to a maximum of 12 credits.

BOTANY AND BACTERIOLOGY

(See also Interdisciplinary Biology)

Faculty: Long, chairman; Alvarez, Betz, Dawes, Eilers, Lakela, Mansell, McClung, Humm (adj.), Wagner (adj.).

BOT 311. SYSTEMATIC BOTANY (5)

PR: BIO 201-203 or CI. Identification and classification of the more interesting vascular plants of Florida; angiosperm evolution; principles of taxonomy. Conducted largely in the field.

BOT 314. FIELD BOTANY (3)

PR: BIO 201-203 or CI. Identification and classification of native and naturalized flowering plants of Florida including historical, climatic and floristic aspects of plant communities. Conducted largely in the field. lec-lab.

BOT 371. ECONOMIC BOTANY (3) (for non-specialists)

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.

BOT 411. TAXONOMY OF FLOWERING PLANTS (4)

PR: BOT 311 or CI. A phylogenetic study of Angiosperms; relationship of the principal orders and families, problems of nomenclature, identification of specimens, comparisons of recent systems of classification, dissection of representative flower types. Field trips and lab work. lec-lab.

BOT 417.* MYCOLOGY (5)

PR: BIO 201-203. Taxonomy, morphology, and physiology of fungi with special emphasis on yeasts and molds; antibiosis; industrial fermentations. lec-lab.

BOT 418.* MEDICAL MYCOLOGY (5)

PR: BIO 201-203. A survey of the yeasts, molds, and actinomycetes most likely to be encountered by the bacteriologists, with special emphasis on the forms pathogenic for man. lec-lab.

BOT 419. PLANT ANATOMY (5)

PR: BIO 201-203. Comparative studies of tissue and organ systems of fossil and present-day vascular plants. Functional and phylogenetic aspects stressed. lec-lab.

BOT 421.* PLANT PHYSIOLOGY (5)

PR: BIO 201-203, CHM 331-336 or CHM 303, or CI. Fundamental activities of plants; absorption, translocation, transpiration, metabolism, growth, and related phenomena. lec-lab.

BOT 446. TERRESTRIAL PLANT ECOLOGY (4)

PR: BIO 201-203, BIO 445 or CI. Distribution and nature of vegetation in relation to climatic, physiographic, edaphic and biotic factors; field investigations of subtropical Florida plant communities. lec-lab.

BOT 447. MARINE BOTANY (4)

PR: BIO 201-203, BIO 445 or CI. A field course in marine plants with emphasis on ecology and functional morphology. Field work will stress the ecological aspects of plants in a subtropical marine environment in Florida. lec-lab.

BOT 451. APPLIED BACTERIOLOGY (5)

PR: BIO 351. Bacteria, rickettsia, and viruses most important to man. Pathogenic

* The purchase of a coupon book to cover expendable items is required for these courses.

bacteria; introduction to sanitary, industrial, soil and agricultural bacteriology.

BOT 481. UNDERGRADUATE RESEARCH (1-6)

PR: Senior standing and CI. Individual investigations with faculty supervision.

BOT 491. SEMINAR IN BOTANY (1)

PR: Senior or advanced junior standing and CI. May be repeated once.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

BOT 515. SUBCELLULAR CYTOLOGY (4)

PR: BIO 422 or CI. Theory and fine structure of cells based on the information available from X-ray diffraction, bright field, phase birefringence light microscopy as well as electron diffraction and electron microscopy. The course will consist of three hours of lecture and one three-hour lab which will include demonstrations. lec-lab.

BOT 517. PHYSIOLOGY OF THE FUNGI (5)

PR: BOT 417, BIO 422 or CI. Differentiation, development, and genetics of the fungi. lec-lab.

BOT 543. PHYCOLOGY (5)

PR: BOT 447 or equivalent. A detailed survey of the algae emphasizing both taxonomy and morphology of fresh and marine water forms; field and laboratory investigations including individual projects. lec-lab.

BOT 551.* BACTERIAL PHYSIOLOGY (5)

PR: BIO 351 or equivalent, CHM 331-336, or CI. Bacterial structure, growth, death, metabolism, and genetic systems. Laboratory emphasis on quantitative and chemical methods for study of bacteria. lec-lab.

BOT 553.* DETERMINATIVE BACTERIOLOGY (5)

PR: BIO 351 or equivalent. CHM 331-336 or equivalent. Survey of bacterial classification; detailed examination of bacteria important to man in agriculture, in industry, and as pathogens. lec-lab.

BOT 557.* VIROLOGY (5)

PR: BIO 351 or equivalent and CI. The biology of viruses associated with plants, animals, and bacteria will be considered; the nature of viruses, mechanisms of viral pathogenesis, and interactions with host cells. lec-lab.

BOT 583. SELECTED TOPICS IN BOTANY AND BACTERIOLOGY (1-4)

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

FOR GRADUATE STUDENTS ONLY

BOT 610. CYTOCHEMISTRY (4)

PR: BIO 421, BIO 315 and CI. Theory and practice of microscopic and quantitative cyto-histochemistry. Intracellular localization methods for total proteins, nucleic acids, insoluble polysaccharides and enzymes. Discussions and demonstrations of optical quantitative methods based on polarizing and interference microscopy, and microspectrophotometry. 3 hours lec and 3 hours lab. lec-lab.

BOT 611. BIOSYSTEMATICS (4)

PR: BOT 311 or equivalent. Application of cytology, ecology, genetics, biochemistry, and morphological analyses to the study of evolution and classification of species of higher plants.

* The purchase of a coupon book to cover breakage is required for these courses.

BOT 615.* ULTRASTRUCTURE TECHNIQUES IN ELECTRON MICROSCOPY (4)

PR: BIO 201-203, BOT 515 or CI. Discussion of theory and techniques in electron microscopy. Emphasis on preparation techniques, optics, and use of the electron microscope. lec-lab.

BOT 621. DEVELOPMENTAL BOTANY (5)

PR: BOT 421, BIO 422 and CI. Morphogenesis and embryogenesis of higher plants. Emphasis on experimental approach to investigations of plant development. lec-lab.

BOT 643. ADVANCED PHYCOLOGY (4)

PR: BOT 543 or CI. A review of contemporary studies in the ecology, physiology, cytology, and morphology of algae. The course will consist of three hours of lecture and one laboratory. Lecture will be a review of the recent phycological literature with a laboratory for individual student projects. Field work will be required. lec-lab.

BOT 651. PLANT METABOLISM (3:2)

PR: BIO 351, BIO 422, BOT 421, CHE 336 or CI. A study of plant metabolism during germination and development with emphasis on respiration, photosynthesis, protein synthesis, pigments, and enzymes. lec-lab.

BOT 654. BACTERIAL GENETICS (3)

PR: BIO 351, BIO 332, BOT 551 or CI. A survey of the recombinational systems found among the bacteria and bacterial viruses with emphasis on the molecular mechanisms of gene transfer, replication and expression and on the significance of these systems for our understanding of cellular functions. lec-3 hrs per week.

BOT 655.* IMMUNOLOGY (5)

PR: BIO 351 or equivalent, CHM 331-336 or equivalent. Discussion of the basic immune reaction, nature of antigenicity; basic immunological techniques and their use in biological research and the medical sciences.

BOT 681. GRADUATE RESEARCH (1-9)

PR: CI.

BOT 683. SELECTED TOPICS IN BOTANY AND IN BACTERIOLOGY (1-4)

PR: CC.

BOT 691. GRADUATE SEMINAR (1)

BOT 699. MASTER'S THESIS (4-9)

PR: CI.

CHEMISTRY

Faculty: Maybury, chairman; Ashford, Binford, Braman, Caghey, Cory, J. Davis, J. Fernandez, Fuchsmann, Jurch, D. Martin, McCoy, Monley, Olsen, T. Owen, Solomons, Stevens, Wenzinger, Whitaker, Worrell.

CHM 211.* GENERAL CHEMISTRY I (4)

Fundamentals of chemistry; gas laws, mass and energy relationships in chemical changes, chemical equilibrium, atomic and molecular structure, lec-lab and discussion.

* The purchase of a coupon book to cover breakage is required for these courses.

CHM 212.* GENERAL CHEMISTRY II (4)

PR: CHM 211 or equivalent. Continuation of General Chemistry, lec-lab and discussion.

CHM 213.* GENERAL CHEMISTRY III (4)

PR: CHM 212 or equivalent. Continuation of General Chemistry, lec-lab and discussion.

CHM 301. ELEMENTARY INORGANIC CHEMISTRY (4)

PR: CHM 213 or equivalent. Fundamental inorganic chemistry principles. One-quarter course for non-chemistry majors. lec-lab.

CHM 303.* ELEMENTARY ORGANIC CHEMISTRY (6)

PR: CHM 213 or equivalent. Fundamental organic chemistry principles. One-quarter course for non-chemistry majors. lec-lab.

CHM 305. ELEMENTARY PHYSICAL CHEMISTRY (5)

PR: CHM 213, 321. Fundamental physical chemistry principles. One-quarter course for non-chemistry majors. lec-lab.

CHM 321.* ELEMENTARY ANALYTICAL CHEMISTRY (4)

PR: CHM 213. Fundamentals of gravimetric and volumetric analysis. lec-lab.

CHM 322.* ANALYTICAL CHEMISTRY (4)

PR: CHM 321. Potentiometry, spectrophotometry, chromatography, and ion exchange. lec-lab.

CHM 331-332.* ORGANIC CHEMISTRY I (3:1)

PR: CHM 213. Fundamental principles of organic chemistry and lab. Must be taken concurrently.

CHM 333-334.* ORGANIC CHEMISTRY II (3:1)

PR: CHM 331-332 or equivalent. Continuation of Organic Chemistry. Lecture and lab must be taken concurrently.

CHM 335-336.* ORGANIC CHEMISTRY III (3:1)

PR: CHM 233-334 or equivalent. Continuation of Organic Chemistry. Lecture and lab must be taken concurrently.

CHM 351. INTRODUCTORY BIOCHEMISTRY (3)

PR: CHM 303. Introduction to the chemistry and intermediary metabolism of biologically important substances. Lecture.

CHM 371. MODERN CHEMICAL SCIENCE (4)

PR: Jr. or Sr. standing. An introduction to some of the major problems in chemistry, its relation to other sciences, and its relevance to contemporary culture. No credit toward a chemistry major.

CHM 433.* QUALITATIVE ORGANIC ANALYSIS (4)

PR: CHM 333. Identification of organic compounds by functional group reactions and physical properties. lec-lab.

CHM 441. PHYSICAL CHEMISTRY I (4)

PR: CHM 321 and MTH 304. CR. MTH 305, PH 223 or 207. Thermodynamics, the states of matter, solutions. Lecture.

CHM 442. PHYSICAL CHEMISTRY II (4)

PR: CHM 322, 441. Electrochemistry, kinetic theory of gases, chemical kinetics,

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surface and nuclear chemistry. Lecture.

CHM 443. PHYSICAL CHEMISTRY III (4)

PR: CHM 442. Introduction to quantum mechanics and statistical thermodynamics. Lecture.

CHM 444.* PHYSICAL CHEMISTRY LABORATORY (3)

PR: One term of physical chemistry. CR: The second term of physical chemistry. 1 hour of lecture, 8 hours of lab weekly.

CHM 481.* UNDERGRADUATE RESEARCH (1-6)

PR: CI.

CHM 491. CHEMISTRY SEMINAR (2)

PR: Senior standing.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

CHM 511. ADVANCED INORGANIC CHEMISTRY (4)

PR: CHM 442. An advanced theoretical treatment of inorganic compounds. Lecture.

CHM 521.* INSTRUMENTAL ANALYSIS (4)

PR: CHM 322, 442. Theory and practice of instrumental methods. lec-lab.

CHM 531.* ADVANCED SYNTHETIC CHEMISTRY (4)

PR: CHM 333. A study of synthetic techniques from both the practical and the theoretical points of view. lec-lab.

CHM 551. BIOCHEMISTRY I (3)

PR: CHM 333. The chemistry and intermediary metabolism of biologically important substances, including carbohydrates, proteins, enzymes, vitamins, and metabolic intermediates. Recommended for chemistry and biology majors. Lecture.

CHM 552. BIOCHEMISTRY II (3)

PR: CHM 551. Continuation of Biochemistry. Lecture.

CHM 553.* TECHNIQUES IN BIOCHEMISTRY (2)

PR: CHM 551. Biochemistry laboratory with emphasis on modern techniques for use in biochemical research.

CHM 583. SELECTED TOPICS IN CHEMISTRY (1-6)

PR: CC. The following courses are representative of those that are taught under this title: Natural Products, Stereochemistry, Reactive Intermediates, Photochemistry, Instrumental Electronics, Thermodynamics, Advanced Lab Techniques, Heterocyclic Chemistry, etc.

FOR GRADUATE STUDENTS ONLY

CHM 611. STRUCTURAL INORGANIC CHEMISTRY (4)

PR: CHM 511. 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. Lecture.

CHM 613. CHEMISTRY OF THE LESS FAMILIAR ELEMENTS (4)

PR: CHM 511. An integrated treatment of the conceptual and factual aspects of the traditionally less familiar elements, including noble-gas elements, unfamiliar non-metals, alkali and alkaline-earth metals, and the transition elements. Lecture.

* The purchase of a coupon book to cover breakage is required for these courses.

CHM 621. ADVANCED ANALYTICAL CHEMISTRY (4)

PR: CC. A study of complete analytical process, including sample handling, separations, the analysis step, and statistical interpretation of data. Emphasis placed on separations and statistics. Lecture.

CHM 623. ELECTROCHEMISTRY (4)

PR: CHM 521. Theory and applications of modern electrochemical techniques, including polarography, amperometry, potentiometry, coulometry, and conductometry. Lecture.

CHM 625. ADVANCED ANALYTICAL TOPICS (4)

PR: CC. Selected topics in analytical chemistry. Offerings include radiochemistry (emphasizing radiotracers in research and analysis), chemical spectroscopy, (including both emission and absorption), and quantitative organic analysis. (Lecture; some topics may have lab.)

CHM 631. ADVANCED ORGANIC CHEMISTRY I (2)

PR: CC. A survey of theoretical and synthetic organic chemistry. Problems of structure and reactivity will be considered. Lecture.

CHM 632. ADVANCED ORGANIC CHEMISTRY II (2)

PR: CHM 631. Continuation of CHM 631. Lecture.

CHM 633. ADVANCED ORGANIC CHEMISTRY III (4)

CR: CHM 632. A study of organic reaction mechanisms emphasizing the interpretation of experimental data. Lecture.

CHM 634. ADVANCED ORGANIC CHEMISTRY IV (4)

CR: CHM 632. A study of organic reactions as exemplified in synthesis, degradation and structure proof. The emphasis will vary from year to year. Lecture.

CHM 641. STATISTICAL THERMODYNAMICS (4)

PR: CC. Application of statistical mechanics to thermodynamics, the relation of molecular structure to thermodynamic properties. Lecture.

CHM 643. QUANTUM CHEMISTRY I (4)

PR: CC. Introduction to elementary quantum mechanics. Atomic structure and Spectra. Lecture.

CHM 645. QUANTUM CHEMISTRY II (4)

PR: CHM 643. Applications of quantum mechanics to problems in chemistry; molecular structure and spectra. Lecture.

CHM 651. ADVANCED BIOCHEMISTRY I ENZYMES (3)

PR: CHM 552. A study of biochemical systems with emphasis on enzymes. lec.

CHM 652. ADVANCED BIOCHEMISTRY II. PROTEIN AND NUCLEIC ACIDS (3)

PR: CHM 552. A study of biochemical systems with emphasis on proteins and nucleic acids. lec.

CHM 653. ADVANCED BIOCHEMISTRY III. BIOORGANIC MECHANISMS (3)

PR: CHM 552. A study of biochemical systems with emphasis on mechanisms of biological reactions. lec.

CHM 654. ADVANCED BIOCHEMISTRY IV. BIOPHYSICAL CHEMISTRY (3)

* The purchase of a coupon book to cover breakage is required for these courses.

PR: CHM 552. A study of biochemical systems with emphasis on physical methods of experimentation and interpretation. lec.

CHM 681. GRADUATE RESEARCH (1-9)

PR: CC. Directed study along lines of the student's research, including participation in regular seminars. May be repeated.

CHM 683. SELECTED TOPICS IN CHEMISTRY (1-6)

PR: CC. 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 Characterization, Spectroscopy, etc.

CHM 691. GRADUATE SEMINAR IN CHEMISTRY (2)

CHM 699. THESIS (1-9)

CLASSICS AND ANCIENT STUDIES

Faculty: Gessman, chairman; Henley.

CLS 101-102-103. ELEMENTARY LATIN (3,3,3)

Elements of grammar, practice in translation from and into Latin, reading of selections from simple Latin texts.

CLS 201. INTERMEDIATE LATIN I (3)

PR: CLS 103 or equiv.; CR: two-hour per week grammar workshop (no credit). Selections from Cicero's speeches and systematic exercises in intermediate grammar.

CLS 202. INTERMEDIATE LATIN II (3)

PR: CLS 201 or equiv. Selections from the letters of Cicero and Pliny the Younger. (Alternate years.)

CLS 203. INTERMEDIATE LATIN III (3)

PR: CLS 201 or equiv. Selections from Ovid read and interpreted. (Alternate years.)

CLS 301. LATIN HISTORIANS (3)

PR: CLS 201 or equiv. Reading and interpretation of selected passages from the works of Sallust, Livy, and Tacitus in the original and of portions of their works in English translation. (Alternate years.)

CLS 302. LATIN LYRICS (3)

PR: CLS 201 or equiv. Reading and interpretation of selected poems by Roman lyricists, especially Catull and Horace. Introduction into Latin metrics. (Alternate years.)

CLS 303. LATIN EPIC (3)

PR: CLS 201 or equiv. Reading and interpretation of selected passages from Vergil's Aeneid in the original and of the entire work in English translation. Comparison with Greek epic. (Alternate years.)

CLS 321. ANCIENT CIVILIZATIONS (5)

History of the nations and empires of the ancient Mediterranean and Near East, their political, economic and religious institutions, and their achievements in philosophy and science, with special emphasis on Hebrews, Greeks and Romans.

CLS 331-332-333. BASIC GREEK (3,3,3)

PR: Junior or senior standing, or a minimum of two years of Latin or another highly inflected language (e.g., German, Russian, Modern Greek), or CI. Accelerated course in the Ancient Greek (Attic) language and introduction to original Greek literature. (Alternate years.)

CLS 341-342-343. BASIC HEBREW (3,3,3)

Designed to give students a working knowledge of Classical (Biblical) Hebrew and to introduce them to the Biblical literature in the original language.

CLS 351. CLASSICAL MYTHOLOGY (4)

Study of the more important myths of the Greeks and Romans as laid down in classical literature and of the impact that Classical mythology made on modern Western and, in particular, English literature.

CLS 371. FOUNDATIONS OF LANGUAGE (4)

Introduction to synchronic linguistics, basic concepts, general features of language. Dialects, kinship groups, language types, writing systems. Methods of structural analysis with emphasis on the Trubetzkoy-Jacobson approach. (Alternate years.)

CLS 401-402-403. ADVANCED GRAMMAR AND COMPOSITION (3,3,3)

PR: CLS 201 plus any two of CLS 202, 203, 301, 302, 303, or 4 years high school Latin. Difficult parts of morphological and syntactic structure. Exercises in advanced translation and composition. Theory of literature: genres, styles, figures of speech, principles of oratory and versification. (Alternate years.)

CLS 411-412-413. LATIN LITERATURE AND BACKGROUNDS (3,3,3)

PR: Same as for CLS 401. Fast survey of Greek literature, discussion of Roman dependence on Greek literary topics, concepts and forms. Survey of Latin literature from Ennius to Augustine. Study and interpretation of sample texts by authors not read earlier. (Alternate years.)

FOR UPPER LEVEL AND GRADUATE STUDENTS

CLS 517. LATINO-ROMANCE LINGUISTICS (4)

PR: Background in Latin or a Romance language. Case study of linguistic development of 4,000 years from Proto-Aryan through Latin to modern Romance languages.

CLS 527. GREEK HISTORY (4)

PR: CLS 321 or equiv. History of Ancient Greece and the Aegean area from the beginning of the Cretan civilization down to and including the Hellenistic period, and history of Greek colonization. (Alternate years.)

CLS 529. ROMAN HISTORY (4)

PR: CLS 321 or 327 or a major in Latin. Early history of Italy and the Etruscan civilization. History of Rome and her Empire to the beginning of the Middle Ages. (Alternate years.)

CLS 571. LANGUAGE IN CHANGE (4)

Principles of diachronic (historical) and comparative linguistics. Causes and documentation of change, research methods. History of writing. Genealogy of languages, glottogenic theories. Ethnolinguistics. (Alternate years.)

CLS 581. INDIVIDUAL RESEARCH (3-5)

PR: CI. Specialized individual work in particular areas of student's interests.

CLS 583. SELECTED TOPICS (3-5)

Course contents depend on student demand and instructor's interest and may range over the whole field of Latin, Greek or Hebrew language, literature or history. Enrollment can be repeated for different topics.

CLS 585. DIRECTED READING (3-5)

Readings in special topics. Arrangement with instructor before registration.

COOPERATIVE EDUCATION

Coordinating Staff: G. Miller, director; K. Lupton, assistant director; M. Fager, G. McClung, W. Smith.

COE 071. COOPERATIVE EDUCATION ORIENTATION (0)

COE 171. COOPERATIVE EDUCATION, 1ST TRAINING PERIOD (0)

PR: 36 hours of academic credit, acceptance in Cooperative Education Program.

COE 172. COOPERATIVE EDUCATION, 2ND TRAINING PERIOD (0)

PR: COE 171.

COE 271. COOPERATIVE EDUCATION, 3RD TRAINING PERIOD (0)

PR: COE 172.

COE 272. COOPERATIVE EDUCATION, 4TH TRAINING PERIOD (0)

PR: COE 271.

COE 371. COOPERATIVE EDUCATION, 5TH TRAINING PERIOD (0)

PR: COE 272.

COE 372. COOPERATIVE EDUCATION, 6TH TRAINING PERIOD (0)

PR: COE 371.

COE 471. COOPERATIVE EDUCATION, 7TH TRAINING PERIOD (0)

PR: COE 372.

COE 472. COOPERATIVE EDUCATION, 8TH TRAINING PERIOD (0)

PR: COE 471.

COE 571. COOPERATIVE EDUCATION, 9TH TRAINING PERIOD (0)

PR: COE 472.

COE 572. COOPERATIVE EDUCATION, 10TH TRAINING PERIOD (0)

PR: COE 571.

COE 671. COOPERATIVE EDUCATION, TRAINING PERIOD (0)

COE 672. COOPERATIVE EDUCATION, TRAINING PERIOD (0)

COE 771. COOPERATIVE EDUCATION, TRAINING PERIOD (0)

COE 772. COOPERATIVE EDUCATION, TRAINING PERIOD (0)

DEVELOPMENTAL MATHEMATICS

DMA 001. BASIC CONCEPTS OF ALGEBRA (0)

A programmed learning course in algebra from a modern point of view for the convenience of persons without adequate knowledge of simple algebraic manipulations and for persons without adequate preparation for MTH 101.

DMA 002. ANALYTICAL TRIGONOMETRY (0)

A programmed learning course in the study of the trigonometric functions as functions of real numbers and their application to triangles.

ECONOMICS

Faculty: Pasternak, chairman; J. A. Anderson, R. H. Burton, Davey, Forbes, Herman, James, Kauder, Kennedy, Mellish, Murphy Shannon, Shows, Small.

ECN 201. ECONOMIC PRINCIPLES I (4)

Economics as a social science; theoretical analysis of price determination of the product and factor markets.

ECN 202. ECONOMIC PRINCIPLES II (4)

Accounting, analytical and policy aspects of national income with emphasis on the theory of income determination; analysis of money and banking system; and survey of international trade theory and policies.

ECN 301. INTERMEDIATE PRICE THEORY (5)

PR: ECN 201-202. Advanced analysis of supply and demand as related to competition and monopoly; application of economic theory to management policies.

ECN 311. LABOR ECONOMICS (4)

PR: ECN 201-202 or CI. History of the trade union movement; economic analysis of trade union philosophies and practices; examination of basic influences affecting labor force, real wages and employment; collective bargaining and labor law.

ECN 313. COLLECTIVE BARGAINING (5)

PR: ECN 311. The administration of labor-management arguments, mediation and arbitration of industrial disputes and governmental role in collective bargaining.

ECN 323. INTERMEDIATE INCOME AND MONETARY ANALYSIS (5)

PR: ECN 201-202. Advanced analysis of national income and monetary theory with emphasis on the modern theory of income determination and the functioning of the monetary system.

ECN 331. BUSINESS AND ECONOMIC STATISTICS I (5)

PR: Proficiency test in algebra, or consent of instructor. The collection, presentation, analysis, and interpretation of quantitative data as they pertain to economic and business problems. This course should be taken, at the latest, in the junior year.

ECN 341. ECONOMICS OF TRANSPORTATION (4)

PR: ECN 201-202. Functions of transportation agencies, rate structure of transportation companies, problems of state and federal regulations and coordination of transportation facilities.

ECN 343. ECONOMICS OF PUBLIC UTILITIES (4)

PR: ECN 201-202. The economic characteristics of natural monopolies and the economic problems of regulation and public ownership.

ECN 351. INTERNATIONAL ECONOMICS (4)

PR: ECN 201-202. The principles and mechanisms of trade, exchange, balance of payments, comparative costs, effects of trade restrictions and economic growth of underdeveloped areas.

ECN 361. INTRODUCTION TO MATHEMATICAL ECONOMICS (4)

PR: CBS 109-110, ECN 201-202, and 331. The principal mathematical tools and techniques used in economic analysis and economic research.

ECN 371. AMERICAN ECONOMIC HISTORY (4)

PR: ECN 201-202. The growth and evolution of American economic institutions from Colonial times to the present.

ECN 401. HISTORY OF ECONOMIC THOUGHT (5)

PR: ECN 201-202. A historical survey of the development of economic theory and the main streams of economic thought, including philosophical and value aspects of economic thought.

ECN 405. COMPARATIVE ECONOMIC SYSTEMS (4)

PR: ECN 201-202. An emphasis on the theoretical and practical differences between economic systems such as capitalism, socialism, and communism.

ECN 411. LABOR RELATIONS AND PUBLIC POLICY (4)

PR: ECN 311. Problems resulting from legislative and judicial interpretation of the rights, duties and responsibilities of labor unions and employers; public policy in labor-management negotiations; survey of legislation designed to protect workers.

ECN 423. PUBLIC FINANCE (5)

PR: ECN 323. Economic analysis of government expenditures, taxation, public debt, and fiscal policy.

ECN 431. BUSINESS AND ECONOMIC STATISTICS II (4)

PR: ECN 331. Basic probability distributions, theory of statistical estimation, tests of hypotheses, design of experiments. Introduction to non-parametric statistics.

ECN 437. BUSINESS—GOVERNMENT RELATIONSHIPS (4)

PR: ECN 201-202. Patterns of regulations such as control of competitive enterprise, cartels and monopolies by the government. Government regulations and economic planning applied to politically determined economic goals.

ECN 451. INTERNATIONAL COMMERCIAL POLICIES (4)

PR: ECN 351. Geographic, social, political and related factors influencing commercial trade policies. Special emphasis on economic consequences of alternative courses of action.

ECN 461. THEORY OF ECONOMIC DEVELOPMENT (4)

PR: ECN 323. Problems, dynamics, and policies of economic change and growth in both emerging and developed countries. Emphasis is placed on economic theory as an explanation of the process of economic development.

ECN 479. SEMINAR IN INTERNATIONAL ECONOMICS (3)

PR: ECN 451. Patterns of economic relationships among countries, with particular emphasis on Latin America.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

ECN 501. ECONOMIC PRICE THEORY (3)

Theoretical analysis of micro-economics.

ECN 502. ECONOMIC NATIONAL INCOME THEORY (3)

PR: ECN 501. Analytical and policy aspects of macroeconomic theory.

ECN 503. STATISTICS OF BUSINESS (3)

The analysis and interpretation of quantitative data pertinent to the solution of economic problems.

FOR GRADUATE STUDENTS ONLY

ECN 601. RESEARCH METHODOLOGY (3)

PR: ECN 603. An investigation and use of research concepts, objectives and methods. This course should be taken at an early stage of the program.

ECN 603. MANAGERIAL STATISTICS I (3)

PR: ECN 331 or equivalent. The theory of statistical inference and its foundation as a decision-making tool. Descriptive statistics, including measures of location and dispersion, index numbers, and time-series analysis. Types of probability distributions, statistical estimation and tests of hypotheses.

ECN 604. MANAGERIAL STATISTICS II (3)

Analysis of variance, regression and correlation analysis and techniques of econometric research.

ECN 605. MANAGERIAL ECONOMICS (3)

An investigation of the concepts, tools and methods of micro-economics analysis.

ECN 607. AGGREGATE ECONOMICS (3)

An analysis of monetary and fiscal policy measures designed to moderate economic fluctuations. The theory of national income determination.

ECN 608. APPLIED ECONOMIC ANALYSIS (3)

PR: ECN 605-607. The application of micro and macro principles to business decision-making.

EDUCATION

Faculty: Agens, Celia Anderson, Christian Anderson, L. Anderson, Auleta, Austin, Barfield, Battle, Bondi, Bott, Bowers, Boyd, Bridges, Briggs, Bryant, Bullock, Burley, Carlson, Casteel, Chambers, Cleary, Craig, Crickenberger, Danenburg, DuBois, Robert Dwyer, Roy Dwyer, Engel, Follman, Francis, French, Gates, Glover, Goforth, Griffiths, Hearn, Hoffman, Holland, Hunnicutt, Johnson, Karns, Kearney, Keiter, Kincaid, Kinde, Kruschwitz, Lantz, Lavelly, Levy, Lichtenberg, Lowe, Lucoff, McCambridge, McClellan, McCracken, McIntosh, Manker, Michael, Wm. Miller, Monley, Mumme, Muntyan, Musgrove, Patouillet, Pfof, Pope, Prescott, Radloff, Reynolds, Rosenberger, Sellers, Shannon, Shanks, Singh, Sisk, A. Smith, C. Smith, Smitzes, Sorenson, Steiner, Stone, Story, Stovall, Tuttle, Urbanek, Weatherford, Webb, Whitney, Wiley.

Professional Education

(Foundations and Curriculum)

Required Undergraduate Core (17 hours)

EDF 305. HUMAN DEVELOPMENT AND LEARNING (4)

PR: CBS 201. Physiological and psychological growth patterns; learning theories, personality adjustment, and appraisal of the various forces affecting learning and personality. Credit cannot be earned for both EDF 305 and EDF 377.

EDF 307. SOCIAL FOUNDATIONS OF EDUCATION (4)

Social, economic and political context within which schools function and the values which provide direction for our schools; the culture as a motivating influence in instruction.

EDC 401. CURRICULUM AND INSTRUCTION (5)

PR: EDF 305 and 307, and admission to a teacher education program. Structure and purposes of curriculum organization with special emphasis on the quality of curriculum.

ED-440—ED-465 are "Methods" courses which are required in the appropriate fields. They are grouped with the courses in the specialized area in Education.

EDC 498. SENIOR SEMINAR IN EDUCATION (3).

PR: Senior standing. Synthesis of teacher candidate's courses in his complete college program. Required concurrently with student teaching.

EDC 499. SUPERVISED TEACHING (1-12)

One full quarter of student teaching in a public or private school. Student teacher takes Senior Seminar in Education concurrently. In special programs where the intern experience is distributed over two or more quarters, students will be registered for credit which accumulates to 12 quarter hours.

Undergraduate Electives

EDC 101. INTRODUCTION TO TEACHING (4)

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.

EDF 303. INTRODUCTION TO MEASUREMENT AND EVALUATION (4)

Elementary concepts basic to a general understanding of measurement and evaluation procedures.

EDF 309. PHILOSOPHY OF EDUCATION (4)

A critical analysis of selected philosophies of education in terms of their beliefs about the nature of man and society and their related assumptions about the nature of reality, knowledge, and value.

EDF 311. COMPARATIVE EDUCATION (4)

PR: Upper level Standing. A comparison of contemporary educational systems of selected countries with that of the United States.

EDF 377. EDUCATIONAL PSYCHOLOGY (4)

The nature of learning and the application of learning principles to educational procedures. Credit cannot be earned for both EDF 305 and EDF 377.

EDC 480. DIRECTED STUDY (1-4)

Extension of competency in teaching field.

EDF 481. INDIVIDUAL RESEARCH (1-4)

PR: Senior standing and consent of program coordinator.

EDC 485. DIRECTED READINGS (1-4)

PR: Senior standing and consent of program coordinator.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

EDC 501. CURRICULUM AND INSTRUCTION: (ELEMENTARY OR SECONDARY) (5)

Curriculum scope, sequence, and interrelationships, with a critical evaluation of current trends.

EDC 502. SURVEY OF ADULT EDUCATION (4)

A survey of the field in all its aspects to include: historical development, social forces, institutional structures, physiological and psychological rationale, program areas, literature and research and trends.

EDC 503. CURRICULUM CONSTRUCTION IN ADULT EDUCATION (4)

Involves the organization of an adult oriented curriculum fashioned from a knowledge of adult psychology and social need.

EDC 510. HEALTH PROBLEMS IN CHILDREN

Health problem prevalent in the culturally disadvantaged child and the teacher's role in referral or educational adaptation in classroom activities.

EDC 511. ORGANIZATION OF COURSE CONTENT FOR INDUSTRIAL EDUCATION TEACHERS (4)

Preparation for instruction to include occupational analysis, organization of content, lesson planning and basic procedures of pedagogy.

EDC 515. DIRECTING SPEECH ACTIVITIES IN THE SECONDARY SCHOOL

Coaching and directing co-curricular activities in discussion, debate, oratory, oral interpretation, and extemporaneous speaking. Planning and supervision of forensic tournaments and speech contests.

EDF 575. AMERICAN DEMOCRACY AND PUBLIC EDUCATION (4)

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 585. PROGRAMMED INSTRUCTION AND TEACHING MACHINES (4)

Principles for programming in the several academic subjects.

FOR GRADUATE STUDENTS ONLY

EDF 603. STATISTICS FOR EDUCATIONAL RESEARCH (4)

PR: EDF 607 or course in elementary statistics. Inferential statistical techniques applied to the experimental study of educational problems.

EDF 605. FOUNDATIONS OF MEASUREMENT (4)

Fundamental descriptive statistics, basic measurement concepts, role of measurement in education, construction of teacher-made tests and interpretation of standardized tests.

EDF 607. FOUNDATIONS OF EDUCATIONAL RESEARCH (4)

PR: EDF 605. Major types of educational research, with emphasis upon understanding the experimental method.

EDF 611. PSYCHOLOGICAL FOUNDATIONS OF EDUCATION (4)

Selected topics in psychology of human development and learning.

EDF 613. PRINCIPLES OF LEARNING (5)

A consideration of several theories of learning and related research studies in regard to classroom application.

EDF 615. BIOLOGICAL BASES FOR LEARNING AND BEHAVIOR (5)

PR: One course in Educational Psychology. A study of human biological development and its influence upon learning and behavior.

EDF 617. MEASUREMENT OF INDIVIDUAL INTELLIGENCE (5)

PR: EDF 305 or 611 or equivalent and a course in educational measurement or statistics. Administration and interpretation of individual measures of intelligence.

EDF 621. SOCIO-ECONOMIC FOUNDATIONS OF AMERICAN EDUCATION (4)

Significant socio-economic factors as they relate to major problems facing American education.

EDF 623. HISTORICAL FOUNDATIONS OF AMERICAN EDUCATION (4)

Historical and comparative problems in American education which are relevant to contemporary issues.

EDF 625. PHILOSOPHICAL FOUNDATIONS OF AMERICAN EDUCATION (4)

Major philosophies of education which are relevant to an understanding of contemporary educational issues.

EDF 627. PROSEMINAR IN COMPARATIVE EDUCATION (4)

Contemporary policies and practices in education in selected countries of the world. Methodology in Comparative Education. Consideration will be given to needs and interests of individual students.

EDC 615. SUPERVISION OF VOCATIONAL PROGRAMS (4)

Supervision as related to vocational programs.

EDC 661. PRINCIPLES OF EDUCATIONAL SUPERVISION (4)

PR: Course in general curriculum. Instructional leadership with emphasis on organization for curriculum improvement and in-service growth for professional school personnel.

EDC 671. PRINCIPLES OF EDUCATIONAL ADMINISTRATION (4)

Educational administration as a profession. Consideration is given to organization control, and support of the educational system.

EDC 681. DIRECTED STUDY: (Subject) (1-4)

Extension of competency in teaching field.

EDC 685. SCHOOL CURRICULUM IMPROVEMENT (4)

Workshop for the improvement of the curriculum of an elementary or secondary school. Open only to teachers in service. Complete faculty participation required.

EDC 687. SEMINAR IN ADULT EDUCATION (4)

The consideration of criteria to evaluate an adult education program in the area of curriculum, program planning, and student achievement.

EDC 689. SUBJECT SPECIALIZATION PLANNING: SECONDARY (4)

Individually planned course in a secondary school subject area for in-service teachers.

EDC 691. INTERNSHIP (4-9)

PR: CI. Supervised teaching at the secondary or junior college level as appropriate.

EDC 699. THESIS (1-9)

Elementary Education

EDE 409. READING FOR THE CHILD (5)

PR: CBS 101-102. Readiness, word recognition, (phonetic, visual and contextual analysis) development of word meanings, basic study skills, comprehension abilities and reading interests.

EDE 411. LANGUAGE ARTS FOR THE CHILD (4)

PR: CBS 101-102. Speaking, writing, reading and listening experiences of children and ways these skills are developed for individual creative expression.

EDE 413. LITERATURE FOR THE CHILD (4)

PR: CBS 101-102. History and development of children's literature, study of bibliographic sources, criteria and techniques for selection and use.

EDE 415. ARITHMETIC FOR THE CHILD (5)

PR: CBS 109-110. Basic structure of arithmetic, principles underlying number concepts.

EDE 417.* SCIENCE FOR THE CHILD (5)

PR: CBS 205, 206, 207 or 208, 209, 210. Science as inquiry.

EDE 419. SOCIAL STUDIES FOR THE CHILD (5)

PR: CBS 301, 302, 303. Significant concepts in the subjects concerned with human relationships. Emphasis upon teaching pupils to solve rather than be engulfed by social problems.

EDE 421.* ART FOR THE CHILD (4)

PR: Any three CBS Humanities courses. Art and the intellectual, creative, emotional, and esthetic growth of children.

EDE 423. MUSIC FOR THE CHILD: SKILLS (2)

Voice production, music reading, creative composition and some instrumental experience. School song materials used to support this work.

EDE 424. MUSIC FOR THE CHILD: METHODS (3)

PR: Any three CBS Humanities courses, EDE 423. Music literature and teaching aids for children including singing, rhythmic, creative, instrumental, and listening experience and their presentation.

EDE 425. HEALTH, PHYSICAL EDUCATION FOR THE CHILD (4)

Motivating factors of play; knowledge and skill in basic rhythmic activities; games and stunts; health instruction for the child.

EDE 426. CREATIVE ARTS IN EARLY CHILDHOOD EDUCATION (3)

The development of the child's creative expression through art, music, dance, play, and drama: included are the materials, contest, and teaching techniques.

EDE 431. ART FOR EARLY CHILDHOOD (3)

Art, presenting the principles, practices and materials to be used in relation to the characteristics of the young child ages 3-8.

EDE 433. MUSIC FOR EARLY CHILDHOOD (93)

Singing, rhythmic, creative, instrumental and listening experience relevant to early-childhood.

EDE 440. TEACHING METHODS IN THE ELEMENTARY SCHOOL (4)

Suggested Co-requisite: EDC 401. Process of teaching elementary school subjects. To be taken quarter prior to internship.

FOR SENIOR LEVEL AND GRADUATE STUDENTS**EDE 519. SOCIAL GROWTH IN CHILDHOOD (4)**

A study of the principle 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.

EDE 527. DEVELOPMENTAL PROCESSES IN EARLY CHILDHOOD (4)

The normal processes of development among children ages 3-8, the relation between these characteristics and the curriculum: child study through observation

required.

EDE 529. PROGRAMS IN EARLY CHILDHOOD EDUCATION (5)

A study of school programs for nursery, kindergarten, and primary education. Analysis and evaluation of these programs in the light of the most effective current classroom practices.

EDE 531. LANGUAGE AND LEARNING IN EARLY CHILDHOOD (4)

A study of the successive stages of development in language and learning during the child's formative years. Theories of learning and of language development.

EDE 539. WORKSHOP IN EARLY CHILDHOOD EDUCATION (4)

Individual problems and innovations related to methods and materials of instruction in the early childhood grades.

FOR GRADUATE STUDENTS ONLY

EDE 603. SEMINAR IN CURRICULUM RESEARCH (1-5)

PR: EDF 601 and admission to candidacy. Critical evaluation of current research and curriculum literature, design and analysis of individual research topics leading to satisfaction of research requirement.

EDE 609. TRENDS IN READING IN THE ELEMENTARY SCHOOL (4)

PR: EDE 409 or equivalent. Extensive study of recent trends in materials, approaches and procedures in teaching reading in the elementary schools.

EDE 611. TRENDS IN LANGUAGE ARTS INSTRUCTION (4)

PR: EDE 411 and 413. Advanced materials and processes of instruction in elementary school language arts programs.

EDE 613. CREATIVE ARTS INSTRUCTION (4)

Creative processes in the teaching of visual arts, music, dance, and drama to elementary school pupils.

EDE 615. TRENDS IN MATHEMATICS INSTRUCTION (4)

PR: EDE 415 or equivalent. Philosophy, content and process of qualitative instruction in modern mathematics in elementary school programs.

EDE 617.* TRENDS IN SCIENCE INSTRUCTION (4)

PR: EDE 417. Topics in the biological and physical sciences appropriate for teaching in excellent elementary school programs. Analysis of modern curriculum materials used in presenting science as a process of inquiry.

EDE 619.* TRENDS IN SOCIAL STUDIES INSTRUCTION (4)

Crucial concepts drawn from the social sciences. Analysis of the problems approach. Students will select an area of independent study on an advanced level.

EDE 621.* ART FOR THE ELEMENTARY SCHOOL TEACHER (4)

Exploration of various materials and techniques in relationship to current theories about art and the intellectual, creative, emotional and esthetic growth of children.

EDE 641. PROBLEMS IN SUPERVISION (4)

PR: EDF 601 or equivalent and EDC 661. Problems in supervising for curriculum improvement within the elementary school.

EDE 687. SUBJECT SPECIALIZATION PLANNING: ELEMENTARY (4)

Individually planned course in an elementary school subject area for in-service teachers.

* The purchase of a coupon book to cover expendable items may be required for these courses.

K-12 CERTIFICATION AREAS

Art Education

EDA 377. THEORETICAL BASES IN ART EDUCATION (3)

A study of the philosophical, psychological and historical bases upon which contemporary art education practice is developed.

EDA 379. ART IN THE ELEMENTARY SCHOOL (3)

PR: EDA 377. Art expressions appropriate for elementary school pupils at each grade level.

EDA 441. TEACHING METHODS IN THE SECONDARY SCHOOL—ART (4)

PR: EDF 401 or concurrent registration in EDF 401. Techniques and materials of instruction in art.

EDA 498. FIELD WORK IN ART EDUCATION (Credits to be announced)

PR: CI. Supervised participation in activities related to art education in community centers, adult education programs, non-school youth programs, planned workshops and research. Undergraduate students will enroll in EDA 498 for two credit hours concurrently with EDC 499.

FOR GRADUATE STUDENTS ONLY

EDA 660. HISTORICAL AND PHILOSOPHICAL FOUNDATIONS OF ART EDUCATION (4)

Past and contemporary philosophies and practices in art education.

EDA 661. ADMINISTRATION AND SUPERVISION OF ART EDUCATION (4)

Principles of administration and supervision of art programs in the school.

EDA 682. RESEARCH SEMINAR IN ART PROGRAM (4)

PR: EDA 660 or CI. Literature and research in art education. Various approaches to problem solving and evaluation with emphasis on individual research.

Guidance

FOR SENIOR LEVEL AND GRADUATE STUDENTS

EDG 581. PRINCIPLES OF GUIDANCE (4)

Guidance as a profession; philosophic framework of the guidance program, its scope and place in the total educational context.

FOR GRADUATE STUDENTS ONLY

EDG 603. THE INFORMATIONAL SERVICE IN GUIDANCE (4)

PR: EDG 581. Occupational structure in the United States; sources and uses of educational, occupational social and personal information; collecting classifying and communicating such information.

EDG 607. THE INDIVIDUAL INVENTORY SERVICE IN GUIDANCE (3)

PR: EDG 581. Case study approach to the analysis of the individual with emphasis on collecting and using information for purposes of better understanding individuals.

EDG 611. THE TESTING SERVICE IN GUIDANCE (4)

PR: EDF 605 or equivalent and EDG 581. Measurement in guidance; administration of tests, interpretation and use of results.

EDG 613. ORGANIZATION AND ADMINISTRATION OF GUIDANCE SERVICES IN ELEMENTARY SCHOOLS (3)

PR: EDG 581. Organization of a guidance program in the elementary school, its relation to instruction and administration. Guidance roles and relationships of members of the school staff.

EDG 615. ORGANIZATION AND ADMINISTRATION OF GUIDANCE SERVICES IN SECONDARY SCHOOLS (3)

PR: EDG 581. Organization of a guidance program and its place in the total educational program; responsibilities of various staff members and their relationships to each other.

EDG 617. GROUP PROCEDURES IN GUIDANCE IN ELEMENTARY SCHOOLS (3)

PR: EDG 581 and EDG 621. Counterpart of EDG 619 for prospective secondary school counselors, use of groups in the counseling and guidance of children and in working with parents and teachers.

EDG 619. GROUP PROCEDURES IN GUIDANCE IN SECONDARY SCHOOLS (3)

PR: EDG 581 and EDG 623. Group interaction and values of group activity for guidance purposes. Methods and techniques for working with groups.

EDG 621. THE COUNSELING SERVICE IN GUIDANCE IN ELEMENTARY SCHOOLS (5)

PR: EDG 581. Counterpart of EDG 623 for prospective secondary school counselors. Counseling viewed as communication through media appropriate to children.

EDG 623. THE COUNSELING SERVICE IN GUIDANCE IN SECONDARY SCHOOLS (5)

PR: EDG 581. Nature of the counseling process with emphasis on some theoretical approaches and practical techniques.

EDG 625. PRACTICUM IN ELEMENTARY GUIDANCE COUNSELING AND CONSULTING (6)

This course is the counterpart of EDG 627 for prospective secondary school counselors; enrollment by permission of program chairman only. Counseling with children in groups as well as individually; consultations with parents, teachers, administrators, and fellow professionals regarding the children being counseled.

EDG 627. PRACTICUM IN SECONDARY SCHOOL GUIDANCE COUNSELING (6)

Final course in guidance program; enrollment by permission of program chairman only. Supervised practice in working with individuals in counseling relationship.

EDG 633. SEMINAR IN GUIDANCE (1)

PR OR CR: EDG 581. Significant issues in the field of guidance; topics for discussion will vary according to needs and interests of students.

Library—Audio-Visual

EDL 411. SCHOOL LIBRARY ADMINISTRATION AND SERVICE (5)

Developments, philosophy, objectives, standards, and current trends in school libraries; library processes, programs and services in the school.

EDL 412. ORGANIZATION OF THE SCHOOL LIBRARY AS A MATERIALS CENTER (5)

Library quarters, facilities, and equipment. The acquisition, maintenance, and circulation of book and non-book library materials, and the organization of library programs in the schools.

EDL 419. AUDIO-VISUAL MATERIALS OF INSTRUCTION (4)

Selection, utilization and care of audio-visual materials and equipment.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

EDL 508. TV UTILIZATION IN AND FOR THE SCHOOL (4)

Techniques in utilization, evaluation, and preparation of instructional programming for media specialists and teachers.

EDL 513. GENERAL REFERENCE SOURCES (4)

Basic reference tools: dictionaries, encyclopedias, handbooks, indexes, serials, bibliographies, biographical sources, atlases and gazetteers; emphasis on school library reference materials.

EDL 514. SELECTION AND ACQUISITION OF ELEMENTARY SCHOOL LIBRARY MATERIALS (2)

Selection and ordering of books and audio-visual materials for children, grades K-6.

EDL 515. TECHNICAL SERVICES IN LIBRARIES (4)

Principles and practice in the classification, cataloging, and processing of books and other informational materials in the school's library.

EDL 517. BOOKS AND RELATED MATERIALS FOR YOUNG PEOPLE—Part I (3)

Literature for adolescents: bibliographic sources, aids, and tools for the selection and utilization of books and related multi-sensory materials.

EDL 518. BOOKS AND RELATED MATERIALS FOR YOUNG PEOPLE—Part II (3)

PR: EDL 517. Examination of books and related materials for young people in terms of basic principles of selection and utilization.

EDL 523. PREPARATION AND PRODUCTION OF INSTRUCTIONAL MATERIALS (4)

Basic techniques for the preparation of a variety of audio-visual instructional materials.

EDL 524. STORYTELLING FOR THE ELEMENTARY SCHOOL LIBRARIAN (2)

History of storytelling; practice in selection and utilization of materials necessary for storytelling in the elementary school library.

EDL 529. TV UTILIZATION IN THE SCHOOL (3)

Techniques in utilization, evaluation, and preparation of instructional programming for media specialists and teachers.

FOR GRADUATE STUDENTS ONLY

EDL 601. BIBLIOGRAPHY AND BOOK SELECTION (5)

PR: EDL 517, 518. Bibliographic sources, evaluative criteria for books and principles of book selection for libraries.

EDL 603. HISTORY OF BOOKS AND LIBRARIES (4)

Development of books and libraries from the earliest records to the great libraries of modern times and the library as a social institution.

EDL 605. HISTORY OF CHILDREN'S LITERATURE (5)

Historical bibliographical survey of imaginative and informational literature for children.

EDL 607. THE CURRICULUM AND INSTRUCTIONAL TECHNOLOGY (5)

Instructional materials as they relate to specific areas of the curriculum in elementary and high school programs.

EDL 609. SUPERVISED FIELD WORK IN SCHOOL LIBRARIES (4)

Admission to candidacy and consent of major adviser.

EDL 611. ADVANCED SUBJECT REFERENCE AND BIBLIOGRAPHY (4)

PR: EDL 513. Literature of the humanities, social sciences, science, and technology.

EDL 615. CLASSIFICATION AND CATALOGING OF NON-BOOK MATERIALS (3)

Principles of classification and cataloging of non-book materials for the media center.

EDL 621. AUDIO-VISUAL ADMINISTRATION (5)

PR: EDL 419, 523. Audio-visual administrative practices in public schools, school systems and junior colleges. Organization of audio-visual facilities, services and instruction.

EDL 623. ADVANCED PREPARATION AND PRODUCTION OF INSTRUCTIONAL MATERIALS (4)

PR: EDL 523 and 607. Designed for the high school specialist. The preparation of transparencies, film strips, and other newer media of instruction.

EDL 625. READING GUIDANCE PROGRAMS IN LIBRARIES AND CLASSROOMS (4)

Reading interests of youth, programs for teaching the library and learning skills, theory and practice in reading guidance techniques.

EDL 681. INDIVIDUAL RESEARCH AND INDEPENDENT STUDY (4)

PR: 20 hours earned in program and consent of adviser.

Music Education

***EDM 431. INSTRUMENTAL MUSIC IN THE ELEMENTARY SCHOOL (4)**

***EDM 432. INSTRUMENTAL MUSIC IN THE JUNIOR HIGH SCHOOL (4)**

***EDM 433. INSTRUMENTAL MUSIC IN THE SENIOR HIGH SCHOOL (4)**

***EDM 435. VOCAL MUSIC IN THE ELEMENTARY SCHOOL (5)**

***EDM 437. VOCAL MUSIC IN THE JUNIOR HIGH SCHOOL (5)**

***EDM 439. PR: EDM 437. VOCAL MUSIC IN THE SENIOR HIGH SCHOOL (5)**

EDM 453. TEACHING METHODS IN THE SECONDARY SCHOOL—MUSIC-INSTRUMENTAL (K-12) (4)

PR: EDC 401 or concurrent registration in EDC 401. Techniques and materials of instruction in instrumental music (K-12).

* Each class meets as a performing group. Score reading, conducting, organizational procedures, historical relationships, and methods at the appropriate grade levels. Teaching techniques concerning the presentation of elements of theory, general music, and literature.

Physical Education for Teachers

EDP 255. FIRST AID (3)

Meets American Red Cross certification requirements in standard and advanced first aid.

EDP 311, 321, 331, 411, 421, 431, SEMINAR AND FIELD EXPERIENCE SEQUENCE IN PHYSICAL EDUCATION (5 each)

A six course sequence providing teaching experiences on the elementary, junior and senior high school levels. Seminars in conjunction with these experiences where the following areas will be studied and discussed: analysis of the instructional process, child growth and development, social correlates of physical education, curriculum, organization and administration, health, community recreation, philosophy and evaluation.

EDP 312. HUMAN KINETICS I (6)

The development and integration of the neuromuscular and the associated sensory systems as they effect motor and perceptual motor performance. The physiology of muscular contraction, the accompanying immediate changes in the cardio-respiratory systems, and the permanent physiological changes resulting from exercise.

EDP 314. 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.

EDP 322. HUMAN KINETICS II (6)

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.

EDP 332. HUMAN KINETICS III (6)

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.

EDP 365 AQUATICS (3)

Methods of organizing and conducting aquatic programs in the school and community.

EDP 366. THEORY AND TEACHING OF MODERN DANCE (3)

Designed to acquaint students with methods and resources for use in teaching dance. Practical experiences in presentation of dance techniques and composition work to classes.

EDP 412, 422, 432. APPLIED KINESIOLOGY (5 each)

A three course sequence providing experiences in a number of sports. Emphasis will be placed on the learning and teaching problems with these activities.

EDP 457. TEACHING INDIVIDUAL AND DUAL ACTIVITIES (3)

PR: PED 150, 152, 160 and 168. Methods of teaching tennis, golf, badminton, bowling, handball, archery and recreational activities.

EDP 459. ATHLETIC TRAINING (3)

Principles and techniques of conditioning athletes for competition; prevention and care of injuries in physical education and athletic activities.

EDP 460. HEALTH EDUCATION PROJECT (4)

A practicum in health education through field experiences with official and voluntary health agencies.

EDP 466. THEORY AND TEACHING OF TEAMS SPORTS (5)

Theory and methods of teaching rules, progressions. Strategy and tactics in team games.

EDP 468. COACHING OF SWIMMING (3)

Methods of organizing and coaching a competitive swimming team.

EDP 469. COACHING OF FOOTBALL (5)

Theory and practice of the fundamental techniques, organizational problems and strategy involved in coaching football.

EDP 478. COACHING OF WRESTLING (4)

Theory and practice of the fundamental techniques, organizational problems and strategy involved in coaching wrestling.

EDP 479. COACHING OF SOCCER (3)

Theory and practice of the fundamental techniques, organizational problems and strategy involved in coaching soccer.

EDP 486. COMMUNITY RECREATION (4)

Introduction to recreational outlets in the community and the administrative problems confronting recreational playground leaders and directors of community recreational programs.

EDP 488. COACHING OF TRACK AND FIELD (4)

Theory and practice of the fundamental techniques, organizational problems and strategy involved in coaching track.

EDP 489. COACHING OF BASKETBALL (3)

Theory and practice of the fundamental techniques, organizational problems and strategy involved in coaching basketball.

EDP 499. COACHING OF BASEBALL (3)

Theory and practice of the fundamental techniques, organizational problems and strategy involved in coaching baseball.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

EDP 556. SPECIAL PROBLEMS IN PHYSICAL EDUCATION (3-6)

EDP 558. SCIENTIFIC BASIS OF COACHING (5)

The application of principles from exercise physiology, kinesiology and psychology to competitive athletics.

Reading Education

FOR SENIOR LEVEL AND GRADUATE STUDENTS

EDR 509. CURRENT TRENDS IN READING IN THE SECONDARY SCHOOL (4)

Developmental reading for the upper grade level junior high school pupils and all grade level senior high school pupils.

EDR 530. CORRECTIVE READING FOR CLASSROOM TEACHERS (4)

PR: EDE 409 or EDR 509 or equivalent. Procedures and materials for individual and group corrective reading in the classroom.

FOR GRADUATE STUDENTS ONLY**EDR 631. DIAGNOSIS OF READING DISABILITIES (4)**

PR: EDF 605 and EDE 609 or EDR 509. Research concerning causes of reading disability; diagnostic procedures; techniques and materials in diagnosis of reading problems.

EDR 632. TECHNIQUES OF CORRECTIVE AND REMEDIAL READING (4)

PR: EDE 609 or EDR 509, and EDR 631. Materials and methods in remediation of moderate to severe reading disability cases.

EDR 633. PRACTICUM IN READING (3-6)

PR: EDE 609 or EDR 509, EDR 631 and EDR 632 and CI. Clinical diagnosis of severe reading disability cases, tutoring of individuals and small groups, interview techniques, preparation of case reports.

EDR 634. CURRICULUM AND SUPERVISION PROBLEMS IN READING (4)

PR: EDE 609 or EDR 509. Planning and administering programs and preparation as consultants in reading. Intensive work on individual projects required.

EDR 635. SURVEY OF READING RESEARCH (1-3)

PR: EDF 601, EDE 609 or EDR 509 and admission to candidacy. Critical analysis of current reading research; individual report or paper required.

Special Education**EDS 311. EXCEPTIONAL CHILDREN IN THE SCHOOLS (4)**

PR: EDF 305, PSY 201, or CI. Characteristics and needs of the Culturally Disadvantaged, Emotionally Disturbed & Socially Maladjusted, Gifted, Hearing Impaired, Mentally Retarded, Physically Handicapped, Speech Impaired, & Visually Limited.

EDS 322. INTRODUCTION TO MENTAL RETARDATION (4)

PR: EDF 305, PSY 201, or CI. Classification, diagnosis, characteristics, and treatment of the mentally retarded.

EDS 371. INTRODUCTION TO COMMUNICATION DISORDERS (4)

Survey of etiologies, nature and prevention. Professional settings for the management of communication disorders. Classroom teacher amelioration of language, speech and hearing impairments.

EDS 423 I & II. EDUCATIONAL PROCEDURES FOR THE EDUCABLE MENTALLY RETARDED (4,4)

PR: EDS 322 and concurrent enrollment in EDC 401, or CI. Special class organization, curriculum adjustments, methods and techniques of teaching the educable retarded.

EDS 424. EDUCATIONAL PROCEDURES FOR THE TRAINABLE MENTALLY RETARDED (4)

PR: EDS 322 or CI. Special class organization, curriculum adjustments, methods and techniques of teaching the trainable retarded.

EDS 471. INSTRUMENTATION FOR COMMUNICATION DISORDERS (4)

PR: EDS 371 or CI. Operation, maintenance, principles in use of electronic and mechanical equipment associated with management and diagnosis of communication disorders.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

EDS 531. BEHAVIOR DISORDERS IN THE SCHOOLS (4)

PR: EDF 305 or EDF 377 or PSY 201 or CI. Survey of emotional and social disorders in children and the implications for educational programs.

EDS 541. THE CULTURALLY DISADVANTAGED AND THE SCHOOLS (4)

Characteristics and needs of the culturally disadvantaged and their implications for educational programming.

EDS 550. NATURE AND NEEDS OF THE GIFTED (4)

Characteristics and educational needs of gifted children and youth.

EDS 551. EDUCATIONAL PROCEDURES FOR THE GIFTED (4)

PR: EDS 550 or CI. Curriculum adjustments, methods and techniques, classroom organization necessary for teaching the gifted.

EDS 571.* EVALUATION OF ORAL COMMUNICATION DISORDERS (4)

PR: EDS 371 or CI. Articulation, voice, language, and stuttering disorders. Reporting, case management, referral, and professional relationships.

EDS 572.* EVALUATION OF AUDITORY COMMUNICATION DISORDERS (4)

PR: EDS 371 or CI. Auditory and visual communication skills of the hearing impaired. Hearing aid consultation, nonorganic hearing loss testing and reporting of hearing evaluation.

EDS 573.* METHODS FOR AUDITORY COMMUNICATION DISORDERS (4)

PR: EDS 572 or CI. Speech reading, auditory training, electronic aids, and acoustic environment modification for the hearing impaired.

EDS 574.* METHODS FOR ORAL COMMUNICATION DISORDERS (4)

PR: EDS 571. Classic and experimental approaches to and systems of evaluation of therapy in the management of speech impaired individuals.

EDS 575. MANAGEMENT OF COMMUNICATION DISORDERS (4)

PR: EDS 573 or EDS 574 or CI. Coordination, planning, and structuring of programs for individuals with communication disorders.

EDS 598. FIELD WORK IN SPECIAL EDUCATION: (AREA) (1-14)

Planned, supervised, participation in activities related to specific area(s) of exceptionalities.

FOR GRADUATE STUDENTS ONLY

EDS 610. SEMINAR IN SPECIAL EDUCATION (4)

A critical survey of the literature related to the psychological, sociological, and education problems of exceptional children.

EDS 611. PSYCHO-EDUCATIONAL APPRAISAL OF EXCEPTIONAL CHILDREN (4)

PR: EDF 303, 605, or CI. Special diagnostic procedures for exceptional children.

* The purchase of a coupon book to cover expendable items may be required for these courses.

EDS 612. SUPERVISION OF EXCEPTIONAL CHILD PROGRAMS (4)

PR: CI. Principles of supervision and their application to exceptional child education.

EDS 613. ADMINISTRATION OF EXCEPTIONAL CHILD PROGRAMS (4)

PR: CI. Procedures which local, state, and national administrators may use to implement services for exceptional children.

EDS 620. BIOLOGICAL AND PSYCHOLOGICAL ASPECTS OF MENTAL RETARDATION (4)

PR: EDS 322 and EDF 601, or CI. Evaluation of relevant literature.

EDS 621. SOCIOLOGICAL AND EDUCATIONAL ASPECTS OF MENTAL RETARDATION (4)

PR: EDS 322 and EDF 601, or CI. Evaluation of relevant literature.

EDS 622. ADVANCED EDUCATIONAL PROCEDURES FOR THE MENTALLY RETARDED (4-8)

PR: EDS 423, experience in teaching the retarded, identification of a problem prior to registration, or CI. Specific curriculum and methodological problems in teaching the retarded.

EDS 632. EDUCATIONAL PROGRAMMING FOR EMOTIONALLY DISTURBED CHILDREN I (4)

PR: CI. Personality dynamics and research findings as related to the interpretation of disturbed behavior; techniques for the management of individual, small group, and classroom behavior.

EDS 633. EDUCATIONAL PROGRAMMING FOR EMOTIONALLY DISTURBED CHILDREN II (4)

PR: CI. Personality dynamics and learning theory as related to the facilitation of learning and communication; techniques for teaching both individuals and groups with emphasis on improved interpersonal relations, academic learning, and communication skills.

EDS 671. COMMUNICATION DISORDERS: VOICE (4)

PR: CI. Research and clinical literature on voice and voice disorders.

EDS 672. COMMUNICATION DISORDERS: ARTICULATION (4)

PR: CI. Research and clinical literature on articulation and articulation disorders.

EDS 673. COMMUNICATION DISORDERS: STUTTERING (4)

PR: CI. Research and clinical literature on stuttering and related disorders.

EDS 674. COMMUNICATION DISORDERS: HEARING (4)

PR: CI. Research and clinical literature on hearing disorders.

EDS 675. COMMUNICATION DISORDERS: LANGUAGE (4).

PR: CI. Research and clinical literature on language disorders.

EDS 676. SPEECH & LANGUAGE DISORDERS (4).

Group management procedures for amelioration of speech and language problems. The nature of disorders of communication and management of verbal behavior.

EDS 699. THESIS (3-9)

Secondary Education

Business Education

EDB 443. TEACHING METHODS IN THE SECONDARY SCHOOL—BUSINESS EDUCATION (4)

PR: EDC 401 or concurrent registration in EDC 401. Techniques and materials of instruction in Business Education.

Distributive Education

EDD 311. RETAILING EDUCATION (4)

The retail functions and related content needed to develop a training plan for careers in such areas as advertising, salesmanship, or merchandising.

EDD 406. MANAGEMENT OF COORDINATED VOCATIONAL PROGRAMS. (4)

The management of cooperative and specialized programs.

EDD 431. SUPERVISED FIELD EXPERIENCE (4)

PR: EDD 311. Planned supervised participation in activities related to training procedures in retail, wholesale, and service occupations in selected industries.

EDD 445. TEACHING METHODS IN THE SECONDARY SCHOOL—DISTRIBUTIVE EDUCATION (4)

PR: EDC 401 or concurrent registration in EDC 401. Techniques and materials of instruction in Distributive Education.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

EDD 506. MANAGEMENT OF VOCATIONAL EDUCATION PROGRAMS (4)

Organization and coordination of cooperative programs, specialized programs, and specific problems.

EDD 507. PRINCIPLES OF VOCATIONAL EDUCATION (4)

The development of vocational programs and the basis for occupational emphasis to other aspects of education.

FOR GRADUATE STUDENTS ONLY

EDD 607. PRINCIPLES OF VOCATIONAL EDUCATION (4)

The foundations of vocational programs and the basis for occupational emphasis and their relationship to other curricular areas.

EDD 621. IMPROVING COORDINATION INSTRUCTION (4)

PR: In-service experience or CI. An examination of the cooperating agencies and their functions; materials, methods and content of junior college mid-management programs.

EDD 631. ORGANIZATION AND SUPERVISION OF ADULT DISTRIBUTIVE EDUCATION (4)

PR: CI. For supervisors of adult distributive education in county-wide programs and community junior colleges. Curriculum structure, advisory committees, teacher recruitment and training, including the construction of course outlines and promotion of enrollment.

EDD 651. DISTRIBUTIVE EDUCATION PRACTICUM: (Area) (4-8)

PR: CI. Field work in the local business community.

EDD 661. SEMINAR IN DISTRIBUTIVE EDUCATION RESEARCH (4)

PR: EDF 601. Applied research techniques and investigation of an important current problem in distributive education.

English

EDT 447. TEACHING METHODS IN THE SECONDARY SCHOOL—ENGLISH (4)

PR: EDC 401 or concurrent registration in EDC 401. Techniques and materials of instruction in English Education.

EDT 463. TEACHING METHODS IN THE SECONDARY SCHOOL—JOURNALISM (4)

PR: EDC 401 or concurrent registration in EDC 401. Techniques and materials of instruction in journalism.

FOR GRADUATE STUDENTS ONLY

EDT 631. CURRENT TRENDS IN SECONDARY ENGLISH EDUCATION (4)

Curricular patterns and instructional practices in secondary English.

Foreign Language

EDX 449. TEACHING METHODS IN THE SECONDARY SCHOOL—FOREIGN LANGUAGE (4)

PR: EDC 401 or concurrent registration in EDC 401. Techniques and materials of instruction in Foreign Language.

EDX 465. TEACHING METHODS IN THE SECONDARY SCHOOL—LATIN (4)

PR: EDC 401 or concurrent registration in EDC 401. Techniques and materials of instruction in Latin.

FOR GRADUATE STUDENTS ONLY

EDX 649. CURRENT TRENDS IN SECONDARY FOREIGN LANGUAGE EDUCATION (4)

Curricular patterns and instructional practices in teaching secondary foreign languages.

Humanities

FOR GRADUATE STUDENTS ONLY

EDY 633. CURRENT TRENDS IN THE TEACHING OF HUMANITIES (4)

Curricular patterns, materials, and instructional practices in the teaching of humanities.

Natural Science—Mathematics

EDN 425. NEW TRENDS IN TEACHING THE PHYSICAL SCIENCES (4)

Physical Science Study Committee Physics, Chemical Education Materials Study and other new approaches to the teaching of the physical sciences. Directed individual study. Recommended to be taken prior to EDN 459.

EDN 427. NEW TRENDS IN TEACHING BIOLOGY (4)

Cellular version of Biological Science Curriculum Study. For secondary school teachers. Recommended to be taken prior to EDN 459.

EDN 451. TEACHING METHODS IN THE SECONDARY SCHOOL—MATHEMATICS (4)

PR: EDC 401 or concurrent registration in EDC 401. Techniques and materials of instruction in mathematics.

EDN 459. TEACHING METHODS IN THE SECONDARY SCHOOL—SCIENCES (4)

PR: EDC 401 or concurrent registration in EDC 401. Techniques and materials of instruction in secondary school sciences.

FOR GRADUATE STUDENTS ONLY

EDN 637. CURRENT TRENDS IN SECONDARY MATHEMATICS EDUCATION (4)

Curricular patterns and instructional practices in secondary mathematics.

EDN 639. CURRENT TRENDS IN SECONDARY SCIENCE EDUCATION (4)

PR: EDN 425 or 427. Curricular patterns and instructional practices in secondary science.

EDN 641. CASE STUDIES IN SCIENCE (4)

Case studies from the Natural Sciences with implications for science teaching.

Social Studies

EDW 461. TEACHING METHODS IN THE SECONDARY SCHOOL—SOCIAL STUDIES (4)

PR: EDC 401 or concurrent registration in EDC 401. Techniques and materials of instruction in social studies.

FOR GRADUATE STUDENTS ONLY

EDW 643. CURRENT TRENDS IN SECONDARY SOCIAL STUDIES (4)

Curricular patterns and instructional practices in secondary social studies.

Junior College

FOR GRADUATE STUDENTS ONLY

EDH 651. THE JUNIOR COLLEGE IN AMERICAN HIGHER EDUCATION (4)

History of higher education, philosophical and cultural bases for definition of its role, and contemporary issues, such as control, financing, and curricular patterns. The place and problems of the community junior college will be central concerns of this course.

EDH 653. SEMINAR IN COLLEGE TEACHING (5)

Implications of learning theory and student characteristics for teaching at the college level. Types of teaching procedures, innovation, evaluation, student freedom and responsibility for learning.

ENGINEERING

Faculty: Abbey, Allen, J. Bowers, Burdick, Burgett, Cowell, Deuel, Devine, Donaldson, Downey, Ellis, Garrett, J. Gonzalez, Griffith, Kopp, Hilley, Lane, Lindgren, Nienhaus, Oline, Payne, B. Ross, Rashad, Scott, N. Smith, J. Smith, W. Smith, Wm. Smith, Stubblebine, Twigg, Weaver, Wimmert.

Core Engineering Course Work

EGB 101. ENGINEERING GRAPHICS I (4)

Theory of orthographic projection, auxiliary views, isometric and oblique projections, fasteners, dimensions, and applicatory problems in descriptive geometry. lec-lab.

EGB 102. ENGINEERING GRAPHICS II (3)

Continuation of EGB 101

EGB 201. FORTRAN PROGRAMMING (2)

Basic computer operations, principles of machine language, FORTRAN programming for scientific problems. lec-lab.

EGB 203. ENGINEERING MEASUREMENTS (3)

An introduction to the concepts of the systems approach and various techniques of measurement in engineering systems, both of discrete and continuous variables.

EGB 301. THERMODYNAMICS I (3)

PR: MTH 304, PHY 222. Introduction to Thermodynamics, Thermodynamic concepts of system and control volume, process and cycle, property and state. The Zeroth Law of Thermodynamics and temperature scales. Properties of ideal and pure substances. Concepts of work and heat. The first law of Thermodynamics.

EGB 302. SOLID MECHANICS I (5)

CR: PHY 221. Principles of statics, equilibrium of rigid bodies, elastostatics of simple structural elements. lec-problem.

EGB 303. SOLID MECHANICS II (4)

PR: EGB 302. CR: MTH 204. Dynamics of discrete particles and distributed mass bodies; spatial kinematics and kinetics. lec-problem.

EGB 304. ENGINEERING MATERIALS I (6)

PR: CHM 213, EGR 302. An introduction to the Structure and Properties of Engineering Materials. lec. lab.

EGB 305. ENGINEERING VALUATION (3)

PR: EGB 201, MTH 303. A study in analyzing and evaluating the economic limitations imposed on engineering activities. Basic models for making engineering decisions.

EGB 308. FLUID MECHANICS I (6)

PR: EGB 303. Fundamental and experimental concepts in ideal and viscous fluids theory; momentum and energy considerations; compressible flow; boundary layer, Navier-Stokes equation. lec-lab.

EGB 309. DYNAMIC RESPONSE OF ENGINEERING SYSTEMS (4)

PR: EGB 302. Linear dynamic analysis, of electrical, mechanical, pneumatic, hydraulic and thermal systems. Introduction to analog computers, Laplace transformation, transient and frequency response. Block diagram representation. lec-lab.

EGB 311. THERMODYNAMICS II (3)

PR: EGB 301. Continuation of EGB 301. The Second Law of Thermodynamics; Concepts of reversibility, the Carnot Cycle, entropy and its calculation, basic engineering cycles, psychrometry; ideal gas mixtures; combustion, thermodynamics of fluid flow through simple nozzles and metering devices.

EGB 316, 317, 318. INTRODUCTION TO ELECTRICAL MODELS I, II, III (3), (3), (3)

PR: PHY 225-226, MTH 304. A first course in the transient and steady-state analysis of passive and active lumped circuits. Characteristics and physical principles of electron devices. Analysis of basic electronic models.

EGB 321. NUMERICAL METHODS USING FORTRAN (1)

PR: EGB 201, MTH 303. Solution of engineering problems using digital computers. Lab.

Specialization Course Work

EGR 301. DIGITAL COMPUTER PROGRAMMING (2)

PR: EGB 201. Basic computer programming including machine language, ALGOL and COBOL. lec-lab.

EGR 311, 411, 417. ELECTRICAL CIRCUITS I, II, III (3 each)

PR: EGB 317, EGR 410. Provides further study in the transient and steady-state responses of passive R-L-C networks to various forcing functions from both the time and frequency domain points of view. Includes the analysis of resonant coupled and three-phase circuits. Introduction to LaPlace, Fourier and Superposition integrals.

EGR 312, 412, 418. ELECTRONICS I, II, III (3 each)

PR: EGB 318, EGR 410., respectively. Provides further study in the physical principles of electronic devices with emphasis on semi-conductor electronics. Includes the study of amplifier, oscillator and switching circuit design.

EGL 312, 316, 317, 318, 413, 418. ELECTRICAL LABORATORIES 1 through 6 (1 each)

PR: EGB 316, 317; CR: EGR 411, 412, 418, 429, respectively.

EGR 313, 413, 419. FIELDS AND WAVES I, II, III (3 each)

PR: PHY 225-226, EGR 410. A basic introduction to electromagnetic field theory, including static and dynamic electromagnetic fields.

EGL 316, 317, 318. See EGL 312.**EGR 331. KINEMATICS (3)**

PR: EGB 302. Plane and angular motion; velocity and acceleration curves, velocities and accelerations in mechanisms; static and dynamic force analysis. Rolling and sliding contact pairs, cams, gear tooth action. lec-lab.

EGR 333. THERMODYNAMICS III (3)

PR: EGB 311. The study of energy conversion processes and cycles as modified for optimization of capacity and efficiency, applications include steam power plants, internal combustion engines, gas turbines, refrigeration and air conditioning systems and air compressors.

EGR 335. HEAT TRANSFER I (4)

PR: EGB 311. The basic laws of conduction, convection and radiation; analysis of the effect on heat transfer of thermal conductivity, emissivity, fluid transport properties and Reynold's number. lec-lab.

EGR 337. ENERGY CONVERSION LAB I (2)

CR: EGB 311. Introduction to engineering laboratory measurements with emphasis on the writing of technical reports. Experiments in the measurement of temperature, pressure, flow of fluids; determination of density, viscosity, analysis of combustion products. lec-lab.

EGC 401. CHEMICAL PROCESS CALCULATIONS (3)

PR: CHM 213, MTH 304, PHY 215. Mathematical formulation of industrial chemical process problems, including graphical and numerical methods. Principles of Stoichiometry.

EGC 402. TRANSPORT PHENOMENA (4)

PR: EGB 301, EGC 401. An introduction to momentum transfer, energy transfer, and mass transfer as applied to industrial chemical process problems.

EGC 403. CHEMICAL PROCESS PRINCIPLES I (4)

PR: CHM 442, EGB 308, EGC 402. Application of transport concepts to the solution of problems concerned with the design, economics, and operation of chemical process equipment; fluid flow, heat transfer, absorption, drying, evaporation, crystallization, extraction, and distillation.

EGC 404. CHEMICAL PROCESS PRINCIPLES II (4)

PR: EGC 403. A continuation of EGC 403.

EGC 405. INDUSTRIAL CHEMISTRY (3)

PR: CHM 332, EGC 404. A critical study of selected chemical process industries in order to give the student a better understanding of the direct application of basic chemical process principles.

EGR 408, 409, 410. SPECIAL TOPICS IN ENGINEERING I, II, III (1-4 each)

PR: CC

EGR 411. See EGR 311.

EGR 412. See EGR 312.

EGR 413. See EGR 313.

EGL 413. See EGL 312.

EGR 414. LINEAR CONTROL SYSTEMS (3)

PR: EGB 309. Introduction to analysis and design of linear feedback control systems. Covers block diagrams, flow charts, Bode, Nyquist and Root Locus techniques.

EGL 414. ELECTRICAL LABORATORY (1)

CR: EGR 414.

EGR 415. LOGIC DESIGN (3)

PR: EGR 412. Binary number system; Boolean functions; canonical forms; Boolean Algebra; minimization of combinational logic circuits; digital switching circuits; switching matrices logic circuits in computers.

EGL 415. ELECTRICAL LABORATORY (1)

CR: EGR 415.

EGR 417. See EGR 311.

EGR 418. See EGR 312.

EGL 418. See EGL 312.

EGR 419. See EGR 313.

EGR 421, 422, 423. SYSTEMS ANALYSIS I, II, III (5 each)

PR: CC. A course series to permit non-electrical majors to take advanced course work in the electrical area.

EGL 421, 422, 423. ELECTRICAL LABORATORIES 10, 11, 12 (1 each)

CR: EGR 421, 422, 423.

EGR 424. MICROELECTRONICS ENGINEERING (3)

PR: PHY 323, EGR 411, EGR 412, EGR 313. Principles of microminutization

of electrical circuits. Fabrication techniques, component realization, component isolation, parasitics.

EGL 424. ELECTRICAL LABORATORY (1)

CR: EGR 424

EGR 431. MACHINE DESIGN I (3)

PR: EGR 331. Stress analysis, factor of safety, beams, columns, application of equilibrium diagram to mechanical design of engineering materials. lec-lab.

EGR 432. MACHINE DESIGN II (3)

PR: EGR 431. Failure theories, dynamic loading, prevention of fatigue of metals, moment-area method and Castigliano's theorem; advanced stress considerations, modified Goodman diagram. lec-lab.

EGR 437. ENERGY CONVERSION LAB II (2)

PR: EGR 337. Continuation of EG 337 with emphasis on measurement techniques and technical report writing. Energy balances of operating systems. lec-lab.

EGR 441. ANALOG COMPUTERS I (3)

PR: EGB 309 or CC. The study of linear and non-linear engineering systems using analog computers. lec-lab.

EGR 443. MECHANICAL MEASUREMENT AND CONTROL (3)

PR: EGR 441. Analysis of devices for measurement and control. Transmitters, error detectors, controllers and final control elements, Block diagram representation. lec-lab.

EGR 445. FLUID MACHINERY (4)

PR: EBG 308, 311. Analytic and experimental determination of the performance characteristics of fluid handling devices; fans, pumps, and valves. Losses in pipe and duct systems. Techniques for noise control. lec-lab.

EGR 446. FUELS AND COMBUSTION (3)

PR: EGB 311. A study of the combustion characteristics of gaseous, solid and liquid fuels, and equipment needed to safely and economically control combustion processes. lec-lab.

EGR 447. REFRIGERATION AND AIR CONDITIONING (3)

PR: EGR 335, EGR 445. Application of the principles of thermodynamics, heat transfer and fluid flow to the design of systems for the control of environment. lec-lab.

EGR 448. POWER PLANT ANALYSIS AND DESIGN (3)

PR: EGR 335, 445. Daily load curves and estimation of future loads; economics of power generation. Plant efficiency as affected by the thermodynamic cycle and load variations.

EGR 449. SPECIAL TOPICS IN ENERGY CONVERSION I (1-4)

EGR 450. SPECIAL TOPICS IN ENERGY CONVERSION II (1-4)

EGR 451. STRUCTURES I (5)

PR: EGB 302. Elastic analysis of structural members, concepts of variational energy principles including virtual work, minimum potential energy, and complementary energy, elastic and inelastic stability.

EGR 452. CONCEPTS OF STRUCTURAL DESIGN (4)

CR: EGR 451. Applications of solid mechanics, materials science, and structural analysis; local effects and connections, critical review of current code and design practices.

EGR 455. ENGINEERING MATERIALS II (4)

PR: EGB 304, EGB 301. Thermodynamics of Solid Materials. Entropy and free energy concepts applied to equilibrium and rate processes in metallic, ceramic and polymer systems. Metallography. (lec.-lab)

EGR 456. CONCEPTS OF MATERIALS ENGINEERING (3)

PR: EGR 455. Application and selection of metals, ceramics, and polymers in engineering problems. Materials technology and failure analysis. (lec.)

EGR 470. INTRODUCTION TO INDUSTRIAL SYSTEMS (3)

PR: EGB 305. Introduction to the analysis of problems encountered in industrial situations, including work planning, manufacturing, & distributing problems and control of industrial systems.

EGR 471. INDUSTRIAL PROCESS ANALYSIS (3)

PR: EGB 305. Analysis of processing industrial materials. Introduction to extraction processing and fabrication. Special tours of local industrial plants. lec-lab.

EGR 472. FUNDAMENTALS OF PRODUCTION DESIGN I (3)

PR: EGR 471, 479. Methods study, work simplification, predetermined time systems, work measurement techniques, work sampling, standard data, and production studies. lec-lab.

EGR 473. FUNDAMENTALS OF PRODUCTION DESIGN II (3)

PR: EGR 472. Continuation of the material covered in EGR 472.

EGR 474. PRODUCTION CONTROL SYSTEMS I (3)

PR: EGR 477, 479. Principles of planning and control. Cost analysis, forecasting, scheduling and controlling production activities.

EGR 475. PRODUCTION CONTROL SYSTEMS II (3)

PR: EGR 474. Continuation of materials covered in EGR 474.

EGR 476. PLANT FACILITIES DESIGN (4)

PR: EGR 474. Design and/or modification of plant facilities. Problems in plant location and layout. Material handling and equipment selection. lec-lab.

EGR 477. INTRODUCTION TO OPERATIONS RESEARCH I (3)

PR: EGR 479. An introduction to the basic operations research techniques—linear programming, dynamic programming, simulation and queueing.

EGR 478. INTRODUCTION TO OPERATIONS RESEARCH II (3)

PR: EGR 477. Continuation of material covered in EGR 477.

EGR 479. INTRODUCTORY STATISTICS I (3)

PR: MA 303. An introduction to the basic concepts of statistical analysis. Probability, distribution functions. Estimation and testing procedures. Applications.

EGR 480. INTRODUCTORY STATISTICS II (3)

PR: EGR 479. A continuation of EGR 479. Chi-square, order statistics, non-parametric tests. Simple and multiple regression and correlation analysis.

EGR 481. STATISTICAL QUALITY CONTROL (2)

PR: EGR 479. Application of statistical techniques to the control of industrial processes. Control charts and acceptance procedures.

EGR 482. HYBRID COMPUTER TECHNIQUES (3)

PR: EGR 302. The use of hybrid computers for the solution of problems in systems analysis. lec-lab.

EGR 491, 492, 493. ELECTROMECHANICS I, II, III (3 each)

PR: EGB 318. Theory of electromechanical energy conversion. Characteristics and control of rotating electrical machines, transformers, electromagnets, loud-speakers, microphones, transducers.

EGL 491, 492, 493. ELECTROMECHANICS LAB 1, 2, 3, (1 each)

CR: EGR 491, 492, 493.

EGR 501, 502, 503, 504, 505. ENGINEERING ANALYSIS I, II, III, IV (3 each)

PR: EGR 410, or MTH 401. Ordinary differential equations with emphasis on numerical methods and series solutions; boundary value problems; orthogonal functions; vector analysis; partial differential equations; the LaPlace transform; functions of a complex variable.

EGR 511, 611. ELECTRICAL MEASUREMENTS I, II (2 each)

PR: EGR 417. Techniques and principles of electronic measurement.

EGL 511, 611. ELECTRICAL LABORATORY 13, 14 (1 each)

CR: EGR 511, 611.

EGR 512. UHF PRINCIPLES (3)

PR: EGR 417, 418. A study of tubes, devices and circuits peculiar to systems which operate at ultra high and super high frequencies.

EGL 512. ELECTRICAL LABORATORY 15 (1)

CR: EGR 512.

EGR 513. PULSE CIRCUIT PRINCIPLES (3)

PR: EGR 417, 418. An introduction to the analysis and design of pulse and timing circuits with applications.

EGR 514. NONLINEAR CONTROL SYSTEMS

PR: EGR 414. Principles of state-variables, phase-plane and describing functions.

EGR 515. DIGITAL COMPUTERS (3)

PR: EGR 415. Digital arithmetic; computer subsystems, arithmetic units; control units; memory units; general purpose computers.

EGL 515. ELECTRICAL LAB (1)

EGR 516. POWER SYSTEMS (3)

PR: CC. Analysis techniques for AC power systems.

EGR 520, 521, 522. SPECIAL ELECTRICAL TOPICS I, II, III (1-3 each)

PR: CC.

EGR 531. MECHANICAL VIBRATION AND BALANCING (3)

PR: CC. Transient and steady state vibration analysis of mechanical systems with lumped parameters. Dynamic balancing, vibration isolation and simulation of systems.

EGR 532. PROJECT DESIGN (3)

PR: CI. Correlation of previously acquired design experience with a creative design project. Lec-lab.

EGR 533. STATISTICAL THERMODYNAMICS (3)

PR: EGR 333. The statistical and microscopic approach to molecular transport phenomena. Boltzman and quantum statistics; entropy and probability; the third law of thermodynamics; evaluation of partition functions.

EGR 534. ENERGY TRANSFORMATION AND STORAGE (3)

PR: EGR 333. Analysis of direct energy conversion systems; photoelectric cells,

thermoelectric devices, fuel cells, thermionic converters, magnetohydrodynamic devices; solar energy utilization; rectifiers, inverters; energy storage devices.

EGR 535. HEAT TRANSFER II. (4)

PR: EGR 335. A continuation of EG 335. Analysis of non-steady state heat transfer by mathematical and graphical means. Radiation from and through flames. Design of heat transfer equipment. lec-lab.

EGR 538. ACOUSTICS AND NOISE CONTROL (3)

PR: CI. Fundamentals of sound propagation; sound power and intensity; psychoacoustics, industrial noise sources, methods of noise attenuation; community noise ordinances; instrumentation for noise measurement. Lec-lab.

EGR 541. ANALOG COMPUTERS II (3)

PR: EGR 441. A continuation of EGR 441 with emphasis on simulation of non-linear systems. lec-lab.

EGR 542. PHYSICAL MEASUREMENTS I (3)

PR: CC. The techniques and theory for measuring temperature, pressure, displacement, speed, acceleration, force, power, and psychrometric properties with particular attention to dynamic measurement. lec-lab.

EGR 543. NUMERICAL MEASUREMENT AND CONTROL (3)

PR: CC. Incremental and absolute control systems. Number systems used in numerical control. Digital to analog and analog to digital conversion. Applications.

EGR 544. PNEUMATIC AND HYDRAULIC CONTROL (3)

PR: CC. A study of pneumatic and hydraulic control system components and their effect on closed loop system performance. lec-lab.

EGR 548. LUBRICATION (3)

PR: CI. The Theoretical Basis of lubrication and hydrodynamic bearing Theory. The study of lubrication requirements of different types of machines.

EGR 549. SPECIAL TOPICS IN ENERGY CONVERSION I (1-4)

PR: CC.

EGR 550. SPECIAL TOPICS IN ENERGY CONVERSION II (1-4)

PR: CC.

EGR 551. STRUCTURES II (4)

PR: EGR 451. Elastic and inelastic structures of composites and structural laminates, and matrix media; prestressed structural systems.

EGR 552. STRUCTURES III (5)

PR: EGR 451. Determination of stress and displacement fields in statically determinate and indeterminate trusses and frames, influence lines and coefficients, plastic analysis of single and multi-story structures.

EGR 553. SOLID MECHANICS III (3)

PR: EGB 303. Dynamics of discrete and distributed mass, spatial kinematics and kinetics, inertia tensor, Euler equations.

EGR 554. SOLID MECHANICS IV (3)

PR: EGB 303. Dynamics of Elastic Systems, Vibration of Rods, Plates, Shells, Structures, Energy and Approximate Solution Techniques, Transform Techniques.

EGR 555. ENGINEERING MATERIALS III (4)

PR: EGB 304. The Structure of Solid Materials. Crystalline and glassy states in metals and ceramics. Diffraction methods in Materials Science. Electron microscopy. lec-lab.

EGR 556. ENGINEERING POLYMERS (3)

PR: EGR 455 or C.C. Structure and bulk properties of polymers. High elasticity, topics in viscoelasticity, the glass transition, irreversible deformation. Technology of plastics, fibers and elastomers.

EGR 559. EXPERIMENTAL SMF I (4)

PR: EGB 308. Experimental methods and applications to problems of current interest in the study of fluid mechanics: Schlieren, interferometry, shadowgraph, hot wire anemometry and electronics. lec-lab.

EGR 560. EXPERIMENTAL SMF II (4)

PR: EGB 303. Experimental stress analysis techniques. Basic elasticity, electric strain gage, brittle coating, photoelastic coatings, photoelasticity, grid methods—Moiré and advanced physical optics. lec-lab.

EGR 561. INTRODUCTION TO CONTINUUM (4)

PR: CC. Development of techniques of applied mathematics to SMF problems; partial differential equations, complex variable, vector and tensor analysis.

EGR 562. CONTINUUM I (3)

PR: EGR 451. Development of fundamental problems in solids and fluids from a unified viewpoint; application to ideal media; elastic, plastic, viscoelastic, and fluids.

EGR 563. CONTINUUM II (3)

PR: EGR 562. Mathematical Theory of elasticity. Two dimensional problems in plane stress and plane strain using cartesian and curvilinear coordinates; three dimensional applications to torsion, bending and semi infinite solids.

EGR 557. FLUID MECHANICS II (4)

PR: EGB 308. Fundamentals of gas dynamics, open channel analogy to compressible fluids, two dimensional hydrodynamic flows with application to airfoil theory, three dimensional flow fields. lec-lab.

EGR 558. FLUID MECHANICS III (4)

PR: EGB 308. Mathematical hydrodynamics, inviscid flow. lec-lab.

EGR 569. SPECIAL TOPICS IN SMF (1-4)

PR: CC.

EGR 570. RESEARCH IN SMF (1-4)

PR: CC.

EGR 571. HUMAN FACTORS (3)

PR: CC. Problems in the design, analysis and evaluation of man-machine systems. Study of physical, mental and psychological characteristics and limitations encountered in man-machine systems.

EGR 572. INVENTORY CONTROL (3)

PR: EGR 480. Properties of inventory systems, and the fundamentals of deterministic and probabilistic inventory models.

EGR 573, 574, 575. DESIGN OF INDUSTRIAL EXPERIMENTS I, II, III (3 each)

PR: EGR 480. Development of the basic experimental designs. Randomized blocks, latin squares and factorial experiments.

EGR 576. RELIABILITY ENGINEERING (3)

PR: EGR 480. Fundamental concepts of reliability theory and their applications

to the solution of practical problems. Reliability sampling and control charting, availability prediction models, and reliability designs.

EGR 577, 578. COMPUTER SIMULATION I, II (3 each)

PR: EGR 478. Use of digital, analog and hybrid computers in simulating physical and industrial systems.

EGR 579. ENGINEERING VALUATION II (3)

PR: EGB 305. Continuation of materials covered in EGB 305.

EGR 588, 589, 590. SPECIAL INDUSTRIAL TOPICS I, II, III (1-3 each)

PR: CC.

EGR 599. RESEARCH OR DESIGN (1-9)

PR: CC.

EGR 602, 603, 604. ELECTROMAGNETIC FIELDS AND WAVES I, II, III (3 each)

PR: CC. Electromagnetic theory from the engineering point of view, propagation and reflection of waves, guided waves, resonant cavities, antennas and radiation.

EGR 605, 606. ADVANCED CIRCUIT THEORY I, II (3 each)

PR: CC. Network fundamentals; network characterization; frequency analysis; super-position integrals; signal-flow techniques; stability problems; real-and-imaginary relations.

EGR 607, 608, 609. NETWORK SYNTHESIS I, II, III (3 each)

PR: CC. Network functions; physical realizability; two-terminal network synthesis methods; frequency transformation; potential analogy; approximation problems; insertion-loss and transfer function synthesis.

EGR 610. NONLINEAR CIRCUITS (3)

PR: CC. Analytical and topological approaches to nonlinear circuits; nonlinear resonance; relaxation oscillations.

EGR 611. See EGR 511.

EGL 611. See EGL 511.

EGR 612. MICROWAVE THEORY (3)

PR: CC. A study of microwave circuits, devices and techniques.

EGL 612. ELECTRICAL LABORATORY (1)

CR: EGR 612.

EGR 613. DIGITAL MACHINES I (3)

PR: EGR 415. Mathematical Foundation; minimization, design of sequential logic circuits, state diagrams.

EGR 614. DIGITAL MACHINES II (3)

PR: EGR 613. Digital arithmetic; binary codes in computers; design of special purpose computers; introduction to sequential machine theory; examples of sequential machines.

EGR 615, 616, 617. SOLID STATE ELECTRONICS I, II, III (3 each)

PR: CC. Theory of operation and application of circuits and devices.

EGR 618. NOISE THEORY (3)

PR: CC. Electrical noise and signals through linear filters and electronic systems.

EGR 619, 620, 621. THEORY OF COMMUNICATION I, II, III (3 each)

PR: CC. Physical basis and statistical representation of electrical noise; filtering, modulation, and de-modulation of signals corrupted by noise; correlation techniques and linear prediction; statistical estimation of signal parameters; optimum filters and receivers; ambiguity functions and inverse probability. Quantitative measure of information sources, noise channels and channel capacity; an introduction to error-correcting codes.

EGR 622. DIGITAL CONTROL SYSTEMS

PR: EGR 414. Sample-data and digital control processes.

EGR 623. RANDOM PROCESSES IN CONTROL SYSTEMS

PR: EGR 414. Analysis and design of control systems subject to random inputs and disturbances..

EGR 624. MODERN CONTROL THEORY

PR: EGR 414, 514, 622, 623. A study of modern control techniques including optimum and adaptive control.

EGR 622, 623, 624. CONTROL SYSTEM THEORY I, II, III (3 each)

PR: CC. Analysis and synthesis techniques of linear and nonlinear control systems. Computer as a control component.

EGR 625. SIMULATION TECHNIQUES FOR ELECTRICALS (3)

PR: CC. Theory of simulation of systems characterized by lumped and distributed parameters.

EGR 626, 627, 628. ELECTRIC POWER SYSTEMS I, II, III (3 each)

PR: CC. Steady-state and transient analysis of interconnected power systems; power circuit protection; transient characteristics of apparatus.

EGR 629. ENGINEERING ANALYSIS VI (3)

PR: CC. Applications of applied mathematics to the study of linearized dynamic systems and networks; state space; stability theory; extensions to discrete and nonlinear systems.

EGR 630. SPECIAL ELECTRICAL PROBLEMS (1-9)

PR: CC.

EGR 631. MACHINE DESIGN III (3)

PR: CC. A continuation of EGR 432.

EGR 632. DIMENSIONAL ANALYSIS AND MODEL THEORY I (3)

PR: CC. Theory of dimensional analysis, similtude, and design of models.

EGR 633. THERMODYNAMICS OF FLUID FLOW (3)

PR: CC. Inter-relationship of the equations of motion and of thermodynamics. The study of ideal and real fluids in motion.

EGR 634. ADVANCED THERMODYNAMICS (3)

PR: CC. Advanced treatment of the general equations of thermodynamics, principal equations of chemical reaction; the chemical potential and equilibrium constant; analysis of metastable states. Irreversibility and unsteady flow.

EGR 635. HEAT TRANSFER III. (3)

PR: CC. Advanced treatment of basic heat transfer phenomena. Radiation through absorbing and non-absorbing media; radiation from gases and plasmas. Analysis of convective heat transfer by boundary layer theory and equations of fluid motion.

EGR 637. VIBRATION ANALYSIS (3)

PR: EGR 531. Application of generalized coordinates, LaGrange's equation, matrix iteration, and other specialized methods to discrete multimass systems. Lateral vibrations of uniform machine elements.

EGR 638. DIMENSIONAL ANALYSIS AND MODEL THEORY II (3)

PR: EGR 632. Continuation of EGR 632 including model testing and correlation of test results with fractional analysis.

EGR 642. FLUIDIC AMPLIFIERS AND CIRCUITS (4)

PR: CC. Analysis and design of fluid devices for use as amplifiers and in logic systems. lec-lab.

EGR 649. SPECIAL PROBLEMS IN ENERGY CONVERSION I (1-4)

PR: CC.

EGR 650. SPECIAL PROBLEMS IN ENERGY CONVERSION II (1-4)

PR: CC.

EGR 651. STRESSED SURFACE STRUCTURES (5)

PR: EGR 451. Elastic and plastic behavior of plate and shell structures, smooth and ribbed surfaces. lec-lab.

EGR 652. STRUCTURAL STABILITY (5)

PR: EG 451. Elastic and plastic stability of trusses and frames, local buckling of structural members, local and generalized buckling of shell and plate structures.

EGR 653. NONLINEAR DYNAMICS (3)

PR: 553. Non-linear restoring force, viscous friction, Duffing and Vander Pol's equations, perturbation methods.

EGR 654. STRUCTURAL DYNAMICS (4)

PR: EGR 451. Behavior of structural components and systems when subjected to periodic and random dynamic loads.

EGR 655. ENGINEERING MATERIALS IV (4)

PR: CC. Electronic processes in materials. Conductors and semiconductors. Magnetic and Dielectric properties of solids. Quantum and statistical models. (lec.-lab)

EGR 656. ENGINEERING MATERIALS V (4)

PR: CC. Mechanical Behavior of Materials. Dislocation mechanics, plasticity, fracture. Mechanical failure mechanisms. Strengthening of solids. Elastic and anelastic behavior. (lec.-lab)

EGR 657. FLUID MECHANICS IV (4)

PR: CC. Flow of Newtonian and Non-Newtonian viscous fluids. lec-lab.

EGR 658. SOLID MECHANICS V (3)

PR: EGB 303, 304, EGR 554. Elastic and plastic stress wave propagation in solids, experimental and theoretical treatment, method of characteristics.

EGR 659, 660. EXPERIMENTAL SMF III, IV. (4 each)

PR: EGR 560. lec-lab. Continuation of EGR 559, 560.

EGR 661. CONTINUUM MECHANICS III (3)

PR: EGR 563. Theory of Plasticity. Initial and subsequent yield surfaces, incremental and deformation theories, flow theories; problems in ideal plasticity, strain hardening and slip line fields.

EGR 662. CONTINUUM MECHANICS IV (3)

PR: EGR 563. Theory of thermoelastic and viscoelastic behavior of continuous media. Basic laws of irreversible thermodynamics and elasticity and application to one, two and three dimensional problems. Inelastic thermal stress. Viscoelastic-elastic analogy, linear viscoelastic theory and application.

EGR 663, 664, 665. HYDROSPACE ENGINEERING I, II, III (3 each)

PR: CC. Advanced analysis of structural, material and fluid systems for marine environment, including underwater acoustics.

EGR 666. MICROMECHANICS (3)

PR: CC. The discrete and continuum concepts in crystalline, polycrystalline and composite materials. Size effect and the continuum limit. (lec.)

EGR 667, 668. EXPERIMENTAL SMF V, VI (4 each)

PR: CC. Optical computing and measurement techniques. Vibration theory and application, multi-degree of freedom systems, random vibration and non-linear oscillations. lec-lab.

EGR 669. SPECIAL TOPICS IN SMF (1-4)

PR: CC.

EGR 670. RESEARCH IN SMF (1-4)

PR: CC.

EGR 671. ANALYSIS AND DESIGN OF MAN/MACHINE SYSTEMS (3)

PR: EGR 571. Principles of human engineering as applied to industrial situations. Principles of work measurements, process analysis and value analysis.

EGR 672. PRODUCTION CONTROL SYSTEMS (3)

PR: EGR 475. Forecasting procedures, development of production plans, scheduling techniques and inventory models. Application of ADP to production control systems.

EGR 673. ADVANCED PLANT FACILITIES ANALYSIS (3)

PR: EGR 476. Evaluation of alternative facilities in equipment location. Material handling problems and integrated material flow systems.

EGR 674. LINEAR PROGRAMMING (3)

PR: EGR 478. The simplex method, degeneracy, duality theory; applications of linear programming to industrial problems.

EGR 675. NONLINEAR AND DYNAMIC PROGRAMMING (3)

PR: EGR 674. Optimization procedures using nonlinear and dynamic programming. Analysis of multi-stage systems.

EGR 676. QUEUEING THEORY (3)

PR: EGR 480. Deterministic and probabilistic queueing models. Poisson queues and special non-Poisson queues with exponential and non-exponential services. Single and multiple channel queues.

EGR 677. THEORY OF SIMULATION (3)

PR: EGR 577. Principles and application of simulation to the solution of in- and special non-Poisson queues with exponential and non-exponential services. Single and multiple channel queues.

EGR 678, 679, 680. THEORY OF STATISTICS I, II, III (3 each)

PR: EGR 480 or equivalent. Probability. Theory of basic probability distribu-

tions and moment generating functions, estimation, small sample theory, least squares, multiple regression, correlation and the general linear hypotheses.

EGR 681. TOPICS IN STATISTICS (1-4)

PR: CC. Special topics in statistics related to research in engineering.

EGR 682. MULTIVARIABLE OPTIMIZATION (3)

PR: EGR 574. Optimum seeking methods: search methods, response surfaces, ridge analysis and stochastic approximations.

EGR 684. THEORY OF REALIBILITY (3)

PR: EGR 480. Topics in statistical methodology which have applications in the field of reliability. Discrete and continuous distribution models, reliability estimation, reliability structure and growth models, and statistical designs for reliability.

EGR 685, 686. STOCHASTIC PROCESSES I, II (3 each)

PR: EGR 678. Theory and application of stochastic processes as models for empirical phenomena, with emphasis on the following processes: Poisson, stationary, normal, counting, renewal, Markov, birth and death. Spectral representations, time series, smoothing and filtering.

EGR 687, 688. INDUSTRIAL SYSTEMS DESIGN I, II (3 each)

PR: EGR 577. Design of integrated systems using statistical and operations research models. Simulation of integrated systems using digital, analog and hybrid computers.

EGR 689, 690, 691. SPECIAL INDUSTRIAL TOPICS I, II, III (1-3 each)

PR: CC.

EGR 692, 693. NUMERICAL METHODS OF SYSTEMS ENGINEERING I, II (3 each)

PR: MTH 401. The study and application of matrix algebra, differential equations, calculus of finite differences, operation and transform methods, and stochastic processes.

EGR 694. ADVANCED ENGINEERING VALUATION (3)

PR: EGR 570. Statistical models for analyzing engineering alternatives from an economic viewpoint. The use of advanced engineering economy concepts in solving industrial problems.

EGR 698. ADVANCED ENGINEERING SEMINAR (1)

PR: CC.

EGR 699. RESEARCH OR DESIGN (1-18)

PR: CC.

Specialized Service Course Work

ETK 601. COMPUTER SYSTEMS (3)

CR: Knowledge of FORTRAN and COBOL Programming. Study of Computer Systems Components, I/O Devices, Memory Devices, Theory of Computer Operation.

ETK 602. COMPUTER PROGRAMING LANGUAGES AND COMPUTATIONS I (3)

PR: ETK 601. Study of Principles of Machine, Assembly and Compiled Lan-

guages. Programing Applications.

ETK 603. COMPUTER PROGRAMING LANGUAGES AND COMPUTATIONS II (3)

PR: ETK 602. Continuation of ETK 602.

ETK 605. THEORY OF DATA PROCESSING I (3)

PR: ETK 601. Structure and Automatic Processing of Data Files, Data Classification, Information Theory and Information Retrieval.

ETK 606. THEORY OF DATA PROCESSING II (3)

PR: ETK 605. Continuation of ETK 605.

ENGLISH

Faculty: Parrish, chairman; Beauchamp, Bentley, Briggs, L. Broer, R. Carr, Chisnell, W. F. Davis, Fabry, Figg, W. Garrett, R. Hall, S. Hall, Harmon, Hartley, Henley, Hickman, Hirshberg, Holland, Iorio, Mitchell, Moore, Morris, Ocshshorn, O'Hara, Palmer, Parker, H. Popovich, Reader, Sanderson, Scheuerle, Shaffer, E. Smith, Walther, Wyly, Zbar, Zetler.

ENG 131. READING ACCELERATION (2)

Designed to change the reading habits and patterns of students from left-to-right progression to down-the-page progression. (Also see Developmental Reading.)

ENG 201. MAJOR BRITISH WRITERS TO 1660 (4)

An introduction to the poetry, prose, and drama of English literature from its beginnings to Milton.

ENG 202. MAJOR BRITISH WRITERS, 1660-1798 (4)

English literature from the Restoration to the pre-Romantics.

ENG 203. MAJOR BRITISH WRITERS, 1798-1912 (4)

English literature from the Romantics through the late Victorians.

ENG 305. MAJOR AMERICAN WRITERS TO 1865 (4)

A study of the major writers of the Colonial, Federal, and Romantic periods. These include Edwards, Taylor, Hawthorne, Poe, Emerson, Thoreau, and Melville.

ENG 306. MAJOR AMERICAN WRITERS, 1865-1912 (4)

A study of the major realists and early naturalists. These include Whitman, Twain, James, Crane, Dickinson, Dreiser, and Robinson.

ENG 307. MODERN BRITISH AND AMERICAN WRITERS, 1912-1945 (4)

Works by such American and British writers as Eliot, Pound, Yeats, Thomas, Shaw, O'Neill, Hemingway, Faulkner, Huxley, Woolf, Joyce, Lawrence, and others.

ENG 319. THE BIBLE AS LITERATURE (4)

Major emphasis on literary types, literary personalities of the Old and New Testaments, and Biblical archetypes of British and American literary classics.

ENG 321. ADVANCED WRITING (4)

PR: CB 102. Emphasis upon excellence in the techniques of description and narration. Practice in the personal essay, critical review and narrative sketch.

ENG 325. ADVANCED EXPOSITORY WRITING (4)

PR: CB 102. Composition techniques in exposition, methods and styles of writing the article and the report.

ENG 335. WORLD LITERATURE (4)

Literature of the Western world, in translation, including ancient, medieval, and Renaissance worlds.

ENG 336. WORLD LITERATURE (4)

Translated masterpieces of the Neoclassical, Romantic, Realistic and Naturalistic, Symbolic and Modern periods.

JNM 341-49. JOURNALISTIC WRITING (2-5)

For courses in writing for mass communications, see Journalism Program.

ENG 411. PLAYS OF SHAKESPEARE (4)

PR: ENG 201 & 12 hours of literature. Twelve comedies, chronicle plays, and tragedies, with attention to the influences on Shakespeare of classical drama, Renaissance ideas, and other Elizabethan playwrights.

ENG 421. IMAGINATIVE WRITING—POETRY (4)

Studies and exercises in prosody and imagery; written assignments in traditional and contemporary forms; evaluation of student work in individual conferences; selected reading. May be taken twice for credit.

ENG 423. IMAGINATIVE WRITING—FICTION (4)

PR: ENG 321. Study and writing of the short story, essays, and sections of the novel. Evaluation of student work in conferences, selected readings. May be taken twice for credit.

ENG 437. CONTINENTAL NOVEL (4)

PR: 12 hours of literature. Major European novels from the Eighteenth Century to the present. Emphasis upon French and Russian novels of the Nineteenth Century.

ENG 459. DRAMA AND THE MODERN LITERARY TEMPER (4)

PR: 12 hours of literature. A study of the major literary problems faced by modern dramatists since Ibsen and the rise of realism.

ENG 481. INDIVIDUAL RESEARCH (credits vary)

PR: 12 hours of literature. Directed study in special projects. Recommended only when material cannot be studied in scheduled courses.

ENG 483. SELECTED TOPICS IN ENGLISH STUDIES (4)

PR: Sophomore standing. The content of the course will be governed by student demand and instructor interest. It will examine in depth a recurring literary theme or the work of a small group of writers. Special courses in writing may also be offered under this title.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

ENG 501. CHAUCER (4)

PR: 20 hours of literature. An introduction to the language through the "Prologue" to *The Canterbury Tales*. Study of the *Book of the Duchess*, a selected number of *Tales*, the *House of Fame*, and *Troilus and Criseyde*.

ENG 502. THE LITERATURE OF MEDIEVAL ENGLAND (4)

PR: 20 hours of literature. An examination of *Beowulf*, the elegies, homilies, selected prose works, and the *Gawain*-poet.

ENG 503. ENGLISH DRAMATIC LITERATURE TO 1642 (4)

(Exclusive of Shakespeare)

PR: 20 hours of literature. English drama from the liturgical plays to the closing of the theatres in 1642. Representative plays of Lyly, Kyd, Dekker, Beaumont and Fletcher, Ford, Marlowe, and Jonson.

ENG 505. SEVENTEENTH CENTURY POETRY (4)

PR: 20 hours of literature. Emphasis upon leading metaphysical and Cavalier poets and upon prose writers from 1588-1660, with a brief study of major influences and figures from 1500-1588.

ENG 507. MILTON (4)

PR: 20 hours of literature. An examination of *Paradise Lost*, *Paradise Regained*, *Comus*, the shorter poems, and selected prose works.

ENG 511. RELIGIOUS AND EXISTENTIAL THEMES IN MODERN LITERATURE

Theological and philosophic idea, allusion, and symbol in the writings of Dostoevsky, Nietzsche, Mann, Joyce, Eliot, Camus, Sartre, and others.

ENG 513. THE ROMANTIC WRITERS (4)

PR: 20 hours of literature. The poetry and poetics of Blake, Wordsworth, Coleridge, Byron, Shelley, Keats; with attention to lesser figures.

ENG 515. HISTORY OF THE ENGLISH LANGUAGE (4)

PR: 24 hours of literature. The evolution of the language from Anglo-Saxon through Middle English to Modern English. Changes in pronunciation and syntax; discussion of the forces which influenced them.

ENG 517. STRUCTURE OF AMERICAN ENGLISH (4)

PR: 20 hours of literature. The phonetics, phonology, and morphology of American English. Structural grammar; the application of linguistics to the teaching of English.

ENG 518. LINGUISTICS AND LITERATURE (4)

PR: ENG 517 or equivalent or CI. The analysis and interpretation of British and American literature, poetry, prose, and drama using relevant materials from the field of descriptive and comparative linguistics.

ENG 519. SHAKESPEARE'S COMEDIES AND HISTORIES (4)

PR: ENG 411. An intensive study of Shakespeare's major comedies and histories.

ENG 520. SHAKESPEARE'S TRAGEDIES (4)

PR: ENG 411. An intensive study of Shakespeare's major tragedies.

ENG 521. RESTORATION AND 18TH CENTURY LITERATURE (4)

(exclusive of the drama and novel)

PR: 20 hours of literature. Concentration upon selected figures of the period with emphasis on their satirical works.

ENG 523. NINETEENTH CENTURY BRITISH LITERATURE, 1837-1901

Selected essays, poetry, novels, and drama of Carlyle, Arnold, Pater; Tennyson; Dickens, Meredith; Wilde, Shaw.

ENG 525. THE AMERICAN NOVEL (4)

PR: 20 hours of literature. Selections from the novels of Charles Brockden Brown, Cooper, Hawthorne, Melville, Twain, Stephen Crane, Frank Norris, Edith Wharton, Henry James, and Theodore Dreiser.

ENG 527. MODERN BRITISH AND AMERICAN POETRY (4)

PR: 20 hours of literature. Selected poets from Hopkins to the present, with attention to modern poetic theory.

ENG 528. CONTEMPORARY BRITISH & AMERICAN FICTION (4)

A critical study of British and American fiction since World War II. Works by Mailer, Beckett, Bellow, Ellison, Nabokov, and others.

ENG 529. EIGHTEENTH CENTURY BRITISH NOVEL (4)

PR: 20 hours of literature. The historical development of the British novel; precursors of the novel; Richardson, Fielding, Smollett, Sterne, and the Gothic novelists.

ENG 530. NINETEENTH CENTURY BRITISH NOVEL (4)

PR: 20 hours of literature. A continuation of the development of the British novel; Austen, Scott, Thackeray, Dickens, Trollope, the Brontes, Eliot, Meredith, Hardy, and Butler.

ENG 531. LITERARY CRITICISM (4)

PR: 24 hours of literature. The great critics and the principles of criticism. Applied criticism of fiction, poetry and drama.

ENG 535. TRANSFORMATIONAL GRAMMAR (4)

PR: 90 hours or CI. A study of the terminology, principles, and methodology of transformational grammar.

ENG 559. RESTORATION DRAMA (4)

PR: 20 hours of literature. Congreve, Wycherly, Sheridan, and others.

ENG 581. INDIVIDUAL RESEARCH (credits vary)

PR: 20 hours of literature. Directed study in special projects. Recommended only when material cannot be studied in scheduled courses.

ENG 583. SELECTED TOPICS IN ENGLISH STUDIES (1-6)

PR: 20 hours of literature. The content of the course will be governed by student demand and instructor interest. It will examine in depth a recurring literary theme or the work of a small group of writers.

FOR GRADUATE STUDENTS ONLY**ENG 615. MAJOR TRENDS IN AMERICAN LITERATURE (4)**

PR: 24 hours of literature in English. An intensive study of selected ideas and movements affecting American letters; for example, Puritanism, Transcendentalism, Regionalism, Pragmatism, Imagism.

ENG 623. LITERARY SCHOLARSHIP AND METHODS OF RESEARCH (4)

PR: 24 hours of literature in English. Introduction of aims and methods of literary scholarship. Detailed studies of bibliographies of cultural milieus, genres, periods, and authors. Brief attention to thesis style and form.

ENG 655. STUDIES IN SIXTEENTH CENTURY LITERATURE (4)

PR: 24 hours of literature in English. Sidney, Spenser, and others.

ENG 667. STUDIES IN THE LATER BRITISH NOVEL (4)

PR: 24 hours of literature in English. Dickens, Thackeray, Eliot, and others.

ENG 681. INDIVIDUAL RESEARCH (credits vary)

PR: CI and 24 hours of literature in English. Directed study in special projects. Recommended only when material cannot be studied in scheduled courses.

ENG 683. SELECTED TOPICS IN ENGLISH STUDIES (1-8)

PR: 24 hours of literature in English. Current topics offered on a rotating basis include The Nature of Tragedy; The Nature of Comedy and Satire; The Nature of Romanticism and Classicism; The Nature of Realism and Naturalism; The Nature of Myth, Allegory, and Symbolism; and The Figure of the Hero. Other topics will be added in accordance with student demand and instructor interest.

ENG 685. DIRECTED READINGS IN ENGLISH STUDIES (credits vary)

PR: CI and 24 hours of literature in English.

ENG 687. STUDIES IN LATE 19TH CENTURY AMERICAN FICTION (4)

PR: 24 hours of literature in English. Twain, James, Crane, or others.

ENG 691. GRADUATE SEMINAR IN ENGLISH (4)

PR: Consent of graduate advisor.

ENG 695. STUDIES IN MODERN DRAMA (4)

PR: 24 hours of literature in English. Ibsen, Shaw, Chekhov, Strindberg, and others.

FINANCE

Faculty: Longstreet, chairman; Deiter, Modrow, Monath, Shows, Small, Power.

FIN 201. PERSONAL FINANCE (5)

Survey of the problems and techniques of family financial planning. Includes consumer credit, insurance, home ownership and personal investing subject to current economic and legal constraints. Not available for credit to upper level students who have been admitted to the College of Business.

FIN 301. PRINCIPLES OF FINANCE (5)

PR: ACC 203 and ECN 201. Fundamental tools and techniques applicable to financial planning of incorporated and unincorporated business, emphasizing the problems of acquisition, supervision, and allocation of resources.

FIN 303. PRINCIPLES OF INSURANCE (5)

The management of insurable risks by business firms and individuals. Insurance concepts, contracts and institutions including problems of underwriting, loss prevention and settlement.

FIN 305. 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.

FIN 351. INTERNATIONAL FINANCE (5)

PR: ECN 201 and 202 or CI. Principles of foreign exchange and methods of financing business operations in foreign countries.

FIN 411. ADVANCED CORPORATION FINANCE (4)

PR: FIN 301. An examination of the financial policies of publicly-owned corporations, with special reference to dividend policy, financial structure, capital expenditures, acquisitions, mergers and reorganization.

FIN 421. PRINCIPLES OF INVESTMENT (4)

PR: FIN 301 and ECN 202. Survey of the risks and returns of investment media in relation to the investment objective of individual and institution investors. Includes an examination of the capital markets, information flows and analytical techniques in terms of their impact upon the valuation process.

FIN 431. FINANCIAL INSTITUTIONS (4)

PR: ECN 201 and 202. A study of private and public financial institutions and their role in savings, consumption, and investments within the framework of our monetary system.

FIN 451. FEDERAL RESERVE SYSTEM AND MONETARY POLICY (4)

PR: ECN 323 or FIN 431. An analysis of the structure of the Federal Reserve System and monetary policy within the framework of monetary theories.

FIN 461. POLICY AND STRATEGY IN CORPORATION FINANCE (3)

PR: FIN 411. Senior seminar for majors in finance. Quantitative and qualitative analysis of financial policies based on independent readings and empirical research.

FIN 471. PORTFOLIO MANAGEMENT (3)

PR: FIN 421. Study of principles underlying security selections, timing, and diversification to achieve the optimum balance for various types of investors.

FIN 489. SPECIAL STUDIES IN FINANCE (3)

PR: CI. Independent study program under the guidance of departmental staff. Includes an examination of professional literature and empirical research.

FIN 501. BUSINESS FINANCE (3)

PR: ACC 501 and ECN 501 or its equivalent. Accelerated introduction to fundamentals of business finance. Emphasis is on planning and evaluating sources and use of funds. Open only to graduate students or seniors outside the College of Business.

FOR GRADUATE STUDENTS ONLY**FIN 601. FINANCIAL MANAGEMENT (3)**

PR: FIN 501 or its equivalent. An examination of financial practice at the level of the individual firm with emphasis on quantitative analysis of the variables affecting solvency and profitability.

FIN 602. ADVANCED FINANCIAL MANAGEMENT (3)

PR: FIN 601. Integration of the financial policies of corporations with the capital markets under various economic conditions.

FINE ARTS (Intradivisional)

Faculty: Saff, O'Sullivan, G. Johnson.

FNA 413. COMPARATIVE ARTS/VISUAL ARTS (3)

PR: Two history courses in major area or CC. Intensive study and comparison of history, aesthetics, works of art, and techniques in the visual arts for the music arts or theatre arts major.

FNA 423. COMPARATIVE ARTS/MUSIC ARTS (3)

PR: Two history courses in major area or CC. Intensive study and comparison of history, aesthetics, works of art, and techniques in music arts for the visual arts or theatre arts major.

FNA 433. COMPARATIVE ARTS/THEATRE ARTS (3)

PR: Two history courses in major area or CC. Intensive study and comparison of history, aesthetics, works of art, and techniques in theatre arts for the visual arts or music arts major.

FNA 543. COMPARATIVE ARTS/ISSUES IN CREATIVITY (3)

PR: Six credits of FNA 413, FNA 423, FNA 433 or CC. An analysis of various theories of art and the intellectual implication of differing propositions about aesthetics.

FNA 553. SENIOR SEMINAR (3)

PR: FNA 543 or CC. To aid majors to understand, appraise and perfect their own art and technique through critical and aesthetic judgments of colleagues in other arts. Discussion and critical evaluation.

FRENCH

Faculty: Artzybushev, Cherry, DeJongh, Glenisson, Hechiche, de la Menardiere, Wall.

Basic courses listed under Basic Studies.
Also see Romance Languages.

FRE 221. TECHNICAL FRENCH (4)

Primarily for students majoring in science or those desiring help in learning to read texts and research material in a specialized field.

FRE 301. ADVANCED COMPOSITION (4)

To develop the student's ease in and command of written French and to increase his vocabulary and familiarity with the idiom in free and fixed composition.

FRE 303. ADVANCED CONVERSATION AND PRONUNCIATION (4)

Designed to develop ease in speaking correct French with attention given to aural comprehension, pronunciation and intonation.

FRE 305. SURVEY OF FRENCH LITERATURE (3)

Middle Ages and Renaissance.

FRE 306. SURVEY OF FRENCH LITERATURE (3)

Seventeenth and Eighteenth centuries.

FRE 307. SURVEY OF FRENCH LITERATURE (3)

Nineteenth and Twentieth centuries.

FRE 403. FRENCH PHONETICS AND DICTION (2)

French phonology with emphasis on phonic groupings; the International Phonetic Alphabet. Correction of the individual student's errors in diction.

FRE 491. SENIOR SEMINAR (3)

Study in depth of a specific writer or literary movement as chosen by the instructor. Individual research required of students.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

PR: FRE 305, 306, 307

FRE 501. RENAISSANCE (3)

Early French Renaissance literature with emphasis on Rabelais and Calvin.

FRE 502. RENAISSANCE (3)

Renaissance literature with emphasis on Montaigne and the Pleiade.

FRE 521. LITERATURE OF THE SEVENTEENTH CENTURY (3)

Preclassical prose and poetry. Malherbe, Voiture, Guez de Balzac, Descartes and Pascal.

FRE 522. LITERATURE OF THE SEVENTEENTH CENTURY (3)

Classical prose and poetry. Boileau, La Fontaine, Bossuet, Madame de La Fayette, Madame de Sevigne, La Rochefoucauld, and La Bruyere.

FRE 523. LITERATURE OF THE SEVENTEENTH CENTURY (3)

The Classical theater. Corneille, Moliere and Racine.

FRE 531. LITERATURE OF THE 18TH CENTURY (3)

The Classical tradition and the new currents of thought 1715-50.

FRE 532. LITERATURE OF THE 18TH CENTURY (3)

Classical decadence and victory of the philosophes 1750-70.

FRE 533. LITERATURE OF THE 18TH CENTURY (3)

The philosophes and Preromantics 1770-89.

FRE 541. LITERATURE OF THE 19TH CENTURY (3)

The Romantic movement in France.

FRE 542. LITERATURE OF THE 19TH CENTURY (3)

Realism, with emphasis on the novels of Balzac.

FRE 543. LITERATURE OF THE 19TH CENTURY (3)

Naturalism and the Parnassian and Symbolist schools.

FRE 551. LITERATURE OF THE 20TH CENTURY (3)

Proust, Gide, Claudel, Valery, Romain Rolland and Mauriac.

FRE 552. LITERATURE OF THE 20TH CENTURY (3)

Cocteau, Giraudoux, Anouilh and Montherlant.

FRE 553. LITERATURE OF THE 20TH CENTURY (3)

Sartre, Camus, Malraux, Robbe-Grillet, Ionesco and Beckett.

FRE 583. SELECTED TOPICS IN FRENCH STUDIES (3)

The content of the course will be governed by student demand and instructor interest. It will examine in depth a recurring literary theme or the work of a small group of writers.

FOR GRADUATE STUDENTS ONLY

FRE 601. OLD FRENCH (3)

A study of Old French morphology, phonetics and syntax with an introduction to the reading of Old French texts.

FRE 602. MEDIEVAL FRENCH LITERATURE (3)

A study of French literature in the Middle Ages.

FRE 621. COMIC WRITERS OF THE SEVENTEENTH CENTURY (3)

Moliere and his predecessors. Special emphasis is placed on Corneille and his influence on French comedy as a comic writer and theorist.

FRE 622. COMIC WRITERS OF THE SEVENTEENTH CENTURY (3)

Moliere's life, works, and his conception of comedy. The contemporaries and successors of Moliere.

FRE 651. LITERARY EXISTENTIALISM (3)

A study of the origins and the development of Existentialist literature with emphasis on the works of Sartre and DeBeauvoir.

FRE 652. LITERARY EXISTENTIALISM (3)

Continuation of study of Existentialist literature with emphasis on Camus.

FRE 689. FRENCH BIBLIOGRAPHY (0)

Training in use of library materials for graduate research and study. Lectures by library staff on general use of research material and by specialists on specific areas of French literature. Required of all candidates for the MA in French.

FRE 691. GRADUATE SEMINAR (3)

Study of an author or authors or a literary movement. Extensive research, class discussion and papers required. Subject chosen to be announced one quarter in advance.

GENERAL BUSINESS ADMINISTRATION

Faculty: Grant, Kenerson, Merritt, Reynolds, Welker.

GBA 351. DATA PROCESSING PRINCIPLES (5)

Punched-card data processing (equipment, techniques, and application), electronic data processing (hardware, software, and sequential vs. real-time processing), and preparation of business system programs in COBOL.

GBA 361. BUSINESS LAW I (5)

The nature of legal institutions, essentials of a binding contract, remedies granted in event of breach of contract and rights acquired by assignment of contracts.

GBA 362. BUSINESS LAW II (5)

PR: GBA 361. Legal problems in marketing of goods, nature of property, sales of personal property, securing of credit granted, nature and use of negotiable instruments.

GBA 363. THE LAW OF BUSINESS ASSOCIATIONS (5)

PR: GBA 361. A study of the law of corporations, the law of partnerships, and the law of agency.

GBA 371. BUSINESS COMMUNICATIONS (4)

Analysis and application of the principles of persuasion in business communication; composition and evaluation of functional business letters; examination of effective text, tabular and graphic presentation in formal business reports.

GBA 489. INDIVIDUAL RESEARCH (1-2)

Individual research in the students major area supervised by an appropriate faculty member.

GBA 499. SENIOR SEMINAR IN BUSINESS ADMINISTRATION (3)

PR: Graduating senior. Students draw upon materials from their complete college program and apply them to case studies, research projects and class discussion. Topics include business policy, operations, and the environment of business.

FOR GRADUATE STUDENTS ONLY

GBA 601. LEGAL ENVIRONMENT OF BUSINESS (3)

A study of the governmental regulation of business emphasizing the constitutional limitations on the powers of the federal government, the administration of the federal antitrust laws, and administrative law.

GEOGRAPHY

Faculty: Fuson, chairman; Limoges, Rothwell, Stowers.

GPY 201. INTRODUCTION TO GEOGRAPHY (4)

Nature, method, principles, and concepts of the discipline; maps and their properties; earth-sun relations, weather elements, place names. Prerequisite to all undergraduate courses in geography. Prerequisite to all geography courses.

GPY 301-302. SYSTEMATIC GEOGRAPHY (4-4)

PR: GPY 201. General description and analysis of the major physical and cultural elements and resources of the geographic landscape.
Prerequisite to all higher undergraduate courses in geography.

GPY 403. PHYSICAL GEOGRAPHY (2-5)

PR: GPY 201, 301-302, and CI. Courses include: meteorology, climatology,

physiography, biogeography, soils, water bodies. May be repeated as courses vary, but the same course may not be repeated for credit.

GPY 405. CULTURAL GEOGRAPHY (2-5)

PR: GPY 201, 301-302. Courses include: economic, political, urban, historical geography; population, settlement, conservation. May be repeated as courses vary, but the same course may not be repeated for credit.

GPY 407. REGIONAL GEOGRAPHY (2-5)

PR: GPY 201, 301-302. Synthesis and analysis of the physical and cultural elements in a selected geographic region. May be repeated as regions vary, but the same region may not be repeated for credit.

GPY 409. GEOGRAPHIC TECHNIQUES AND METHODOLOGY (2-5)

PR: GPY 201, 301-302, and CI. Courses include: cartography, graphics, map design and analysis, air photo interpretation, field methods, quantitative analysis, seminar. May be repeated as courses vary, but the same course may not be repeated for credit.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

GPY 581. INDIVIDUAL RESEARCH (1-5)

PR: 30 quarter hours in GPY and CI. Arrangement must be made with chairman prior to registration. May be repeated.

GPY 585. DIRECTED READING (1-5)

PR: 30 quarter hours in GPY and CI. Arrangement must be made with chairman prior to registration. May be repeated.

FOR GRADUATE STUDENTS ONLY

GPY 601. GEOGRAPHY IN WORLD SOCIETY (4)

A conceptual approach that examines the geographic framework in which our social, economic, and political systems have evolved; an areal interpretation and evaluation of earth realities.

GEOLOGY

Faculty: Ragan, chairman; Boulware, Griffin, Sommers, Stevenson.

GLY 201. INTRODUCTION TO GEOLOGY (5)

Study of earth materials and the processes responsible for changing the face of the earth. Examination of minerals and rock specimens, topographic and geologic maps and aerial photographs. Historical geology (GLY 301) continues the study. Occasional field trip studies. lec-lab.

GLY 301. INTRODUCTION TO HISTORICAL GEOLOGY (4)

Study of the record of past life and interpretation of the major physical events in the history of the earth. Occasional field trip studies. lec-lab.

GLY 302. INTRODUCTION TO PALEONTOLOGY I (4)

PR: GLY 301 or CI. Paleontology and stratigraphic occurrence of most important invertebrate fossils of the geologic record. lec-lab.

GLY 303. INTRODUCTION TO PALEONTOLOGY II (4). The second half of GLY 302.

GLY 311. MINERALOGY I (4)

PR: GLY 201 and CHM 211-212-213, or equivalent. Study of origin, occurrence, and chemistry of mineral groups. Identification of common minerals by physical and chemical properties. lec-lab.

GLY 312. MINERALOGY II (4)

PR: GLY 311. (Non-majors from other departments, CC.) Introduction to crystallography and the petrographic microscope. Identification of minerals by means of optical properties.

GLY 313. PETROLOGY (4)

PR: GLY 312. Systematic study of rock groups, including composition, origin, and classification using modern methods of rock study. lec-lab.

GLY 361. STRUCTURAL GEOLOGY (5)

PR: GLY 201 or equivalent. Application of basic principles of geology, mathematics, and physics in solving relationships of strata and interpreting structural features in the earth's crust.

GLY 401. FIELD AND SUBSURFACE METHODS (5)

PR: 12 hours of geology courses, CI. Fundamentals of geology in the field and marine laboratory; compass and plane table mapping, mapping of aerial photos, reconnaissance surveys, interpretation of geologic structures. lec-lab.

GLY 411. MARINE GEOLOGY (4).

PR: GLY 201, 301. Fundamentals of marine geology, including the collection, analysis, and geologic interpretation of marine waters, sediments, and environments. Occasional marine trips. lec-lab.

GLY 441. ECONOMIC MINERAL DEPOSITS (4)

PR or CR: GLY 311. Principles involved in the origin, occurrence, recovery, and use of mineral resources. lec-lab.

GLY 471. GEOLOGY OF SOILS (5)

PR: General Chemistry or equivalent. The origin, geologic development, formation, and nature of soils. Fundamentals of soil science, including the physical, chemical, and biological factors affecting soil fertility with special application to the soils and ecology of Florida. lec-lab.

GLY 473. CONCEPTS IN EARTH SCIENCE (5) (for non-specialists)

Earth's environment in space, including a selected study of its materials, processes, climate, oceans, soils and history. lec-lab.

GLY 481. UNDERGRADUATE RESEARCH (1-6)

PR: Senior or advanced junior standing and CI. Individual experimental investigations with faculty supervision. Limit of five credits.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

GLY 503. SEDIMENTATION I (3)

PR: GLY 303 and 312. Geologic factors governing chemical, physical, and biological interactions and deposition of sediments. lec-lab.

GLY 504. SEDIMENTATION II (3). The second half of GLY 503.

GLY 512. MARINE GEOLOGY (4)

PR: GLY 303, 313, 361, and 504. Geological interpretation of marine processes and products. Seminar and field studies. lec-lab.

GLY 521. GEOPHYSICS (4)

PR: Senior or advanced Junior standing, one year of Physics, or CI. Earth's magnetic fields, gravity, electrical properties, seismic wave paths and velocities, radioactivity, and heat flow. lec-lab.

GLY 531. STRATIGRAPHIC ANALYSIS (4)

PR: GLY 504. Environmental and paleogeographic reconstruction of sedimentary

basins. Seminar. lec-lab.

GLY 533. GEOMORPHOLOGY (4)

PR: CC. Origin, evolution, and distribution of land forms.

GLY 541. GEOPHOTO INTERPRETATION (3)

PR: Senior standing, GPY 409 and/or CI. Geo-analysis of air photos and earth data, including some acquired by remote sensing techniques. Analysis of chemical and physical sample data. lec-lab.

GLY 551. HYDROGEOLOGY I (5)

PR: Senior or advanced Junior standing and CI. Ground water physiochemical properties, distribution and occurrence, modes of migration, relation to geologic environment, exploration, and development.

GLY 552. HYDROGEOLOGY II (5) The second half of GLY 551.

GLY 561. X-RAY ANALYSIS (2)

PR: GLY 312 or CI. (Non-majors from other areas, CI.) The use of X-rays for the identification of crystalline materials.

GLY 571. GEOCHEMISTRY (4)

PR: CHM 211, 212, 213, or equivalent, GLY 201, GLY 313. Application of the laws of chemical equilibrium and resultant chemical reactions to natural earth systems. lec-lab.

GLY 583. SELECTED TOPICS IN GEOLOGY (1-6)

PR: Senior or advanced junior standing and CC. Each topic is a course in directed study under supervision of a faculty member. Courses include: Introductory Geological Oceanography, Advanced Stratigraphic Paleontology, Geotectonics, Palynology, Sedimentary Processes, and Sedimentary Techniques.

GLY 591. GEOLOGY SEMINAR (1)

PR: Senior or advanced junior standing and CC. May be repeated once.

FOR GRADUATE STUDENTS ONLY

GLY 604. RECENT FLUVIAL, TRANSITIONAL, AND CONTINENTAL SHELF SEDIMENTATION (3)

PR: GLY 504 or CI. Environmental factors and resulting sediment types accumulated in fluvial, transitional, and continental shelf environments. lec-lab.

GLY 605. ADVANCED SEDIMENTATION (3)

PR: GLY 504 or CI. Structural development, sedimentation processes, and sediments of shoreline, continental slope, continental rise, and abyssal plain environments. lec-lab.

GLY 607. CARBONATE PETROLOGY I (4)

PR: GLY 504 or CC. Genesis of recent carbonate sediments, and the interpretation of ancient carbonate rocks by the use of conceptual models. Field-lab-seminar. Alternate years.

GLY 608. CARBONATE PETROLOGY II. (4) The second half of GLY 607.

GLY 611. IGNEOUS AND METAMORPHIC PETROGENESIS (5)

PR: GLY 313 and CC. Detailed study of modern thought on origin of igneous and metamorphic rocks. lec-lab.

GLY 621. MARINE MICROPALAEONTOLOGY (6)

PR: GY 301, 303 or equivalents and CC. Principal groups of microfossils in marine sediments and cores. Paleoecology, correlation, and applications to petroleum and paleomarine problems.

GLY 631. CENOZOIC STRATIGRAPHY (3)

PR: GLY 531 or CI. Structural elements, paleogeography, stratigraphy, and

economic resources of the Gulf of Mexico coastal plain. lec-lab.

GLY 651. ADVANCED HYDROGEOLOGY (5)

PR: GLY 552, MTH 211, 212, 213 and/or CI. Advanced study of ground water-research-oriented study of selected topics including analog models, geophysical exploration. Field work-lab.

GLY 661. CLAY PETROLOGY (4)

PR: GLY 313, 561, or CC. Composition, structures, origin, and diagenesis of clay minerals. Identification of clay minerals by x-ray diffraction techniques.

GLY 673. HISTORY OF GEOLOGY (2)

PR: CC. Historical development of geologic thought from standpoint of theory and principle with developing areas. lec. Alternate years.

GLY 675. GEOLOGY OF FLORIDA (5)

PR: 24 hours of earth science credits or CI. Designed for teachers of earth science. Mineralogy, structure, stratigraphy, paleontology, geomorphology, tectonics, and petrology of Florida and contiguous areas. lec-field-lab. Offered each year—fourth quarter.

GLY 681. GRADUATE RESEARCH (1-9)

PR: CC.

GLY 683. SELECTED TOPICS IN MARINE GEOLOGY (1-6)

PR: CC. Sedimentary Petrology, Shoreline and Marine Physiography, Advanced Sedimentology, Shoreline Geology, Geology of Coastal Plain and Shelf, Geochronology, Geochemistry of the Ocean, Structure of Ocean Floor and Continental Margins, Geological Oceanography of Gulf of Mexico, Advanced Paleontology, Paleocology, Foraminiferal Ecology, Pleistocene Geology, Cenozoic Geology, Petroleum Geology, and computer applications.

GLY 691. GRADUATE SEMINAR (2)

PR: CC.

GLY 699. THESIS (2-9)

PR: CC.

GERMAN

Faculty: Grothmann, Price, Stelzmann.

Basic courses listed under Basic Studies.

GER 221. TECHNICAL GERMAN (4)

Primarily for students majoring in science or those desiring help in learning to read texts and research material in a specialized field.

GER 301-303. ADVANCED COMPOSITION AND CONVERSATION (4,4)

Intensive study of writing and conversation skills based on reading in German cultural history and drama. Descriptive grammar and syntax.

GER 305. SURVEY OF GERMAN LITERATURE (3)

Old High German and Middle High German literature in modern translations; the literature of Humanism and Barock.

GER 306. SURVEY OF GERMAN LITERATURE (3)

Literature of the Enlightenment; the Classical period.

GER 307. SURVEY OF GERMAN LITERATURE (3)

The Romantic period; the literature of the nineteenth and twentieth centuries.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

PR: GER 305, 306, 307

GER 513. HISTORY OF GERMAN LANGUAGE (3)

Development of the language from the Indo-European family: Gothic, Old High German to Middle High German.

GER 514. HISTORY OF GERMAN LANGUAGE (3)

The development of Modern High German.

GER 521. GOETHE'S FAUST (3)

Sources, form, content, and literary significance of Urfaust and Faust I.

GER 531. CLASSICAL PERIOD (3)

Goethe: novels, novelle and autobiographical writings; lyric poems and epics; dramas (except Faust).

GER 532. CLASSICAL PERIOD (3)

Schiller: philosophical writings, drama and poetry.

GER 533. ROMANTIC PERIOD (3)

Jenaer circle and Heidelberger circle.

GER 534. ROMANTIC PERIOD (3)

The late Romantic period, the writers between Classicism and Romanticism.

GER 541. LITERATURE OF THE 19TH CENTURY (3)

Dramatists: Grillparzer, Grabbe, Büchner and Hebbel. Critics: Heine, Laube and Immermann.

GER 542. LITERATURE OF THE 19TH CENTURY (3)

Prose writers: Gotthelf, Stifter, Keller, Meyer, Storm and Raabe. Poets: Droste Hülshoff and Mörike.

GER 551. LITERATURE OF THE 20TH CENTURY (3)

Dramatists and novelists: Hauptmann, Mann, Jünger, von Hofmannsthal, Hesse, Carossa, Werfel, Kafka, Musil and Brecht.

GER 552. LITERATURE OF THE 20TH CENTURY (3)

Poets: Rilke, Schröeder, Loehrke, Heym, Trakle, Lasker-Schüler, Benn and Aichinger.

GER 583. SELECTED TOPICS IN GERMANIC STUDIES (var.)

The content of the course will be governed by student demand and instructor interest. It will examine in depth a recurring literary theme or the work of a small group of writers.

HISTORY

Faculty: Hilliard, acting chairman; Arnade, Billingsley, Burke, Currey, DellaGrotte, Gessman, Goldstein, Parker, Rollins, Silbert, Swanson.

PART I

HTY 100. THE IDEA OF HISTORY (3)

Required of all history majors. The course deals with history as a discipline, emphasizing the acquisition of the conceptual tools required for systematic, critical thought about human problems in the historical perspective. May be waived in the case of transfer students for comparable work.

HTY 211, 212. AMERICAN HISTORY (3,3)

PR: HTY 100 or CI. A history of the United States with attention given to relevant developments in the Western Hemisphere. 211: European origins to 1865; 212: 1865 to present.

HTY 221, 222. MEDIEVAL HISTORY (3,3)

PR: HTY 100 or CI. A survey of Medieval history: HTY 221 deals with the nascent, Christian civilization of Europe, circa 300-1050 A. D.; HTY 222 treats the mature medieval civilization of Europe, circa 1050-1350.

HTY 231, 232. MODERN EUROPEAN HISTORY (3,3)

PR: HTY 100 or CI. Basic patterns of modern European history; the rise of the nation-state; economic, social and intellectual developments; traditions and patterns that have shaped European institutions and cultural development. 231: Renaissance to 1815; 232: 1815 to present.

PART II**HTY 301, 302. A HISTORY OF THE AMERICAN COLONIAL PERIOD (4,4)**

PR: HTY 100, 211, 212, or CI. A study of European interest and involvement in America from the Age of Reconnaissance to 1789 with emphasis on institutional development and the establishment of the American national system.

HTY 315, 316. THE CIVIL WAR AND ITS AFTERMATH (4,4)

PR: HTY 100, 211, 212, or CI. The causes of the Civil War and the factors, forces and atmosphere which produced the reconstruction policy following the war, with continued emphasis on the Negro down to the present.

HTY 317. HISTORY OF FLORIDA (4)

A history of Florida and the Caribbean. Florida as an area of discovery, colonization and imperial conflict; the emergence of Florida within its regional setting.

CLS 321. ANCIENT CIVILIZATIONS (5) See page 129. (Formerly HI 321)**HTY 323. MEDIEVAL CIVILIZATION (4)**

PR: HTY 100, 221, 222, or CI. The development of European ideas and institutions during the Middle Ages.

HTY 331. EUROPE IN THE TWENTIETH CENTURY (4)

PR: HTY 100, 231, 232, or CI. The development of European international relations from the post-World War I period to the present, with concentration on the more recent period.

HTY 333, 334. FRENCH HISTORY (4,4)

PR: HTY 100, 231, 232, or CI. An examination of the major developments of French History: HTY 333 deals with the period from the Renaissance to the Revolution; HTY 334, from the Revolution to present.

HTY 335, 336. GERMAN HISTORY (4,4)

PR: HTY 100, HTY 231, 232, or CI. An examination of German History from the Reformation to modern times. HTY 335: Germany from the Reformation to the Age of Revolution; HTY 336: A treatment of the major developments in the modern period.

HTY 337, 338. A HISTORY OF RUSSIA (4,4)

PR: HTY 100, 231, 232, or CI. An analysis of the primary social, economic, and cultural forces which have shaped the historical development of Russia. HTY 337 treats the period to 1855; HTY 338, 1855 to present.

HTY 341, 342. BRITISH HISTORY (4,4)

PR: HTY 100, 231, 232, or CI. British history and the Empire from the Roman conquest to modern times. 341: will include the period to 1688; 342: 1688 to present (formerly HI 241).

HTY 351, 352. LATIN AMERICAN HISTORY (4,4)

PR: HTY 100, 211, 212, or CI. Examines the Iberian-Indian Civilization in the New World from the 15th through the 20th centuries. 351: conquests and colonization to the Independence Movements of the 19th century, 352: the Ibero-American states from the Wars of Independence to the present.

HTY 371. FAR EAST (4)

A history of the Far East, including China, Korea and Japan, from early to modern times.

PART III**HTY 409, 410. A HISTORY OF AMERICAN FOREIGN RELATIONS (4,4)**

PR: HTY 100, 211, 212, or CI. The development of American foreign relations from the Revolution to the present. HTY 409 deals with earlier period to 1877; HTY 410, with the period from 1877 to present.

HTY 411. AMERICAN SOCIAL AND INTELLECTUAL HISTORY (4)

PR: HTY 100, 211, 212, or CI. Major religious, scientific, political, economic and philosophical ideas of the American people and their leaders in relation to the nation's social environment.

HTY 421, 422. A HISTORY OF THE AMERICAN ECONOMIC PROCESS (4,4)

PR: HTY 100, 211, 212, ECN 201, 202, or CI. The development of American economic thought and policies from the colonial period to the present, emphasizing the inter-relationship of economic development with the major political, ideological and institutional currents of American history. A student may not receive credit for both HTY 421, 422, and ECN 371.

HTY 425, 426. A HISTORY OF THE RENAISSANCE AND REFORMATION PERIODS (4,4)

PR: HTY 100, 231, 232, or CI. HTY 425 deals with the European Renaissance; HTY 426 with the major developments of Reformation Europe.

HTY 432, 433. EUROPEAN SOCIAL AND INTELLECTUAL HISTORY (4,4)

PR: HTY 100, 231, 232, or CI. HTY 432: Selected topics in the social and intellectual history of Early Modern Europe; HTY 433: selected topics in the social and intellectual history of Modern Europe.

HTY 451. A HISTORY OF INTER-AMERICAN RELATIONS (4)

PR: HTY 100, 351, 352, or CI. An examination of the mutual problems of the American nations since independence with emphasis upon the development of Pan Americanism and the Organization of American States.

HTY 461. REVOLUTION IN THE MODERN WORLD (4)

PR: HTY 100, 231, 232, or CI. An analytical study of the nature of revolution in modern history, leading to a development of a conceptual paradigm of the revolutionary process.

HTY 465. SCIENCE AND CIVILIZATION (4)

PR: HTY 100, 231, 232, or CI. A survey of the impact of science on western civilization from the ancient Egyptians to the present, emphasizing the relationship of science to socio-economic, political and intellectual development.

HTY 485. DIRECTED READING (1-4)

PR: Arrangement with instructor prior to registration. Readings in special topics.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

CLS 527. GREEK HISTORY (4) See page 129. (Formerly HI 527)

CLS 529. ROMAN HISTORY (4) See page 129. (Formerly HI 529)

HTY 587. HISTORIOGRAPHY (4)

PR: To be taken during senior year. The various schools of historical thought, representative historians, bibliography and an introduction to the problems of philosophy of history.

HTY 591. PRO-SEMINAR IN HISTORY (4)

Special topics in American, European, and Latin American History emphasizing readings, research, and paper writing designed for seniors and graduates. One pro-seminar must be taken by all history majors; non-history majors may take it with consent of Department Chairman. Topics vary within each field: may be repeated twice for credit.

HTY 592. SENIOR SEMINAR IN HISTORY (4)

Introduction to the methods of historical research and writing, bibliography, and directed research in special topics designed to meet the particular needs and interests of individual students.

FOR GRADUATE STUDENTS ONLY**HTY 685. DIRECTED READING (1-3)**

PR: CC. Readings in special topics.

HUMANITIES

Faculty: Kiefer, chairman; J. B. Camp, H. Deer, Frantz, Gowen Hoffman, Jeurgensen, Kashdin, Koenig, MacKay, Peizer, Rutenberg, Shackson, W. Smith, Spillane, E. Stanton, Watkins.

HUM 311, 312, 313. HUMANITIES AND HUMANE VALUES (3,3,3)

PR: CBS requirement in humanities or CI. Masterpieces of music, visual arts, theater, literature, and philosophy in varying cultural and historical situations.

HUM 411, 412, 413. TWENTIETH-CENTURY ARTS AND LETTERS (3,3,3)

PR: CBS requirement in humanities or CI. Case studies in the arts and letters of the twentieth century.

HUM 415, 416. ARTS AND LETTERS OF THE ROMANTIC PERIOD (3,3)

PR: CBS requirement in humanities or CI. Case studies in the arts and letters of the romantic period.

HUM 417, 418. NINETEENTH-CENTURY ARTS AND LETTERS (3,3)

PR: CBS requirement in humanities or CI. Case studies in the arts and letters of the nineteenth century.

HUM 419, 420. THE ENLIGHTENMENT (3,3)

PR: CBS requirement in humanities or CI. Case studies in the arts and letters of the Enlightenment.

HUM 423, 424. RENAISSANCE ARTS AND LETTERS (3,3)

PR: CBS requirement in humanities or CI. Case studies in the arts and letters of the Renaissance.

HUM 427, 428. MEDIEVAL ARTS AND LETTERS (3,3)

PR: CBS requirement in humanities or CI. Case studies in the arts and letters of the middle ages.

HUM 431, 432. CLASSICAL ARTS AND LETTERS (3,3)

PR: CBS requirement in humanities or CI. Case studies in the arts and letters of the ancient world.

HUM 535, 536, 537. HUMANITIES IN AMERICA (3,3,3)

PR: CBS requirement in humanities or CI. Case studies in the arts and letters of the United States.

HUM 539. SELECTED NON-WESTERN HUMANITIES (3)

PR: CBS requirement in humanities or CI. Materials chosen from the arts and letters of Asia and Africa. May be repeated for credit.

HUM 541. HUMANITIES IN THE ORIENT: INDIA (3)

PR: CBS requirement in humanities or CI. Examples from the arts and letters of India and the relationship of these arts to the Hindu and Buddhist philosophy-religions.

HUM 542. HUMANITIES IN THE ORIENT: CHINA (3)

PR: CBS requirement in humanities or CI. Examples from the arts and letters of China; their relationship to Taoism, Confucianism and other Chinese philosophies; Western influences on 20th-century Chinese arts and letters.

HUM 543. HUMANITIES IN THE ORIENT: JAPAN (3)

PR: CBS requirement in humanities or CI. Examples from the arts and letters of Japan; their relationship to Zen Buddhism and other Japanese philosophy-religions; Western influences on 20th-century Japanese arts and letters.

HUM 545. LATIN AMERICAN ARTS AND LETTERS (3)

PR: CBS requirement in humanities or CI. Analysis of selected Latin American works of art in their cultural context.

HUM 581. DIRECTED STUDY (1-5)

PR: CBS requirement in humanities and CI. Specialized individual study determined by the student's needs and interests.

HUM 591. SELECTED PROBLEMS IN HUMANITIES (3)

PR: Senior classification and CI. Problems in the interrelationships among the fine arts and the natural, social and behavioral sciences. A senior essay for humanities majors.

FOR GRADUATE STUDENTS ONLY**HUM 611. STUDIES IN CONTEMPORARY ARTS AND LETTERS (3)**

Concentration on major artists and recent trends.

HUM 623. STUDIES IN THE RENAISSANCE (3)

Masterpieces and major artists of the Renaissance in Europe and England.

HUM 683. SELECTED TOPICS IN HUMANITIES (3)

Each topic is a course of study in a subject not covered by a regular course.

HUM 691, 692, 693. MASTER'S ESSAYS (2,2,2)

Required of graduate students in humanities.

ITALIAN

Faculty: Artzybushev, Milani.

Basic courses listed under Basic Studies.

History of Romance Languages listed under Romance Languages.

ITA 301. ADVANCED ITALIAN COMPOSITION (4)

To improve the student's ability in writing Italian, to increase his ability in comprehension and use of the grammatical elements. Practice in both free and fixed composition.

ITA 303. ADVANCED ITALIAN CONVERSATION (4)

To develop fluency and correctness in spoken Italian.

ITA 305. SURVEY OF ITALIAN LITERATURE (3)

Origins of Italian literature and Medieval Italian literature.

ITA 306. SURVEY OF ITALIAN LITERATURE (3)

General aspects of the literature of the Renaissance and the literature through the Eighteenth century.

ITA 307. SURVEY OF ITALIAN LITERATURE (3)

The major movements of the Nineteenth and Twentieth centuries.

ITA 491. SENIOR SEMINAR (3)

Study in depth of a specific writer or literary movement, as chosen by the instructor. Individual research required of students.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

PR: ITA 305, 306, 307

ITA 511. DANTE (3)

Emphasis on historical period; Dante's life and minor works.

ITA 512. DANTE (3)

Divine Comedy: Inferno.

ITA 513. DANTE (3)

Divine Comedy; Purgatorio and Paradiso.

ITA 541. NINETEENTH CENTURY LITERATURE (3)

Romanticism in Italy.

ITA 542. NINETEENTH CENTURY LITERATURE (3)

Realism and Naturalism in Italy.

ITA 551. TWENTIETH CENTURY ITALIAN LITERATURE (3)

A comprehensive study of the major writers through the "Decadentismo." Special emphasis on D'Annunzio.

ITA 552. TWENTIETH CENTURY ITALIAN LITERATURE (3)

A comprehensive study of the major writers from the "Idealismo filosofico" up to the present time, with special emphasis on Pirandello.

ITA 583. SELECTED TOPICS (var.)

The content of the course will be governed by student demand and instructor interest. It will examine in depth a recurring literary theme or the work of a small group of writers.

JOURNALISM

Faculty: Sanderson, program chairman; Grisetti, Stalnaker, Yates.

(Four basic courses are offered; students interested in journalism will major in another field. See page 94.)

JNM 341-342. BASIC JOURNALISTIC WRITING (5)

PR: CBS 101-102. JNM 341 (2 q.h.): Survey of the mass media; the structure of the news story. JNM 342 (3 q.h.): Some typing ability required. Basic news writing, interviewing, use of news sources. Students may enter either quarter first.

JNM 343: ADVANCED JOURNALISTIC WRITING (4)

PR: JNM 342. News and feature writing for newspapers with emphasis on investigative and in-depth writing techniques. Laboratory experience on The Oracle.

JNM 347. NEWS EDITING AND NEWS WRITING (4)

PR: JNM 341-342. Evaluating news and display; editing and rewriting news for the mass media; editing techniques, newspaper typography and makeup; ethical problems and communications law. Laboratory experience on The Oracle.

JNM 349. MAGAZINE AND FEATURE WRITING (4)

PR: CBS 101-102. A study of writing and marketing articles for general circulation magazines and feature sections. Preparation of articles for submission to professional publications.

ENG 483. SELECTED TOPICS: PERSUASIVE WRITING (4)

PR: Sophomore standing. Copywriting; the role and scope of persuasion in our society and in the mass media; principles of advertising.

LANGUAGE-LITERATURE (Interdisciplinary)

Faculty: Bentley, Carr, Deer, Gould, O'Hara, Stanton.

LLI 301,302. MAIN CURRENTS OF WESTERN THOUGHT I & II (3,3)

A study of the principal forces that have shaped Western thought since 1500. These include humanism, Protestantism, rationalism, romanticism, communism, and naturalism. Among the authors included in the course are Machiavelli, Swift, Newman, Freud, Dreiser, and Camus. 301: 1500-1800; 302: 1800-present.

LLI 305,306. THE IDEA OF PROGRESS I & II (3,3)

A study of the ways in which the idea of progress has affected philosophical, social, scientific and literary theory since the Renaissance. Among the authors considered are Descartes, Bacon, Pascal, Adam Smith, I. S. Mill, Walthus, Darwin, Locke, Pope, Dickens, Tolstoy, Chekov, Shaw, Molraux, Kant, and Lovejoy.

LLI 311. LITERATURE AND THE FILM (3)

A study of what happens when a novel is adapted for the movies; of the insights of modern writers and literary critics into the motion picture as an art form analogous to, yet distinct from, literature and of the impact of literature on film-making.

LLI 312. PHILOSOPHY AND THE FILM (3)

A study of the philosophical implications of the motion picture as an art form: aesthetics in general versus film aesthetics, the connections between the world views of such modern philosophers as Bergson, Whitehead and Bradley and the world view expressed through the motion picture, the connections between "pure ideas," the ideas in the documentary film, and the ideas in the fictional film.

LLI 313. INTRODUCTION TO FILM WRITING (4)

PR: CBS 102. CI. An introduction to the techniques of writing for the film with special emphasis on adaptations from fiction, and examinations of scripts as models and as subjects for critical analysis.

LLI 315. THE IDEA OF FREEDOM (3)

An analysis of the idea of freedom, both in general and in particular. Various philosophical, literary, and journalistic aspects will be analyzed: metaphysical, ethical, political, social, religious and economic.

LLI 540. THE SOCIAL STRUCTURE OF LANGUAGE (4)

PR: SOC 345 or ANT 313 and ENG 517 or ENG 535. An analysis of the interrelation of a language and the structure of the society using it. The linguistic behavior and patterns characteristic of particular social, economic, political, educational, and racial groups. Problems in communication between strata.

LLI 541. PSYCHOLINGUISTICS (4)

PR: PSY 331, or ANT 313, and ENG 515 or ENG 517. The nature of grammar and its psychological implications; linguistic structures and their correlates in behavior and perception. Problems in verbal learning, verbal conditioning, and word usage. Examination of the hypotheses of Whorf, Chomsky, and others.

LINGUISTICS

Faculty: Shaffer, chairman; O'Hara.

LIN 411-412. DESCRIPTIVE LINGUISTICS (4,4)

Introduction to the IPA and the Harris-Smith-Trager approach to phonemic, morphemic and syntactic analysis with its application to American English and other analytic languages.

FOR UPPER LEVEL AND GRADUATE STUDENTS

LIN 520. WRITING MODERN GRAMMARS (4)

This course will acquaint students with various interesting grammatical features from among a large number of modern languages, teach them how to construct grammars and to describe these and evaluate alternate grammars.

LIN 530. FIELD METHODS (4)

An introduction to the techniques of gathering language data in the field and making a preliminary analysis of such data.

LIN 581. INDIVIDUAL RESEARCH (3-5)

PR: CI. Specialized individual work in areas of student's interest.

LIN 583. SELECTED TOPICS (3-5)

PR: CI. Course contents depend on students' need and instructor's interest and may range over the whole field of linguistics. Study of languages not otherwise offered is possible. Enrollment can be repeated.

LIN 585. DIRECTED READING (4)

Readings in special topics. Arrangement with instructor before registration.

MANAGEMENT

Faculty: R. W. Morell, chairman; Alexander, Allen, Bartlett, Busch, Dutton, Kener-son, Parker, R. Miller.

MGT 301. PRINCIPLES OF MANAGEMENT (5)

PR: ECN 201-202. A course designed to present a carefully organized system of concepts by which the basic meaning and the fundamental truths of management can be grasped. This course is limited to that body of principles which underlies all management regardless of type or size of organization.

MGT 341. PERSONNEL MANAGEMENT (4)

PR: MGT 301. Systematic analysis of personnel problems in organizations. Emphasis is placed upon employee motivation and supervisory skills, handling personnel problems, manpower and employee selection and development, and incentives for effective performance.

MGT 343. PERSONNEL PROBLEMS (4)

PR: MGT 341. Application of personnel management theory and concepts to practical organization problems. Case study approach considers situations faced by line and staff executives at all levels in the firm, and provides problem-solving incidents which parallel actual company experience.

MGT 371. INDUSTRIAL RELATIONS (4)

PR: MGT 341. The impact of trade unionism on industrial relations. Current problems, conflicts and trends; the development of managerial approaches to achieve labor-management cooperation.

MGT 381. MANAGEMENT SYSTEMS (5)

PR: MGT 301, MKT 301, FIN 301. Basic elements of information systems will be developed and applied to manual, business machine and computer information systems. Principles of business systems design, systems flow-charting, systems auditing and the economic justification of business systems.

MGT 421. PRODUCTION MANAGEMENT (4)

PR: MGT 301. A course designed to present a framework of principles and methods of factory management, and to develop the student's ability to make sound managerial decisions, especially at the operational level.

MGT 431. ORGANIZATION THEORY (4)

PR: MGT 301. Study of organizations using the social system approach while at the same time retaining the lasting contributions of traditional, formal organization theory. Special attention is given to modifying existing organization systems.

MGT 441. WAGE AND SALARY ADMINISTRATION (4)

PR: MGT 341. Determination and administration of wage and salary programs with emphasis on managerial policies, techniques and control procedures in solving wage and salary problems.

MGT 445. BEHAVIORAL FACTORS IN ORGANIZATIONS (4)

PR: MGT 343. The analysis of the relationship of psychology and management. Evaluation of the writings, theories, experiments and problem-solving efforts of contemporary behavioral scientists. Special emphasis is placed on research dealing with stress, attitudinal change, and creativity.

MGT 471. MANAGEMENT SCIENCE I (3)

PR: MGT 421. A study of various operations research techniques and their application to business problem analysis. Topics will include a survey of the calculus, matrix algebra, boolean algebra, set theory, probability theory, and game theory.

MGT 472. MANAGEMENT SCIENCE II (3)

PR: MGT 471. A study of linear programming, dynamic programming, and Markov chain analysis as applied to business problems.

MGT 489. RESEARCH STUDIES IN MANAGEMENT (6)

PR: MGT 301, 341, 343, 381, 441, 445. Independent research studies in Management of a specialized or general nature. Materials for the research projects to be selected and studied under the direction of a major professor in the field of management. This course should be taken in the final quarter of the program.

FOR SENIOR LEVEL AND GRADUATE STUDENTS**MGT 501. SURVEY OF MANAGEMENT (3)**

An analysis of the theory and practice of management, including a study of the determination of goals and means, the functions of management, decision-making and the administrative process in general.

FOR GRADUATE STUDENTS ONLY**MGT 601. HUMAN RELATIONS IN ORGANIZATIONS (3)**

PR: MGT 301 or 501. An analytical view of the modern human relations movement with stress of development since the 1930's. Incorporates the philosophy of the behavioral sciences and relates it to the management process.

MGT 603. COMMUNICATIONS THEORY IN INDUSTRY (3)

PR: MGT 301 or 501. Investigation of the communication process through analysis of the available literature. Pragmatic business writing, general semantics, readability studies, cybernetic theory, and network analysis will be among the topics covered.

MGT 605. SEMINAR IN ADMINISTRATIVE POLICY (3)

PR: Graduating MBA student. A course designed to present an organized and integrated approach to the managerial decision-making process. Case problems will be presented to give student practice and guidance in arriving at sound decisions and in the determination of valid administrative policies. This course should be taken in the final quarter of the program.

MARKETING

Faculty: R. W. Morell, chairman; Carmichael, Sleeper, Williams, Wilson.

MKT 301. BASIC MARKETING (5)

PR: ECN 201-202. Survey of the marketing of goods and services within the economy. The integration of functional, commodity, and institutional approaches from the consumer and management viewpoints.

MKT 311. PROMOTIONAL FUNDAMENTALS AND STRATEGY I (3)

PR: MKT 301. The role of promotion in the economy and the examination of promotion as a marketing variable. Emphasis is placed on personal selling and sales management as basic elements in the marketing strategy of firms.

MKT 312. PROMOTIONAL FUNDAMENTALS AND STRATEGY II (3)

PR: MKT 311. 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.

MKT 315. MARKETING INSTITUTIONS AND CHANNELS I (3)

PR: MKT 301. A detailed study of marketing channels as a functional area of marketing management and as a part of the marketing process. Special emphasis given to the retailing structure and institutions including problem analyses.

MKT 316. MARKETING INSTITUTIONS AND CHANNELS II (3)

PR: MKT 315. A comprehensive analysis of the wholesaling structure and institutions. Includes the marketing of consumer and industrial goods and services and special problems of channel selection and management.

MKT 411. MARKETING RESEARCH (4)

PR: MKT 301; ECN 331 or MTH 145. A study of research methods applicable to problem-solving in the field of marketing.

MKT 413. CONSUMER BEHAVIOR (3)

PR: MKT 301. An investigation and application of the behavioral factors affecting consumer demand. Consideration given to industrial, governmental and ultimate consumers.

MKT 415. MARKETING MANAGEMENT (4)

PR: MKT 312, 316, 411. Management of the marketing function of firms: objectives, planning, organization, controlling of the total marketing effort and coordination with other major functional areas.

MKT 419. MARKETING PROBLEMS (4)

PR: MKT 312, 316, 411. The integration of marketing knowledge in solving specific marketing problems. Selected readings and case analyses.

MKT 459. INTERNATIONAL MARKETING (4)

PR: MKT 312, 411. 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 problems will be treated as well as effects of national differences on business practices.

MKT 489. SPECIAL STUDIES IN MARKETING (3)

PR: MKT 312, 316, 411, 415; CI. Intensive independent research in marketing under the direction of a major professor; progress and final analysis reported in seminar.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

MKT 501. SURVEY OF MARKETING (3)

PR: ECN 501. A critical analysis of the field of marketing including aspects of marketing policies, institutions, research, and trends. Special emphasis given to product development, pricing strategy, channel selection, and promotion as a basis for marketing management decisions. Assigned readings, discussions, and reports.

FOR GRADUATE STUDENTS ONLY

MKT 601. ADVANCED MARKETING PROBLEMS (3)

PR: MKT 301 or 501, ECN 605. A study of the marketing problems of the firm approached from a management point of view. Emphasis is placed upon the development of the student's ability to analyze marketing situations, identify problems, determine solutions, implement corrective action, and plan marketing strategy.

MKT 603. SEMINAR IN MARKETING (3)

PR: MKT 301 or 501; ECN 601, 605. The study of contemporary marketing thought, advanced marketing concepts, and recent developments in the field of marketing. Readings, discussions, and individual investigation.

MATHEMATICS

Faculty: Kelley, chairman; Archer, Chesley, Cornett, Fusaro, Goodman, Y-F. Linn, Marshall, G. Michaelides, Rahman, Ratti, J. H. Reed, Sacks, Shannon, Zerla.

MTH 101. FOUNDATIONS OF UNIVERSITY MATHEMATICS (5)

PR: Two years of secondary school algebra, one year of plane geometry. Real numbers and their properties; introduction to analytic trigonometry and geometry.

MTH 203. CALCULUS I (5)

PR: MTH 101 with a grade of "C" or better or CC. Limits derivatives, applications, definite integral.

MTH 211. ELEMENTARY CALCULUS I (3)

PR: Two years of secondary school algebra, one year of plane geometry or CC. Real numbers, exponential, logarithmic and trigonometric functions, rates of change, derivatives. The sequence MTH 211-212-213-321 is primarily for students from Biological Sciences, Social Sciences and Business. (No credit for Mathematics Majors.)

MTH 212. ELEMENTARY CALCULUS II (3)

PR: MTH 211 or CC. Rules for differentiation, applications of the derivative, definite integral, fundamental theorem of calculus, integration.

MTH 213. ELEMENTARY CALCULUS III (3)

PR: MTH 212. Functions of several variables, partial derivatives, introduction to infinite series.

MTH 303. CALCULUS II (4)

PR: MTH 203 with a grade of "C" or CC. Logarithmic, exponential, and trigonometric and inverse trigonometric functions, methods of integration.

MTH 304. CALCULUS III (4)

PR: MTH 303 with grade of "C" or better or CC. Indeterminate forms, improper integrals, infinite series, vectors.

MTH 305. CALCULUS IV (4)

PR: MTH 304 with grade of "C" or better or CC. Partial derivatives, multiple integrals, applications.

MTH 321. ELEMENTARY MATRIX THEORY AND ITS APPLICATIONS (3)

PR: MTH 213 or equivalent. Vectors, matrices, systems of linear equations.

MTH 345. INTRODUCTORY STATISTICS I (5)

Measures of central tendency, dispersion and skewness; probability; testing hypotheses; lines of best fit; measures of correlation; application.

MTH 401. DIFFERENTIAL EQUATIONS (3)

PR: MTH 305. First order linear and nonlinear differential equations, higher order linear equations, applications.

MTH 405. ADVANCED CALCULUS I (3)

PR: MTH 305 with a grade of "C" or better. Functions of several variables, partial derivatives, implicit-function theorems, transformations, vector fields.

MTH 406. ADVANCED CALCULUS II (3)

PR: MTH 405. Continuation of MTH 405.

MTH 407. ADVANCED CALCULUS III (3)

PR: MTH 406. Continuation of MTH 406.

MTH 409. SET THEORY (3)

PR: MTH 203 or CC. Relations, functions, order, cardinal numbers.

MTH 420. ELEMENTARY ABSTRACT ALGEBRA (3)

PR: MTH 203 or CC. Groups, rings, integral domain, fields, integers, the rational, real and complex number systems.

MTH 421. LINEAR ALGEBRA I (3)

PR: MTH 203 or CC. Vector spaces, linear independence, basis, dimension, matrices.

MTH 422. LINEAR ALGEBRA II (3)

PR: MTH 421. Linear transformations, systems of linear equations.

MTH 423. GEOMETRY I (3)

PR: MTH 203. Emphasis on axiomatics, advanced Euclidean geometry, elements of projective geometry, non-Euclidean geometries.

MTH 424. GEOMETRY II (3)

PR: MTH 423. Continuation of MTH 423.

MTH 431. VECTOR ANALYSIS (3)

PR: MTH 305. The algebra and calculus of vectors, applications, general coordinates, introduction to tensor analysis.

MTH 445. INTRODUCTORY PROBABILITY THEORY I (3)

PR: MTH 305 and MTH 409 or CC. Probability spaces, discrete and continuous probability distributions, expectation.

MTH 446. INTRODUCTORY PROBABILITY THEORY II (3)

PR: MTH 445. Joint distributions, sums of random variables, weak and strong laws of large numbers, limit theorems.

MTH 447. NUMERICAL ANALYSIS (3)

PR: MTH 305. Interpolation and quadrature, finite differences, numerical solution of algebraic and transcendental equations, numerical solution of differential equations, computer techniques.

MTH 471. THE SCOPE AND SIGNIFICANCE OF MATHEMATICS (3)

(For non-science majors)

PR: Senior or junior standing. Students having completed MTH 203 are not eligible to enter this course. The development of mathematical thought and its application to the physical world, the social sciences, and the fine arts, emphasizing the importance and meaning of mathematics in contemporary culture.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

MTH 501. ADVANCED DIFFERENTIAL EQUATIONS (3)

PR: MTH 401 or CC. Series solutions of second order linear equations, systems of differential equations, boundary value problems.

MTH 513. REAL ANALYSIS I (3)

PR: MTH 305 and 409. Continuity, differentiation and derivatives, sequences and series of functions, convergence.

MTH 514. REAL ANALYSIS II (3)

PR: MTH 513. Convergence, measure theory.

MTH 515. REAL ANALYSIS III (3)

PR: MTH 514. Measure theory and integration.

MTH 520. COMPLEX ANALYSIS I (3)

PR: MTH 405. Complex numbers, analytic functions and mappings, integrals.

MTH 521. COMPLEX ANALYSIS II (3)

PR: MTH 520. Power series, residues and poles.

MTH 522. COMPLEX ANALYSIS III (3)

PR: MTH 521. Conformal mapping and applications.

MTH 523. ALGEBRA I (3)

PR: MTH 305 and 409. Semi-groups and groups. Rings and ideals; homomorphisms.

MTH 524. ALGEBRA II (3)

PR: MTH 523. Polynomials rings, integral domains; factorization. Fields and field extensions; reducibility.

MTH 525. ALGEBRA III (3)

PR: MTH 524. Groups with operators. Modules and vector spaces; direct sums. Elementary lattice theory.

MTH 531. TOPOLOGY I (3)

PR: MTH 305 and MTH 409. Topological spaces, product topology, compact spaces, normal spaces.

MTH 532. TOPOLOGY II (3)

PR: MTH 531. Continua, homeomorphisms, metric spaces, Moore-Smith convergence.

MTH 533. TOPOLOGY III (3)

PR: MTH 532. Countably compact series, superior and inferior limits, locally compact spaces, locally connected spaces.

MTH 541. APPLIED MATHEMATICS I (3)

PR: MTH 401. Series solutions of differential equations, Bessel and other special functions, Sturm-Liouville problems, eigenfunction expansions.

MTH 542. APPLIED MATHEMATICS II (3)

PR: MTH 541 or CI. Matrices, determinants, and linear systems. Topics from vector analysis and functions of several variables.

MTH 543. APPLIED MATHEMATICS III (3)

PR: MTH 542. Introduction to partial differential equations of first and second order, initial value and boundary value problems.

MTH 571. GEOMETRY FROM AN ADVANCED STANDPOINT (3)

PR: A bachelor's degree or CI. Axiomatic development of geometries, with emphasis on Euclidean geometry, for teachers and others.

MTH 573. SET THEORY AND ALGEBRA FROM AN ADVANCED STANDPOINT (3)

PR: A bachelor's degree or CI. Basic concepts of the language of mathematics, including a study of relations, functions, algebraic structures, for teachers and others.

MTH 583. SELECTED TOPICS (3)

PR: Senior or junior standing and CC. Each topic is a course of study. 01-History of Mathematics, 03-Logic and Foundations, 05-Number Theory, 07-Topics in Algebra, 09-Mathematics for Physics, 11-Topics in Probability and Statistics, 13-Topics in Analysis, 15-Topics in Topology.

FOR GRADUATE STUDENTS ONLY

MTH 614. MODERN ANALYSIS I (3)

PR: CC. Metric and Banach spaces, integration and measure in locally compact spaces, function spaces.

MTH 615. MODERN ANALYSIS II (3)

PR: MTH 614. Continuation of MTH 614.

MTH 616. MODERN ANALYSIS III (3)

PR: MTH 615. Continuation of MTH 615.

MTH 617. BANACH SPACES AND ALGEBRAS I (3)

PR: MTH 616. Topological vector spaces, normed spaces, dual spaces with various topologies, L_p spaces, Banach algebras.

MTH 618. BANACH SPACES AND ALGEBRAS II (3)

PR: MTH 617. Continuation of MTH 617.

MTH 619. BANACH SPACES AND ALGEBRAS III (3)

PR: MTH 618. Continuation of MTH 618.

MTH 624. ABSTRACT ALGEBRA I (3)

PR: CC. Structure theory of fields; ideals and modules.

MTH 625. ABSTRACT ALGEBRA II (3)

PR: MTH 624. Noetherian rings; ideal theory.

MTH 626. ABSTRACT ALGEBRA III (3)

PR: MTH 625. Dedekind domains. Introduction to valuation theory.

MTH 627. HOMOLOGICAL ALGEBRA (3)

PR: MTH 626. Categories and functors, homology of complexes, cohomology, spectral sequences.

MTH 629. LIE GROUPS (3)

PR: MTH 616 or 626 or 634 and CC. Topological groups, representation of compact Lie groups, algebraic groups.

MTH 632. ADVANCED TOPOLOGY I (3)

PR: MTH 533 and CC. Continua, Hausdorff metric, decomposition spaces, characterizations of E^n , homogeneous spaces.

MTH 633. ADVANCED TOPOLOGY II (3)

PR: MTH 632. Continuous curves, function spaces, arcwise connected spaces, homotopic and isotopic mappings, uniform spaces.

MTH 634. ADVANCED TOPOLOGY III (3)

PR: MTH 633. Manifolds, wild and tame embeddings, dimension theory.

MTH 635. ALGEBRAIC TOPOLOGY (3)

PR: MTH 634 or CC. Homotopy, homology groups, local homology groups.

MTH 636. TOPOLOGICAL ALGEBRA I (3)

PR: MTH 634 and CC. Topological semi-groups, topological groups, topological rings and fields, Haar measure.

MTH 637. TOPOLOGICAL ALGEBRA II (3)

PR: MTH 636. Continuation of MTH 636.

MTH 638. TOPOLOGICAL ALGEBRA III (3)

PR: MTH 637. Continuation of MTH 637.

MTH 639. DIFFERENTIAL GEOMETRY (3)

PR: CC. Local differential geometry, curvature, evolutes and involutes, calculus of variations.

MTH 643. PARTIAL DIFFERENTIAL EQUATIONS I (3)

PR: MTH 401 and CC. Classification of second order equations, Cauchy problem, Dirichlet and Neumann problems, mixed problems, properties of solutions.

MTH 644. PARTIAL DIFFERENTIAL EQUATIONS II (3)

PR: MTH 643. Continuation of MTH 643.

MTH 645. PARTIAL DIFFERENTIAL EQUATIONS III (3)

PR: MTH 644. Continuation of MTH 644.

MTH 651. LOGIC AND FOUNDATIONS I (3)

PR: CC. Propositional calculus, Post's theorem, first order and equality calculi, models, completeness and consistency theorems, Gödel's theorem, recursive functions.

MTH 652. LOGIC AND FOUNDATIONS II (3)

PR: MTH 651. Continuation of MTH 651.

MTH 653. LOGIC AND FOUNDATIONS III (3)

PR: MTH 652. Continuation of MTH 652.

MTH 683. SELECTED TOPICS (3)

PR: CC. 01-Topology, 02-Analysis, 03-Algebra, 04-Applied Mathematics, 05-Graph Theory, 06-Number Theory.

MTH 691. GRADUATE SEMINAR (1)

Direction of this seminar is by a faculty member. Students are required to present research papers from the literature.

MTH 699. THESIS (1-6)

May be taken more than once, but not more than a total of nine hours credit will be allowed.

MUSIC

Faculty: Sperry, chairman; Abram, E. S. Anderson, Beecher, Bridges, Enix, Eubank, Golding, K. F. Harris, Henning, T. A. Hoffman, Jennings, G. Johnson, Nagosky, W. D. Owen, Preodor, Prescott, Rearick, J. M. Reynolds, Stenberg, Wolf.

MUS 212-213-214. MUSICAL STYLES (3,3,3)

Required of music arts and music education majors. Aural and visual analysis of musical styles from Antiquity to 1600, stylistic composition for voices, counterpoint, form; includes development of related skills of music reading and keyboard facility.

APPLIED MUSIC

Vocal and instrumental instruction for students at all levels of proficiency. Students are auditioned and classified according to technical ability and musical background. Each week the student receives one private lesson devoted to individual technical and musical problems. Students also meet in a class each week, in the pattern of a master class, in order to hear each other perform, and to learn to analyze and discuss technique, interpretation, and style. Courses marked with an asterisk require a \$25 applied music fee.

ENSEMBLE REQUIREMENT: All applied vocal and instrumental students who are qualified are required to enroll in a major ensemble. Piano students are required to enroll in MUS 305 (Chamber Music Ensemble). May be repeated for credit.

MUS 215. *BEGINNING STRING INSTRUMENTS (1)**MUS 225. *BEGINNING PIANO (1)****MUS 235. *BEGINNING VOICE (1)****MUS 245. *BEGINNING WOODWIND INSTRUMENTS (1)****MUS 255. *BEGINNING BRASS INSTRUMENTS (1)****MUS 265. *BEGINNING PERCUSSION INSTRUMENTS (1)****MUS 275. *BEGINNING ORGAN (1)****MUS 301. ISSUES IN MUSIC (2)**

Artist Teacher-performers will lecture and perform significant works from the literature for the piano. The aesthetic and abstract elements in music which vitally concern the artist-performer will be analysed and illustrated in performance.

MUS 303. THE ENJOYMENT OF MUSIC (3)

For non-music majors. A study of the art of music and its materials, designed to develop an understanding of basic principles of music and a technique for listening to music.

MUS 305. CHAMBER MUSIC ENSEMBLE (1)

Open to students with the necessary proficiency in their performance media. Study and performance of literature for small combinations of string, woodwind, or brass instruments, voice, and piano. May be repeated for credit.

MUS 312-313-314. MUSICAL STYLES (3,3,3)

PR: MUS 214. Required of music arts and music education majors. Continuation of MUS 212-214. Musical styles from 1600 to 1827; includes harmony, instrumentation, form, stylistic composition for various media; continued development of related skills.

MUS 315. *INTERMEDIATE STRING INSTRUMENTS (2)**MUS 325. *INTERMEDIATE PIANO (2)****MUS 335. *INTERMEDIATE VOICE (2)****MUS 345. *INTERMEDIATE WOODWIND INSTRUMENTS (2)****MUS 355. *INTERMEDIATE BRASS INSTRUMENTS (2)****MUS 365. *INTERMEDIATE PERCUSSION INSTRUMENTS (2)****MUS 375. *INTERMEDIATE ORGAN (2)****MUS 385. UNIVERSITY ORCHESTRA (1)**

PR: CI. Study, rehearsal, and performance of major musical works. Membership open to all University students by audition on a credit or non-credit basis. May be repeated for credit.

MUS 387. UNIVERSITY BAND (1)

PR: CI. Description under MUS 385.

MUS 389. UNIVERSITY CHORUS (1)

PR: CI. Description under MUS 385.

MUS 412-413-414. MUSICAL STYLES (2,2,2)

PR: MUS 314. Required of music arts and music education majors. Continuation of MUS 212-314. Musical Styles from 1828 to the present.

MUS 477. STRING WORKSHOP (2)

PR: CI. To prepare music teachers for inaugurating a string instrumental program. Methods, techniques, and materials for the organization and execution of heterogeneous string classes will be studied, performed, and evaluated.

MUS 481. DIRECTED STUDY (1-6)

PR: CC. Independent studies in the various areas of Music Arts. Course of study and credits must be assigned prior to registration.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

MUS 503. COMPOSITION (3)

PR: MUS 414 or CI. Creative writing for various instrumental and vocal media, solo and ensemble. Emphasis on composition in contemporary idioms. Includes class performance, critical discussion of compositions by students and instructor. May be repeated for a maximum of 12 credits.

MUS 512-513-514. MUSICAL STYLES (3,3,3)

PR: 414. Required of undergraduate music arts majors. Advanced problems in analysis of music of various styles; emphasis on individual research by students.

MUS 515. *ADVANCED STRING INSTRUMENTS (2)

MUS 521. PIANO MASTER CLASS (2)

PR: CI. Study and performance of selected piano literature with special emphasis on style, form, and technique. Especially designed for teachers, piano majors, and talented secondary school students. Credit and non-credit students must attend all scheduled class sessions, private lessons, and concerts.

MUS 525. *ADVANCED PIANO (2)

MUS 531. VOICE MASTER CLASS (2)

PR: CI. Study and performance of selected voice literature with special emphasis on style, form, and technique. Especially designed for teachers, voice majors, and talented secondary school students. Credit and non-credit students must attend all scheduled class sessions, private lessons, and concert.

MUS 535. *ADVANCED VOICE (2)

MUS 545. *ADVANCED WOODWIND INSTRUMENTS (2)

MUS 555. *ADVANCED BRASS INSTRUMENTS (2)

MUS 565. *ADVANCED PERCUSSION INSTRUMENTS (2)

MUS 571. STUDIO TEACHING (3)

PR: CI. Required of advanced instrumentalists or vocalists who plan a career in studio teaching. Emphasis on the organization of materials, literature, and techniques.

MUS 575. *ADVANCED ORGAN (2)

MUS 593. ORCHESTRA WORKSHOP (2)

PR: CI. The study, rehearsal, and performance of ensemble literature. Membership open to University students, teachers, and secondary school students. Those eligible may register for credit. Non-credit members receive no grade but are required to participate in all scheduled classes and concerts.

MUS 595. BAND WORKSHOP (2)

PR: CI. Description under MUS 593.

MUS 597. CHORUS WORKSHOP (2)

PR: CI. Description under MUS 593.

FOR GRADUATE STUDENTS ONLY**MUS 601. SYMPHONIC LITERATURE (5)**

A chronological study of the development of orchestral music. Works will be analyzed and studied from a stylistic and biographical perspective.

MUS 603. MASTERWORKS OF CHORAL LITERATURE (5)

A chronological study of the development of choral music. Works will be analyzed and studied from a stylistic and biographical perspective.

MUS 609. COMPOSITION (4)

PR: MUS 314. Original composition in varied forms. Emphasis on analysis and application of contemporary techniques and styles. May be repeated for a maximum of twelve credits.

MUS 611. TWENTIETH CENTURY MUSIC (5)

PR: MUS 314. A study of the compositional techniques of composers from Debussy to the present. Emphasis on counterpoint, harmonic structure, tonality, atonality, polytonality, texture, and serial technique.

MUS 614. VOCAL MATERIALS AND CONDUCTING (4)

A study of materials appropriate for use in vocal groups. Emphasis is given to conducting skills.

GRADUATE APPLIED MUSIC

Vocal and instrumental instruction for graduate students only. Performance majors must qualify by audition to enroll at this level for four credits. Candidates for the master of arts degree may be permitted to enroll for two credits at a lower level of proficiency in order to study performance techniques on their major instrument or one of secondary importance. Courses marked with an asterisk require a \$25 applied music fee.

MUS 615. *STRING INSTRUMENTS (2-4)

PR: CC.

MUS 617. INSTRUMENTAL MATERIALS AND CONDUCTING (4)

A study of materials appropriate for use in instrumental groups. Emphasis is given to conducting skills.

MUS 618-619. GRADUATE REVIEW IN MUSIC THEORY (2,2)

Aural and visual analysis of music from Gregorian chant through contemporary musical styles. Adapted to the needs of the individual student as determined by graduate entrance examination in music theory.

MUS 620-621. GRADUATE REVIEW IN MUSIC HISTORY (2,2)

Stylistic and historical survey of Western music from its beginning to the present. Adapted to the needs of the individual student as determined by graduate entrance examination in music history.

MUS 622-623-624. TEACHING OF MUSIC THEORY (3,3,3)

Required of music theory majors. Comparative study of teaching techniques, procedures, and materials used in music theory curricula.

MUS 625. *PIANO (2-4)

PR: CC.

MUS 626-627-628. KEYBOARD LITERATURE (3,3,3)

Chronological study of the development of music for the keyboard instruments. Works will be analyzed and studied from a stylistic and biographical perspective.

MUS 629-630-631. SONG LITERATURE (3,3,3)

Study of solo song literature from the 17th century through the contemporary with emphasis on German lieder, oratorio, and opera. Works will be studied with emphasis on performance.

MUS 632-633-634. EVOLUTION OF MUSICAL STYLES (3,3,3)

Required of music theory majors. Study of the development of musical styles in Western civilization from Antiquity to the present. Includes analysis and performance of representative works.

MUS 635. *VOICE (2-4)

PR: CC.

MUS 645. *WOODWIND INSTRUMENTS (2-4)

PR: CC.

MUS 646-647. ACOUSTICS (3,3)

Required of music theory majors. Study of the nature and transmission of sound, the hearing process, tuning, and temperament. Includes principles of electronic sound reproducers and basic concepts of architectural acoustics.

MUS 655. *BRASS INSTRUMENTS (2-4)

PR: CC.

MUS 665. *PERCUSSION INSTRUMENTS (2-4)

PR: CC.

MUS 675. *ORGAN (2-4)

PR: CC.

MUS 691. GRADUATE SEMINAR (2)

PR: CC. Six quarter-hours credit required of music history-literature and theory majors.

MUS 699. M. M. THESIS (3-9)

PR: CI. May be repeated to a maximum of nine credits.

OCEANOGRAPHY (Interdisciplinary)

Faculty: Briggs, chairman; Bloch, Dawes, DeWitt, Friedl, Griffin, Hopkins, Humm, Kopp, Lawrence, D. Martin, Simon, Taft.

OGY 311. INTRODUCTION TO OCEANOGRAPHY (3)

A survey of modern oceanography and its methods, including the important features of physical, chemical, biological, and geological oceanography.

OGY 521. CHEMICAL OCEANOGRAPHY (4)

PR: CHM 213 and CI. The ocean as a chemical system, including composition, physical-chemical aspects, role of nutrients, trace metals, interaction between bottom and overlying water, modern methods of analysis in routine use in oceanography. lec-lab.

* An applied music fee is charged for these courses.

During 4th quarter (1968) at the Bay Campus of the University, the following marine field courses will be offered: ZOO 313, 519, 523, 533, 614; BOT 443; GLY 411; and OGY 521 (course descriptions are given under Zoology, Botany, Geology, and Oceanography).

OFFICE ADMINISTRATION

Faculty: Beringson, Vanover.

OAD 141. INTRODUCTORY TYPEWRITING (2)

For students with no previous instruction in typewriting. Basic skills of typewriting for personal use, common types of business letters, manuscripts, reports and tabulated materials.

OAD 142. INTERMEDIATE TYPEWRITING (2)

PR: OAD 141 or equivalent. Development of speed and accuracy; introduces skill-building procedures in production typewriting.

OAD 143. ADVANCED TYPEWRITING (2)

PR: OAD 141, 142 or equivalent. Expands typewriting skills and applications and production of mailable transcripts.

OAD 251. INTRODUCTORY SHORTHAND (4)

Introduction to basic skills and vocabulary in Gregg Shorthand.

OAD 252. INTERMEDIATE SHORTHAND (3)

PR: OAD 251 and 141, 142, or equivalent of each. Review of basic skill and vocabulary and emphasis on dictation speeds.

OAD 253. ADVANCED SHORTHAND AND DICTATION (3)

PR: OAD 252 and 142, 143, or equivalent. Continued development of basic skills and vocabulary and emphasis on dictation speeds.

OAD 351. ADVANCED SHORTHAND TRANSCRIPTION (3)

PR: OAD 253 and 143, or equivalent of each. Increased dictation speed and transcription of mailable business communications.

OAD 353. OFFICE ADMINISTRATION (3)

Function of the business office, including planning for office equipment and supplies, actuating office employees, controlling the work of the office and principles of office organization.

OAD 361. BUSINESS MACHINES (4)

PR: OAD 141 or equivalent. Instruction and practice in the use and functions of calculating and secretarial machines in today's business office.

OAD 461. SECRETARIAL PROCEDURES (4)

PR: OAD 351. Development of executive secretarial concepts, instruction and practice in various office duties such as records, control, handling mail, arranging itineraries and telephone techniques.

PHILOSOPHY

Faculty: Gould, chairman; Chen, Miller.

PHI 111. GREAT PHILOSOPHERS OF THE WESTERN WORLD (2)

Lectures and discussions of the great philosophers since Plato, focusing on particular problems.

PHI 301. PROBLEMS OF PHILOSOPHY (4)

An introduction to the major philosophical problems in methodology, philosophy of science, philosophy of religion, and epistemology as seen in the writings of Plato, Descartes, Berkeley, Hume, James, etc.

PHI 303. LOGIC (5)

Language analysis and classical and modern formal logic, including the logic of classes and propositions.

PHI 304. SCIENTIFIC METHOD (4)

Probability, inductive inference, the hypothetico-deductive method, experimentation, and selected topics in the philosophy of science.

PHI 311. FOUNDATIONS OF PHILOSOPHY (4)

An introduction to the major philosophical problems in ethics, political and social theory, aesthetics, and metaphysics as seen in the writings of Plato, Aristotle, Mill, Sartre, Kant, Kierkegaard, etc.

PHI 321. ETHICS (4)

An examination of the writing of the philosophers: Plato, Aristotle, Kant, Sartre, etc. about moral problems and principles.

PHI 333. ANCIENT AND MEDIEVAL PHILOSOPHY (4)

A survey of philosophy from Thales through the medieval writers.

PHI 334. RENAISSANCE AND MODERN PHILOSOPHY (4)

A survey of philosophy from the Renaissance through Kant.

PHI 335. RECENT PHILOSOPHY (4)

A survey of philosophy from Kant through 19th century philosophy.

PHI 377. SOCIAL PHILOSOPHY (4)

An analysis of rival theories of social order and their philosophical foundations.

PHI 381. DIRECTED STUDY (1-5)

PR: CI. Individual study directed by a faculty member.

PHI 383. SELECTED TOPICS (1-5)

PR: CI. Selected topics according to the needs of the student.

PHI 405. CONTEMPORARY PHILOSOPHY (4)

PR: 12 hours or CI. Selected schools of 20th century thought such as idealism, positivism, pragmatism, realism, and existentialism.

PHI 411. PHILOSOPHY OF RELIGION (4)

Analysis of religious experience and activity and examination of principal religious ideas in light of modern philosophy.

PHI 413. AMERICAN PHILOSOPHY (4)

Major traditions in American thought—Puritanism, the Enlightenment, Transcendentalism, Idealism, Pragmatism, and Analytic Philosophy—in relation to American culture.

PHI 415. PLATO AND ARISTOTLE (4)

PR: 8 hours or CI. A study of the two great Greek philosophers. The examination of Plato will include the dialogues Protagoras, Gorgias, Meno, Republic; while the readings in Aristotle will be taken from the Nicomachean Ethics and the Politics.

PHI 425. KANT (4)

PR: 8 hours or CI. Lectures and discussions of Kant's philosophy, especially *The Critique of Pure Reason*.

PHI 461. ANCIENT AND MEDIEVAL POLITICAL PHILOSOPHY (3)

A survey of political philosophy from 6 B.C. until 1600 A.D., including an examination of the ethical, metaphysical, and epistemological bases of these philosophies.

PHI 463. MODERN POLITICAL PHILOSOPHY (3)

A survey of political philosophy from 1600 A.D. until 1900 A.D., including an examination of the ethical, metaphysical, and epistemological bases of these philosophies.

PHI 465. CONTEMPORARY POLITICAL PHILOSOPHY (3) . .

A survey of political philosophy in the 20th century, including an examination of the ethical, metaphysical, and epistemological bases of these philosophies.

PHI 481. DIRECTED STUDY (1-5)

PR: CI. Individual study directed by a faculty member.

PHI 483. SELECTED TOPICS (1-5)

PR: CI. Selected topics according to the needs of the senior students.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

PHI 507. PHILOSOPHY OF SCIENCE (4)

PR: 8 hours or CI. The nature and functions of science; the logic of scientific method; clarification of such concepts as cause, law, theory, probability, determinism, simplicity, technology.

PHI 509. SYMBOLIC LOGIC (4)

PR: PHI 303 or CI. Mathematical treatment of formal logic, including methods of proof, quantification, the logic of relations, and an introduction to properties of deductive systems.

PHI 511. PHILOSOPHY OF LAW (4)

PR: 8 hours or CI. The nature and function of law, relations between law, morality and metaphysics, logic of legal reasoning, analysis of fundamental concepts and institutions.

PHI 521. CONTEMPORARY CONTROVERSIES IN PHILOSOPHY OF RELIGION (4)

PR: PHI 411 or CI. A survey of contemporary philosophical problems in religion such as demythologizing, falsification, and the meaning and justification of key concepts, e.g. God, immortality, faith, etc.

PHI 522. AESTHETICS (4)

The nature of beauty and fine art as analyzed by philosophers.

PHI 571. SEMINAR IN EPISTEMOLOGY I (3)

PR: Major in philosophy or psychology and CI. Theory of perception.

PHI 572. SEMINAR IN EPISTEMOLOGY II (3)

PR: Major in philosophy, or social science and CI. The possibility and conditions of knowledge.

PHI 573. SEMINAR IN METAPHYSICS I (3)

PR: Major in philosophy or CI. A consideration of the theory of reality.

PHI 574. SEMINAR IN METAPHYSICS II (3)

PR: Major in philosophy or CI. Cosmology.

PHI 575. SEMINAR IN CONTEMPORARY ETHICS (3)

A study of the central figures and doctrines in Contemporary Ethics.

PHI 581. DIRECTED STUDY (1-3)

PR: CI. Individual study directed by a faculty member.

PHI 583. SELECTED TOPICS (1-3)

PR: CI. Selected topics according to the needs of the student.

PHI 585. RESEARCH (1-3)

PR: CI. Individual research supervised by a faculty member.

PHI 591. SEMINAR IN THE HISTORY OF PHILOSOPHY (3)

A study of one or more of the central figures or movements in the History of Philosophy.

PHYSICAL EDUCATION—Basic

Faculty: W. Berner, R. Bowers, H. Chapman, R. Grindey, R. Heesch, G. Hertz, D. Holcomb, A. Jonaitis, P. Ortwein, M. Osborne, S. Prather, S. Taylor, H. Wright, J. Young.

See Education, page 153, for Physical Education for Teachers.

Abbreviations: (C) coeducational; (M) men; (W) women.

PEB 101. FUNCTIONAL PHYSICAL EDUCATION (0)

Prerequisite to all courses except Beginning Swimming. Stresses importance of optimum fitness for daily living and provides experiences directed toward a better understanding of physical activity and its relationship to the individual. Evaluation of physical fitness.

PEB 102-129. TEAM SPORTS, CONDITIONING, DANCE, RECREATION (0)

Fundamental experiences in team and group activities. Physical conditioning and self-expression through team competition, rhythmic activities and recreational skills.

102 BASKETBALL AND VOLLEYBALL (M) (W)

106 FIELD HOCKEY AND TRACK & FIELD (W)

112 SOFTBALL AND VOLLEYBALL (M) (W)

113 SOCCER AND SPEEDBALL (M) (W)

116 SPECIAL CONDITIONING (M) (W)

Required of those falling below the 25th percentile on motor fitness.

119 FOLK AND SQUARE DANCE (C)

Recommended for elementary education majors.

120 MODERN DANCE (INTERMEDIATE-ADVANCED) (C)

PR: PE 166 or equivalent.

122 SOCIAL DANCE (C)

126 *BEGINNING RIDING (C)

129 PROFICIENCY (content to be certified by Physical Education Division)

* Additional fee is required for these courses.

PEB 130-149. AQUATIC SPORTS (0)

Essential aquatic skills and knowledges vital to individual and group survival, safety and recreation.

130 BEGINNING SWIMMING (C)

132 INTERMEDIATE SWIMMING (C)

134 ADVANCED SWIMMING (C)

136 LIFE SAVING (C)

138 SCUBA DIVING (C)

140 WATER SAFETY INSTRUCTION (C)

142 SYNCHRONIZED SWIMMING (C)

144 CANOEING AND SAILING (C)

149 PROFICIENCY (content to be certified by Physical Education Division)

PEB 150-180. INDIVIDUAL AND DUAL ACTIVITIES (0)

Basic instruction in recreational sports, fundamental sport skills, individual development and acquisition of dance techniques and skills. Development of desirable levels of strength, endurance, agility, balance and poise.

150 ARCHERY (C)

152 BADMINTON (C)

156 BOWLING (C)*

158 FENCING (C)

160 GOLF (C)

164 HANDBALL AND PADDLEBALL (C)

166 FUNDAMENTALS OF DANCE MOVEMENT (C)

168 TENNIS (C)

169 WRESTLING (M)

170 GYMNASTICS (C)

178 WEIGHT TRAINING (M)

179 PROFICIENCY (content to be certified by Physical Education Division)

PHYSICS

Faculty: Forman, chairman; Aubel, Bloch, Brooker, Clapp, Deans, Flynn, Kendall, Kruschwitz, R. Mitchell, Turbeville.

PHY 211-212. GENERAL PHYSICS (3:1)

First quarter of general physics and lab for science students. Must be taken concurrently.

PHY 213-214. GENERAL PHYSICS (3:1)

PR: PHY 211-212. Second quarter of general physics and lab for science students. Must be taken concurrently.

PHY 215-216. GENERAL PHYSICS (3:1)

PR: PHY 211-212. Third quarter of general physics and lab for science students. Must be taken concurrently.

* Additional fee is required for these courses.

PHY 221-222. GENERAL PHYSICS (3:1)

PR: MTH 203. First quarter of general physics and lab for physics majors and engineering students. Must be taken concurrently.

PHY 223-224. GENERAL PHYSICS (3:1)

PR: PHY 221-222. CR: MTH 303. Second quarter of general physics and lab for physics majors and engineering students. Must be taken concurrently.

PHY 225-226. GENERAL PHYSICS (3:1)

PR: PHY 221-222. CR: MTH 303. Third quarter of general physics and lab for physics majors and engineering students. Must be taken concurrently.

PHY 305. THERMODYNAMICS (3)

PR: MTH 305 and either prerequisite PHY 225 or corequisite PHY 315. Kinematics and dynamics of a particle, of a system of particles and of a solid body. First quarter of the sequence PHY 305-405.

PHY 307. MECHANICS I (3)

CR: MTH 305 and either prerequisite PHY 225 or corequisite PHY 315. Kinematics and dynamics of a particle, of a system of particles and of a solid body. First quarter of the sequence PHY 307-407-507.

PHY 309. ELECTRICITY AND MAGNETISM I (4)

PR: MTH 305, PHY 341. Direct and alternating circuits, thermoelectricity, instrumentation, electrostatics, electrokinetics and laboratory. First quarter of the sequence PHY 309-409-509.

PHY 315. MATHEMATICAL ANALYSIS OF PROBLEMS IN MECHANICS AND ELECTRICITY (3)

PR: One year of non-calculus general physics. CR: MTH 305. A course designed for physics majors and engineering students who have taken a non-calculus, general physics course. Not open to students who take PHY 221 through 226 or equivalent.

PHY 323. MODERN PHYSICS (4)

PR: PHY 225 or CR PHY 315. CR: MTH 305. A course in modern physics for engineering students and suggested for physics majors.

PHY 331. GEOMETRICAL OPTICS (4)

PR: PHY 341. CR: MTH 304. Wave motion, reflection, refraction, dispersion, emission of spectra, interference diffraction, polarization and laboratory.

PHY 341. INTERMEDIATE LABORATORY—GENERAL (1)

CR: Physics course of 300 level or above. Experiments related to various areas of physics.

PHY 371. CONTEMPORARY PHYSICS (3)

PR: Junior standing. A qualitative investigation of some of the great experiments in physics, emphasizing their influence on life today. (No credit for physics majors.)

PHY 405. KINETIC THEORY AND STATISTICAL MECHANICS (3)

PR: PHY 305. Continuation of the sequence PHY 305-405.

PHY 407. MECHANICS II (3)

PR: PHY 307 and MTH 401. Continuation of the sequence PHY 307-407-507.

PHY 409. ELECTRICITY AND MAGNETISM II (3)

PR: PHY 309 or CC. CR: MTH 401. Continuation of the sequence PHY

309-409-509.

PHY 421. SOLID STATE PHYSICS I (3)

PR: PHY 323 and MTH 401. Molecular binding, energy bands in solids, electrical, thermal and magnetic properties of solids, semi-conductors.

PHY 437. QUANTUM MECHANICS I (3)

PR: PHY 407, MTH 401 or CC. Schrodinger's equation, one-dimensional potentials, and the hydrogen atom. First quarter of sequence PHY 437-537.

PHY 441. ADVANCED LABORATORY (1)

PR: PHY 341. Experiments related to nuclear physics.

PHY 481. UNDERGRADUATE RESEARCH (1-6)

PR: Senior or advanced junior standing and CC. Individual experimental work under supervision of instructor.

PHY 491. PHYSICS SEMINAR (1)

PR: Senior or advanced junior standing or CC. May be repeated once.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

PHY 501. NUCLEAR PHYSICS (3)

PR: PHY 323 and MTH 401. Stable nuclei and isotopes, radioactivity, nuclear reactions, binding energies, fission and fusion.

PHY 507. MECHANICS III (3)

PR: PHY 407. Continuation of the sequence PHY 307-407-507.

PHY 509. ELECTRICITY AND MAGNETISM III (3)

PR: PHY 409. Continuation of the sequence PHY 309-409-509.

PHY 521. SOLID STATE PHYSICS II (3)

PR: PHY 421. Continuation of the sequence PHY 421-521.

PHY 523. ELECTRONICS (4)

PR: PHY 409 and PHY 341. Vacuum and gas-discharge tubes and associated circuits, electron dynamics, thermionic emission, space charge phenomena, electronic circuit analysis and laboratory.

PHY 537. QUANTUM MECHANICS II (3)

PR: PHY 437. Continuation of the sequence PHY 437-537.

PHY 551. MODERN PHYSICS (3)

PR: PHY 215 or 225. Electron dynamics, X-rays, Bohr-Sommerfield atom and photoelectricity (No credit for physics majors.).

PHY 583. SELECTED TOPICS IN PHYSICS (1-6)

PR: Senior or advanced junior standing and CC. Each topic is a course in directed study under the supervision of a faculty member. The following courses are contemplated: gaseous electronics, plasma physics, relativity and atomic and molecular structure.

FOR GRADUATE STUDENTS ONLY

PHY 601. ATOMIC SPECTRA (3)

PR: PHY 437 or CC. Quantitative study of molecular, atomic, and nuclear structure and spectra.

PHY 607. CLASSICAL MECHANICS I (3)

PR: PHY 407 or CC. Review of vectors, tensors, and matrices; dynamics of particles and systems of particles; the equations of Hamilton and Lagrange; fluid mechanics. First quarter of the sequence PHY 607-608-609.

PHY 608. CLASSICAL MECHANICS II (3)

PR: PHY 607 or CC. Continuation of PHY 607-608-609.

PHY 609. CLASSICAL MECHANICS III (3)

PR: PHY 608. Continuation of 607-608-609.

PHY 631. ELECTROMAGNETIC THEORY I (3)

PR: PHY 409 or CC. Electrostatics and magnetostatics; potential and boundary value problems; Maxwell's equations, electromagnetic waves. First quarter of the sequence PHY 631-632-633.

PHY 632. ELECTROMAGNETIC THEORY II (3)

PR: PHY 631 or CC. Continuation of PHY 631-632-633.

PHY 633. ELECTROMAGNETIC THEORY III (3)

PR: PHY 632. Continuation of PHY 631-632-633.

PHY 637. QUANTUM MECHANICS III (3)

PR: PHY 437 or CC. The theory of non-relativistic quantum mechanics.

PHY 641. EXPERIMENTAL PHYSICS (1)

PR: Graduate standing. The practice of laboratory techniques.

PHY 681. GRADUATE RESEARCH (1-9)

PR: CC.

PHY 683. SELECTED TOPICS IN PHYSICS (1-6)

PR: CC. Each topic is a course in directed study under the supervision of a faculty member.

PHY 691. GRADUATE SEMINAR (1)

PHY 699. MASTER'S THESIS (1-9)

PR: PHY 641.

POLITICAL SCIENCE

Faculty: A. Kelley, chairman; R. Agpalo; S. Barber; R. Johnston; D. Knab; R. Nichols; M. O'Donnell; W. Young.

POL 199. INTRODUCTION TO POLITICAL SCIENCE (4)

A survey of the basic concepts in government and politics, theories and methods of political science and the American political system as well as materials.

POL 201. AMERICAN NATIONAL GOVERNMENT (4)

Basic principles and procedures of the American governmental system with emphasis on current issues and trends.

POL 203. STATE AND LOCAL GOVERNMENT (4)

Analysis of the structure and function of state and local governments, of the social and political influences that shape them, and of the dynamics of their administrative processes.

POL 311. COMPARATIVE POLITICS (4)

Analysis of political systems using the concepts and methods of comparative politics. Studies of selected countries will be included.

POL 331. INTERNATIONAL RELATIONS (4)

Contemporary international affairs, including analysis of politics among nations; control of national foreign policies, sovereignty, nationalism and diplomacy; technology, public opinion and war in international relations.

POL 333. INTERNATIONAL ORGANIZATION (4)

The problem of achieving peace through existing international structures, both within and outside the United Nations. The background, achievement and organizational problems of these agencies.

POL 341. POLITICAL PARTIES (4)

PR: POL 201 or CI. The development, structure, operation and significance of political parties in the American system of government.

POL 345. PRIVATE GROUPS AND PUBLIC POLICY (4)

Role of non-party groups in the American society and their impact on public policy; growth of interest groups, internal politics, and formation of public policy.

POL 351. INTRODUCTION TO PUBLIC ADMINISTRATION (4)

PR: Upper level standing. An examination of the administrative principles and processes by which public policies are implemented in a democratic society.

POL 410. POLITICAL SYSTEMS OF SOUTHEAST ASIA (4)

PR: Upper Level Standing. Comparative analysis of political systems and practices in Southeast Asian countries with emphasis on the nature of nationalism, political development and revolutionary processes in the region.

POL 411. SOUTHEAST AND SOUTH ASIA IN WORLD POLITICS (4)

Survey of international politics of Southeast and South Asia.

POL 415. MILITARY POWER IN INTERNATIONAL POLITICS (4)

PR: POL 331, Upper Level Standing or CI. A study of the role of military power affecting war and peace in modern international politics. Among the issues covered are, limited war, nuclear deterrence, balance of power, conventional war, guerrilla warfare, disarmament and nuclear proliferation.

POL 421. GOVERNMENT AND POLITICS OF THE FAR EAST (4)

Development of political ideas and institutions in Japan and China with emphasis on 20th century issues.

POL 431-432. CONSTITUTIONAL LAW (4,4)

The development of the United States government through judicial interpretation of the Constitution. Case study method of analysis.

POL 441. THE AMERICAN PRESIDENCY (4)

The presidency as an institution of American democracy; constitutional status and powers, administrative responsibilities, legislative and political leadership, decision-making process.

POL 443. POLITICAL BEHAVIOR (4)

PR: POL 199, 201 or CI. Economic, psychological and social dimensions of political behavior; political participation, leadership and elites; political attitudes; voting behavior and decision-making processes.

POL 445. CONTEMPORARY AMERICAN FOREIGN POLICY (4)

Analysis of the development and scope of United States foreign policy, focusing upon our aims, decision-making, application of policies, and alternatives for specified problem areas in foreign affairs.

POL 453. URBAN GOVERNMENT (4)

An introduction to the theory of urbanism, formal and informal structures that govern urban areas, new patterns and policy emphases of urban government.

POL 454. URBAN POLITICS (4)

PR: Upper Level Standing, POL 203 or equivalent. An examination of the political processes and systems in urban and suburban communities in America.

POL 455. THE AMERICAN LEGISLATIVE PROCESS (4)

Intensive analysis of the nature of the legislative process in the United States; organization, procedure, leadership, relation with other governmental agencies, group tactics, decision-making process in the formation of policy.

POL 457. PROBLEMS OF PUBLIC FISCAL ADMINISTRATION (4)

PR: POL 351 or CI. Analysis of problems in the growth and development of public budgets with emphasis on principal techniques and theories of fiscal administration.

POL 461. CLASSICAL POLITICAL IDEAS (4)

PR: POL 199 or CI. Basic political ideas from the works of Plato, Aristotle, Cicero, St. Augustine, St. Thomas Aquinas and other leading Greek, Roman, and Medieval-Christian political philosophers.

POL 462. CLASSICAL POLITICAL IDEAS (4)

PR: POL 199 or CI. Basic political ideas from the works of Machiavelli, Bodin, Hobbes, Locke, Montesquieu, Rousseau, Burke, Bentham and other leading modern political philosophers.

POL 463. AMERICAN POLITICAL THOUGHT (4)

PR: Upper level standing. American political thought from the Colonial period to the present with emphasis on recent contributions.

POL 481. INDIVIDUAL RESEARCH (1-4)

PR: 3.0 average in Political Science and CC. Investigation of some aspect of political science culminating in the preparation of an original research paper.

POL 491. SENIOR SEMINAR (4)

PR: Senior standing. Required of all Political Science majors. An examination of the content and methods of political science as a social science discipline.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

POL 561. POLITICS OF THE DEVELOPING AREAS (4)

An analysis of the ideologies, governmental structures, and political processes of selected nations of the non-Western world.

POL 571. FIELD WORK (4)

PR: 3.0 average in Political Science or CC. Practical participation in a political organization or governmental bureau observing its operation and making a critical analysis in light of political science principles.

POL 573. GOVERNMENT AND POLITICS OF CONTEMPORARY AFRICA (4)

PR: POL 311 or CI. Development and growth of emerging African political systems and their relations with each other and with states outside of Africa.

PSYCHOLOGY

Faculty: Sistrunk, chairman; Ball, Bliss, Caldwell, Clement, Dertke, Edwards, Hawkins, Hite, Huff, LaBarba, Mathis, McKittrick, Merin, Mourer, Nelson, Strong, Weiss.

PSY 201. INTRODUCTION TO PSYCHOLOGY (4)

A survey of major topics in psychology (learning, perception, thinking, intelligence, etc.), and an introduction to methods used in psychological investigation.

PSY 213. APPLIED PSYCHOLOGY (4)

PR: CBS 201 or PSY 201. The application of psychological principles and the functions of psychologists in education, government, industry, and clinical practice.

PSY 311. EXPERIMENTAL DESIGN (4)

PR: PSY 201 and SSI 301. Major scientific research methods and strategies and their application to psychology. Psychophysical methods, including detection theory. Topics from analysis of variance, correlation analysis, and factor analysis. Experiments in various areas of psychology. lec-lab.

PSY 323. PERCEPTION (4)

PR: PSY 201 and SSI 301. How man perceives his environment. Topics include sensory bases of perception, physical correlates of perceptual phenomena, and the effects of individual and social factors on perception. Primary emphasis on vision and audition. lec-lab.

PSY 325. INDUSTRIAL PSYCHOLOGY (4)

PR: SSI 301. Application of psychological principles to industry. Topics considered: Man-machine systems, development of skills, training, employee attitudes, worker motivation, accident prevention, fatigue and monotony.

PSY 331. SOCIAL PSYCHOLOGY (4)

PR: PSY 201. Behavior of the individual human being as affected by the social and cultural influences of society. lec-lab.

PSY 335. PSYCHOLOGY OF ADJUSTMENT (4)

PR: PSY 201. Genetic, organic and learned factors involved in the processes of personal adjustment; applications of mental health principles to everyday living.

PSY 341. CHILD PSYCHOLOGY (4)

PR: PSY 201 or EDF 305. Developmental and psychosocial aspects of childhood, including hereditary, maturational, psychological, and social determinants of child behavior.

PSY 413. INTRODUCTION TO PSYCHOLOGICAL TESTING (4)

PR: SSI 301. A consideration of the instruments for intellectual, achievement, and personality assessment including their applications, development, and potential abuses.

PSY 431. ABNORMAL PSYCHOLOGY (4)

PR: PSY 433 or 335. A study of the classifications of variant behavior and some of the hypotheses used to explain such behavior.

PSY 433. PERSONALITY (4)

PR: 8 hours in PSY courses. Methods and findings of personality theories and an evaluation of constitutional, biosocial, and psychological determinants of personality. lec-lab.

PSY 435. PSYCHOLOGICAL MANIPULATION OF THE INDIVIDUAL (4)

PR: PSY 201 or CBS 201. The impact of modern psychological techniques on the individual. Topics considered: brainwashing, indoctrination, propaganda, psychological drugs, sensory deprivation, etc. Emphasis on the psychological processes involved in the manipulation of the individual.

PSY 481. INDIVIDUAL RESEARCH (1-4)

PR: Upper division standing and CI. The student plans and conducts an individual research project under the supervision of a staff member. May be

repeated with a maximum of eight hours credit.

PSY 485. DIRECTED READING (1-4)

PR: Upper division standing and CI. A reading program of topics in psychology is conducted with the supervision of a psychology staff member. May be repeated with a maximum of eight hours credit.

PSY 491. SENIOR SEMINAR IN PSYCHOLOGY (4)

PR: Senior standing and completion of the core program in psychology. Designed to give the advanced undergraduate student an opportunity to integrate concepts within the field of psychology and relate these to other areas of study.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

PSY 501. PHYSIOLOGICAL PSYCHOLOGY (4)

PR: PSY 311 or CI. Gross neural and physiological components of behavior. Structure and function of the central nervous system as related to emotion, motivation, learning, and theory of brain functions. lec-lab.

PSY 503. HISTORY AND SYSTEMS OF PSYCHOLOGY (4)

PR: PSY 311 plus three other upper level PSY courses. The historical roots of modern psychological theories, investigation of the various schools of psychology such as behaviorism, Gestalt psychology, psychoanalysis, and phenomenological psychology.

PSY 505. CONDITIONING AND INSTRUMENTAL LEARNING (4)

PR: PSY 311. Survey of methods, empirical findings and theoretical interpretations in conditioning and instrumental learning. lec-lab.

PSY 506. VERBAL LEARNING AND INFORMATION PROCESSING (4)

PR: PSY 311. Survey of methods, empirical findings and theoretical interpretations of verbal learning and retention, concept learning and information processing. lec-lab.

PSY 507. SENSORY PHYSIOLOGICAL PSYCHOLOGY (4)

PR: PSY 201. The structure and function of the sensory systems and attendant peripheral nervous system with regard to their determination of the behavioral capacity of organisms.

PSY 508. AUDITION (4)

PR: CI. Theories of hearing. Theoretical principles and developments relating to hearing and its disorders.

PSY 509. COMPARATIVE PSYCHOLOGY (4)

PR: PSY 201. The study of the evolution of behavior, similarities and differences in capacities for environmental adjustment and for behavioral organization among the important types of living beings, from plants and unicellular organisms to the primates including man.

FOR GRADUATE STUDENTS ONLY

PSY 601. EXPERIMENTAL METHODS (5)

Measurement theory, probability theory, and sampling theories will be considered in relation to the design of experiments. Analysis of variance, trend analysis, uncertainty analysis, and factor analysis will be applied to problems in psychology.

PSY 602. CLINICAL METHODS (5)

A review of descriptive research on clinical problems. Experience in the design of research problems in clinical diagnosis and therapy.

PSY 603. PERCEPTION (5)

Consideration of the physiological and psychological variables in perception. Review of the effect of motivation and other factors on perception. Study of perception theories.

PSY 605. PERSONALITY THEORY (5)

Review of approaches to the development of personality theories and consideration in depth of Freudian psychology and other personality theories influencing modern psychological thought.

PSY 607. EXPERIMENTAL SOCIAL PSYCHOLOGY (5)

Consideration of the behavior and experience of individuals in relation to social stimulus situations, emphasizing the integration of theory, methodology, and contemporary research problems.

PSY 609. MOTIVATION AND EMOTION (5)

A detailed examination of human motivation and emotion from both the physiological and psychological viewpoints. Emphasis will be given to current research.

PSY 610. OPERANT BEHAVIOR (5)

PR: CI. Review of the basic literature of operant conditioning and major areas of research and application. Supervised laboratory experience in programming basic schedules of reinforcement.

PSY 611. PSYCHOPATHOLOGY (5)

Exploration of current approaches to the understanding of pathological behavior and implications for theories of personality. A survey of treatment methods is included.

PSY 613. BEHAVIORAL DISORDERS OF CHILDREN (5)

Causative factors in behavior deviations common to children and adolescents. Thorough study of selected childhood mental disorders and a survey of ameliorative techniques for treating childhood behavior difficulties.

PSY 615. PERSONALITY ASSESSMENT (5)

PR: PSY 617. Interview, case history, objective and projective tests are surveyed together with a critical review of the history and theory of assessment. Special consideration is given to study of interrelations between research, diagnostic data, and personality theory.

PSY 617. INDIVIDUAL INTELLIGENCE TESTING (5)

History and objectives of intelligence testing. Methods used in the construction of individual intelligence tests. Intensive experience in the administration and interpretation of the Wechsler tests, Stanford-Binet, and Grace Arthur tests.

PSY 619. INTRODUCTION TO COUNSELING AND PSYCHOTHERAPY (5)

Examination of theory and practices in counseling and psychotherapy. The role of the counselor and the nature of the therapeutic relationship is emphasized. Professional and ethical issues are considered.

PSY 620. SUPERVISED RESEARCH (1-5)

Consent of instructor and department chairman. May be repeated for credit. The student works in close collaboration with a faculty member in designing, conducting and interpreting experiments.

PSY 623. ADVANCED INDUSTRIAL PSYCHOLOGY I (5)

220 RELIGIOUS STUDIES

Application of psychological principles, research, and research methods to the problem of business and industry; work methods, fatigue, job analysis, selection and training, performance measurement.

PSY 624. ADVANCED INDUSTRIAL PSYCHOLOGY II (5)

PR: PSY 623. Application of psychological principles, research, and research methods to the problems of business and industry: leadership, motivation and morale, communication, job environment, interviewing.

PSY 650. ELECTROPHYSIOLOGICAL METHODS (5)

PR: PSY 501 or 507. Introduction to the use of electrophysiological methods in psychological research. This will involve actual experience in use of oscilloscopes, polygraphs, EEG techniques, stereotaxic procedure, stimulation and lesioning techniques, use of microtome, and staining and mounting of tissue sections. lec-lab.

PSY 682. PRACTICUM IN PSYCHOLOGY (5)

Supervised observation and training in various community and university clinic, research and/or industrial settings.

PSY 689. GRADUATE SEMINAR IN LEARNING (5)

May be repeated for credit.

PSY 690. GRADUATE SEMINAR IN PERCEPTION (5)

May be repeated for credit.

PSY 691. GRADUATE SEMINAR IN PHYSIOLOGICAL PSYCHOLOGY (5)

May be repeated for credit.

PSY 692. GRADUATE SEMINAR IN SOCIAL PSYCHOLOGY (5)

May be repeated for credit.

PSY 693. GRADUATE SEMINAR ON ISSUES IN CLINICAL PSYCHOLOGY (5)

May be repeated for credit.

PSY 694. GRADUATE SEMINAR IN DEVELOPMENT PSYCHOLOGY (5)

May be repeated for credit.

PSY 695. GRADUATE SEMINAR IN PERSONALITY (5)

May be repeated for credit.

PSY 696. GRADUATE SEMINAR IN COGNITIVE PROCESSES (5)

May be repeated for credit.

PSY 697. GRADUATE SEMINAR IN QUANTITATIVE METHODS (5)

May be repeated for credit.

PSY 698. GRADUATE SEMINAR IN INDUSTRIAL PSYCHOLOGY (5)

May be repeated for credit.

PSY 699. THESIS (5)

A study in depth of a problem in psychology approved by a thesis committee. Student stands an oral examination on the thesis.

RELIGIOUS STUDIES

Faculty: Deer, acting chairman; Gessman, Gould, Smith.

REL 310. OLD TESTAMENT STUDIES (4)

An introduction to the critical study of the Old Testament against the backgrounds

of the ancient Near East, emphasizing the history and religion of the Hebrew people.

REL 315. NEW TESTAMENT STUDIES (4)

An introduction to the critical study of the New Testament in the context of the first century A.D. Stress is placed upon the Gospel accounts of the life and teachings of Jesus, Paul's interpretations of faith and problems faced by the early Christian movement.

REL 325. HISTORY OF JUDAISM (4)

The historical development of Judaism and its ideas from Biblical times to the 20th century with emphasis on its formative years from the Great Prophets to the close of the Talmud.

REL 327. HISTORY OF CHRISTIANITY (4)

The historical development of Christianity, its ideas and institutions, from New Testament times to the present.

REL 350. WORLD RELIGIONS (5)

An introduction to the ideas and institutions of some of the major religions of the world, such as Hinduism, Jainism, Buddhism, Islam, Confucianism, Taoism, and Shinto.

ROMANCE LANGUAGES

Faculty: Milani, Neugaard.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

ROM 517. ROMANCE PHILOLOGY (3)

The phonological-lexical development of the Romance languages from Vulgar Latin to modern times, with special emphasis on French, Italian and Spanish.

ROM 518. ROMANCE PHILOLOGY (3)

PR: ROM 517. The morphological-syntactical changes of the Romance languages, with special attention to French, Italian and Spanish.

RUSSIAN

Faculty: Artzybushev, Sokolsky.

Basic courses listed under Basic Studies.

RUS 221. SCIENTIFIC RUSSIAN (4)

Primarily for students majoring in science or those desiring help in learning to read texts and research material in a specialized field.

RUS 301. ADVANCED COMPOSITION (4)

To improve the student's ability in reading and writing Russian; practice in free and fixed composition.

RUS 303. ADVANCED CONVERSATION AND PRONUNCIATION (4)

To develop fluency and correctness in spoken Russian.

RUS 305. SURVEY OF RUSSIAN LITERATURE (3)

Development of Russian literature from the Eleventh century to the Eighteenth century.

RUS 306. SURVEY OF RUSSIAN LITERATURE (3)

From the Eighteenth century to N. V. Gogol.

RUS 307. SURVEY OF RUSSIAN LITERATURE (3)

From N. V. Gogol to present.

RUS 491. SENIOR SEMINAR (3)

Study in depth of a specific writer or literary movement as chosen by the instructor. Individual research required of students.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

PR: Rus 305, 306, 307

RUS 515. HISTORY OF THE RUSSIAN LANGUAGE (3)

Changes in Russian morphology, syntax, phonetics and style.

RUS 516. HISTORY OF THE RUSSIAN LANGUAGE (3)

PR: RUS 515. Continuation of RUS 515.

RUS 541. RUSSIAN DRAMA OF THE 19TH CENTURY (3)

Griboyedor, Pushkin, Ostrovsky, Tolstoy, Turgenev and Chekhov.

RUS 542. RUSSIAN POETRY OF THE 19TH AND 20TH CENTURY (3)

Classical Russian poetry of the 19th century and new poetic movements of the 20th century (symbolism, acmeism, futurism).

RUS 551. RUSSIAN NOVEL OF THE 19TH CENTURY (3)

Study of the works of Gogol, Turgenev and Goncharov.

RUS 552. RUSSIAN NOVEL OF THE 19TH CENTURY (3)

Life and works of Leo N. Tolstoy.

RUS 553. RUSSIAN NOVEL OF THE 19th CENTURY (3)

Life and major novels of F. M. Dostoyevsky.

RUS 561. RUSSIAN LITERATURE 1880-1917 (3)

Lectures, reading and analysis of the works of A. P. Chekhov and Maxim Gorky.

RUS 562. RUSSIAN LITERATURE 1880-1917 (3)

Lectures, reading and analysis of the works of A. I. Kuprin, L. N. Andreyev, D. S. Merezhkovsky and I. A. Bunin.

RUS 563. RUSSIAN SOVIET LITERATURE (3)

Revolutionary and post-revolutionary Soviet literature including V. V. Mayankovsky, A. N. Tolstoy, A. Serafimovich, A. A. Fadeev, N. A. Ostrovsky and L. M. Leonov.

RUS 564. RUSSIAN SOVIET LITERATURE (3)

Literary works of M. M. Zoshchenko, M. A. Sholokhov, B. L. Pasternak, A. Solzhenitsyn and others.

RUS 583. SELECTED TOPICS (var.)

The content of the course will be governed by student demand and instructor interest. It will examine in depth a recurring literary theme or the work of a small group of writers.

SOCIAL SCIENCES (Interdisciplinary)

Faculty: Orr, chairman; E. Allen, E. C. Anderson, Arnade, Bateman, Brooks, Dertke, Fuson, Kaplan, Kutcher, Nelson, Osmolovsky, Rothwell, Seligsohn, Stevenson, Strong, Swanson, Winthrop, Wright.

SSI 301. SOCIAL SCIENCE STATISTICS (4)

Topics selected from the following: measures of central tendency and variability probability and the normal curve, correlations, curve fitting, scale and index number theory, polling, interview and survey techniques, content analysis.

SSI 311. COMMUNICATION (4)

The theories, modes and processes of communication, its history as an instrument of social change and its role in human behavior.

SSI 315. PUBLIC OPINION AND PRESSURE MECHANISM (4)

The content and formation of public opinion, properties of opinions and attitudes, and the principles and mechanisms of their formation and change.

SSI 321. HUMAN RELATIONS AND PRODUCTIVITY (4)

Topics to be selected from the following: the relation of science, technology, resources, energy and population change to social, economic, cultural and political change; social implications of research findings from the social, behavioral and management sciences.

SSI 325. PSYCHOLOGY AND THE SOCIAL ORDER (4)

Topics to be selected from the following: the quest for personal identity in modern mass society, the problems of mass culture and mass education, the problems of alienation and anomie in the 20th century, psychological factors in political and industrial conflict, man versus the machine in modern life.

Area Studies

The following four courses (SSI 341, 343, 345 and 347), dealing with one or more countries of a given region, will select and emphasize subject matter from the following topics: its history, its people and their cultures, its social psychology and national characteristics, its resources, its economic and industrial characteristics, its literature, religion and dominant values, its political framework and outlook, its social structure, and its current problems.

Each course may be repeated once when countries of concentration vary, but the same country may not be repeated for credit.

SSI 341. LATIN AMERICA (4)

SSI 343. ASIA (4)

SSI 345. AFRICA (4)

SSI 347. THE MIDDLE EAST (4)

SSI 361. COMMUNISM IN THE MODERN WORLD (4)

An interdisciplinary approach to the nature of Communism, its philosophic bases, its anti-religious bias, its economic, social and political theories and practices, the arts and sciences under Communist ideology, its conduct of foreign affairs and associated programs and techniques. Emphasis will be on Soviet and Chinese Communism.

SSI 411. SOCIAL ISSUES OF OUR TIME (4)

Topics to be selected from the following: automation and cybernation and the social problems they generate; special problems of a technological civilization;

the implications of changing social patterns of Western culture and opportunities for social re-construction.

SSI 413. LEISURE IN SOCIETY (4)

Facts and trends of changing leisure-time patterns in the USA and other countries; various conceptualizations of leisure; relationships of non-work time to work attitudes, personality, family, community, sub-cultures, religion, value systems, social class, and the functions of government.

SSI 415. COMMUNITY PLANNING (4)

Topics to be selected from the following: varied concepts of community; environmental, social, psychological, economic and medical problems accompanying large-scale urbanization; objectives, methods and technologies for community planning.

SSI 449. THE EMERGING NATIONS (4)

This course examines the processes and problems involved when an under-developed country seeks to develop a modern industrial civilization.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

SSI 503. CONTEMPORARY AMERICAN CULTURE (4)

A social analysis of the leading characteristics, ideals, and values of American life. An effort will be made to deal with a variety of contexts in which American cultural themes, standards and practices receive expression.

SSI 505. SOCIAL VALUES AND SOCIAL ORDER (4)

Topics to be selected from the following: the value-patterns of modern societies; social bases for a world order; the aims and functions of social planning; international transformation created by science and technology.

FOR GRADUATE STUDENTS ONLY

SSI 601. SOCIAL PATHOLOGY (4)

An examination of the variety of social criticism which has been leveled at Western society and of some of the defenses which have been made in its behalf. Materials will be chosen from several of the social sciences.

SOCIOLOGY

Faculty: R. Wheeler, chairman; N. Bateman, R. Burton, M. Kaplan, J. Keller, L. Kutcher, J. Osmolovsky, D. Petersen, J. Ross, N. Taylor, M. Truzzi.

SOC 201. INTRODUCTION TO SOCIOLOGY (4)

Nature and application of sociological concepts, theories and methods; analysis of societies, associations and groups; social processes and social change.

SOC 251. MARRIAGE (4)

Study of pre-marital and marital relations. Social, cultural and personal factors related to success and failure in mate selection and marriage.

SOC 261. SOCIAL PROBLEMS (4)

Descriptive and analytical consideration of major social problems in modern industrial societies, with emphasis on American society.

SOC 301. INTRODUCTION TO SOCIAL WELFARE (4)

PR: SOC 201 or CI. The historical and contemporary development of organized social services and institutions to meet human needs.

SOC 321. SOCIAL INVESTIGATION (4)

PR: SOC 201, SSI 301. Methods and techniques of social research. Design of sociological studies, collection of data, and interpretation of results.

SOC 331. SOCIAL PSYCHOLOGY (4)

PR: PSY 201 or SOC 201. Behavior of the individual human being as affected by social and cultural influences of modern society.

SOC 341. SOCIAL ORGANIZATION (4)

PR: SOC 201 or CI. Social organization in the broadest sense, including institutions and associations, as well as variations in role and status.

SOC 345. SOCIAL STRATIFICATION (4)

PR: SOC 201 or CI. Social status and social stratification, social class as a factor in behavior, social mobility.

SOC 351. THE FAMILY (4)

PR: SOC 201 or CI. Principles of family organization, social adjustment and control. Maturation, socialization and stability of the family.

SOC 371. RACIAL AND ETHNIC RELATIONS (4)

PR: SOC 201 or CI. Comparative study of interracial relations, social tensions, attitudes, and modes of adjustment in various areas of the world.

SOC 373. SOCIOLOGY OF RELIGION (4)

PR: SOC 201 or CI. Types, sources, and functions of religious behavior. Religious behavior of individuals and groups in relation to other aspects of personality and culture.

SOC 481. INDIVIDUAL RESEARCH (1-4)

PR: Four courses in sociology, including SOC 321, upper division standing or CI. Content and method dependent upon interests and competence of the student.

SOC 491. SENIOR SEMINAR (4)

For seniors majoring in sociology or other social sciences. Major issues in sociology, stressing theory and research.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

SOC 505. COMMUNITY WELFARE RESOURCES (4)

PR: SOC 301 or CI; upper division standing. Emphasis upon voluntary programs and their development, planning and coordination.

SOC 515. FOUNDATIONS OF THEORY (4)

PR: SOC 201 or CI; upper division standing. Consideration of selected theories of sociology and procedures of systematic theory construction.

SOC 523. SOCIOLOGICAL STATISTICS (4)

PR: SSI 301 or CI; upper division standing. Logic and application of parametric and nonparametric statistical analysis for sociological data.

SOC 531. SOCIAL INTERACTION (4)

PR: SOC 331, or PSY 331, or CI; upper division standing. Theory and research, including interpersonal influence, complex behavior, role, conflict, and social situational factors.

SOC 533. COLLECTIVE BEHAVIOR (4)

PR: SOC 201 or CI; upper division standing. Study of the development of group and mass behavior—crowds, social movements.

SOC 535. SOCIOLOGY OF SMALL GROUPS (4)

PR: SOC 201 or CI; upper division standing. Theory of small group structure, mechanics of interaction, observation of small groups.

SOC 541. SOCIAL CHANGE (4)

PR: SOC 201 or CI; upper division standing. Major theories of social and cultural change, and mechanisms of change in various societies.

SOC 543. URBAN SOCIOLOGY (4)

PR: SOC 201 or CI; upper division standing. The social structure of the community in modern industrial societies. Analysis of selected aspects of community change.

SOC 561. CRIMINOLOGY (4)

PR: SOC 201 or CI; upper division standing. Etiology of criminal behavior; law enforcement, crime in the United States; penology and prevention.

SOC 563. JUVENILE DELINQUENCY (4)

PR: SOC 201 or CI; upper division standing. Theories of delinquency as a social product, individual factors, patterns of delinquent behavior, methods of control and treatment.

SOC 571. POPULATION (4)

PR: SOC 201 or CI; upper division standing. Sociological determinants of fertility, mortality, and migration; theories of population change.

SOC 575. INDUSTRIAL SOCIOLOGY (4)

PR: SOC 201 or CI; upper division standing. Interaction, communication and authority in economic organizations; the factory as a social system.

FOR GRADUATE STUDENTS ONLY

SOC 611. CONTEMPORARY SOCIOLOGICAL THEORY (4)

PR: Undergraduate course in sociological theory or CI. Emphasizes logical and conceptual dimensions of theory and theory construction.

SOC 621. METHODS OF RESEARCH (4)

PR: Course in Social Investigation or CI. Logic and practice of research; problems of observation and data collection, data processing, and evaluation.

SOC 631. SOCIAL PSYCHOLOGY SEMINAR (4)

PR: Course in Social Psychology or CI. Stresses contemporary developments in social psychological theory and empirical research.

SOC 641. COMMUNITY ANALYSIS (4)

PR: Course in Urban Sociology or CI. Theories of community and community organization. Methods of community study; problems of urban areas.

SOC 643. COMPLEX ORGANIZATIONS (4)

PR: Course in Social Organization or CI. Organizational theory, bureaucratic models, authority, power, legitimation, and types of formal organization.

SOC 651. FAMILY ANALYSIS (4)

PR: Course in Family or CI. Theory of interpersonal relations and interaction in the modern family. Analysis of functions and roles.

SOC 661. SOCIAL CONTROL (4)

PR: Course in criminology or juvenile delinquency or CI. Theories of control and deviance with research application in problem areas.

SOC 671. SOCIAL GERONTOLOGY (4)

PR: Four courses in social sciences with two in sociology, or CI. Theory of aging. Social correlates of aging, retirement, and personality modification.

SOC 681. INDIVIDUAL RESEARCH (1-4)

PR: CI. Content and method dependent upon interest and competence of student.

SOC 691. THESIS AND THESIS SEMINAR (5)

PR: Degree candidate. Equivalent of 16 quarter hours in the student's graduate program, SOC 523, 621.

SOC 692. THESIS AND THESIS SEMINAR (5)

PR: Degree candidate. Equivalent of 16 quarter hours in the student's graduate program, SOC 523, 621. May be taken concurrently with SOC 691.

SPANISH

Faculty: Gleaves, Hunter, McLean, Milani, Neugaard, Payas, Spurlock, Tatum.
Basic courses listed under Basic Studies.

History of Romance Languages listed under Romance Languages.

SPA 301. ADVANCED SPANISH COMPOSITION (4)

To improve student's ability in writing Spanish, to increase his accuracy in comprehension and use of the grammatical elements; practice in both free and fixed composition.

SPA 303. ADVANCED SPANISH CONVERSATION (4)

To develop fluency and correctness in spoken Spanish for non-native speakers.

SPA 305. SURVEY OF SPANISH LITERATURE (3)

Spanish literature from the Twelfth Century through the Sixteenth Century.

SPA 306. SURVEY OF SPANISH LITERATURE (3)

Spanish literature of the Seventeenth and Eighteenth Centuries.

SPA 307. SURVEY OF SPANISH LITERATURE (3)

Spanish literature of the Nineteenth and Twentieth Centuries.

SPA 403. SPANISH PHONETICS & DICTION (2)

Spanish phonology with emphasis on phonic groupings; correction of the individual student's errors in diction.

SPA 491. SENIOR SEMINAR (3)

Study in depth of a specific writer or literary movement as chosen by the instructor. Individual research required of students.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

SPA 513. SURVEY OF SPANISH-AMERICAN LITERATURE (3)

Modern Spanish-American poetry. Main currents of poetry since the Romantic period, with brief introduction to the major poets of the Colonial period.

SPA 514. SURVEY OF SPANISH-AMERICAN LITERATURE (3)

Modern Spanish-American novel. Main currents of the novel since the Independence period, with brief discussion of origins of the novel in Spanish-America.

SPA 515. SURVEY OF SPANISH-AMERICAN LITERATURE (3)

Modern Spanish-American short story. Main currents of the short story of the last 100 years, with brief discussion of the origins of the genre in Spanish-America.

SPA 523. GOLDEN AGE LITERATURE (3)

Lope de Vega and his contemporaries.

SPA 524. GOLDEN AGE LITERATURE (3)

Calderon and his contemporaries.

SPA 525. GOLDEN AGE LITERATURE (3)

Lyric poetry, the mystics, the picaresque and idealistic novel of the Golden Age.

SPA 526. CERVANTES (3)

A study of the life and works of Cervantes, with special emphasis on the Quixote.

SPA 541. 19TH CENTURY LITERATURE (3)

The Romantic movement.

SPA 542. 19TH CENTURY LITERATURE (3)

Costumbrismo and the early Realists: Alarcon, Valera and Pereda.

SPA 543. 19TH CENTURY LITERATURE (3)

The later Realists: Galdos, Palacio Valdes and Naturalism.

SPA 545. GENERATION OF 1898 (3)

Philosophical writings of the Generation of 1898.

SPA 546. GENERATION OF 1898 (3)

Novel of Generation of 1898 (3)

SPA 547. MODERNISMO (3)

The precursors to Modernismo in Latin America.

SPA 548. MODERNISMO (3)

A study of the writings of Ruben Dario and other writers of Modernismo.

SPA 551. TWENTIETH CENTURY SPANISH LITERATURE (3)

Drama and poetry since the generation of 1898.

SPA 552. TWENTIETH CENTURY SPANISH LITERATURE (3)

Prose since the generation of 1898.

SPA 583. SELECTED TOPICS IN HISPANIC STUDIES (var.)

The content of the course will be governed by student demand and instructor interest. It will examine in depth a recurring literary theme or the work of a small group of writers.

FOR GRADUATE STUDENTS ONLY

SPA 601. OLD SPANISH (3)

An analysis of the development of Spanish from Vulgar Latin to the Renaissance.

SPA 602. MEDIEVAL SPANISH LITERATURE (3)

A study of Spanish literature of the Middle Ages, with special emphasis on the Poema de Mio Cid, Berceo, Juan Ruiz, Alfonso el Sabio and the ballads. PR: SPA 601 (3)

SPA 603. RENAISSANCE (3)

A study of Spanish literature of the late 15th and the 16th centuries; from the Celestina through the immediate precursors of Lope de Vega.

SPA 647. NATURALISMO (3)

A study of the Naturalistic movement in Spain. Emphasis on Pardo Bazan.

SPA 648. NATURALISMO (3)

Continuation of SPA 647. Emphasis on Blasco Ibanez and Clarin.

SPA 689. SPANISH BIBLIOGRAPHY (0)

Training in use of library materials for graduate research and study. Lectures by library staff on general use of research material and by specialists on specific areas of Spanish literature. Required of all candidates for the MA in Spanish.

SPA 691. GRADUATE SEMINAR (3)

Study of an author or authors or a literary movement. Extensive research, class discussion and papers required. Subject chosen to be announced one quarter in advance.

SPEECH

Faculty: Popovich, chairman; Betzer, Brady, Galati, Kearney, Lucoff, O'Hara, Sarett, Scheib, Steck, Stelzner, Webb.

SPE 103. SPEECH FOR FOREIGN STUDENTS (0)

A special course for students learning English as a second language. Intensive study and drill in American English pronunciation and listening comprehension. Must be taken in conjunction with CBS 100—English for Foreign Students.

SPE 201. FUNDAMENTALS OF SPEECH (5)

The nature and basic principles of speech; emphasis on improving speaking and listening skills common to all forms of oral communication through a variety of experiences in public discourse.

SPE 203. SPEECH IMPROVEMENT AND PHONETICS (5)

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.

SPE 241. INTRODUCTION TO BROADCASTING (5)

PR: SPE 201 or 203. Introduction to the principles, tools and skills involved in radio and television broadcasting.

SPE 321. FUNDAMENTALS OF ORAL READING (5)

PR: SPE 201 or 203. Designed to develop proficiency in the understanding and oral communication of literary and other written materials.

SPE 322. ORAL INTERPRETATION PERFORMANCE (2)

PR: SPE 321 or CI. The study, rehearsal, and performance of literature for Readers Theatre and Chamber Theatre productions. May be repeated (maximum total of 6 hours).

SPE 343. BROADCAST SPEECH (5)

PR: SPE 203. The development of skills required for effective announcing, acting, newscasting and other speaking before microphone and camera.

SPE 345. THE MASS MEDIA AND SOCIETY (5)

The mass communication process and influence of the mass media upon society.

SPE 347. RADIO PRODUCTION AND DIRECTION (5)

PR: SPE 241. Radio production and direction, laboratory and broadcasting experience.

SPE 351. INTRODUCTION TO AUDIOLOGY AND SPEECH PATHOLOGY (5)

PR: SPE 203. The nature, causes and principles of treatment of speech and hearing disorders.

SPE 361. GROUP DISCUSSION AND CONFERENCE METHODS (5)

PR: SPE 201 or CI. Principles and methods of leading and participating in various types of group discussion and conference. Emphasis on reflective thinking and group dynamics.

SPE 363. PUBLIC SPEAKING (5)

PR: SPE 201 or CI. Study of selected public addresses as aids in speaking extemporaneously and from manuscript. The relationship between public speaking and public policy formulation.

SPE 365. PUBLIC DISCUSSION: ARGUMENTATION AND PERSUASION (5)

PR: SPE 201. Advanced study of factors involved in changing beliefs and behavior of audiences. Rhetorical analysis of public addresses; the study of effective organization and presentation of public questions through panel discussions, symposia, forums and debate.

SPE 366. FORENSICS (2)

PR: SPE 365 or CI. The study, library research and investigation, and practice in forensics. Application of the principles of rhetoric to the current debate and discussion topics. May be repeated (maximum of 6 hours).

SPE 367. FORMS OF PUBLIC ADDRESS (5)

PR: SPE 363 or 365. An advanced course emphasizing arrangement and style in informative, persuasive and ceremonial public address.

SPE 369. PARLIAMENTARY SPEAKING (3)

Principles of parliamentary procedure and practice in conducting and participating in meetings governed by parliamentary rules.

SPE 411. SPEECH BEHAVIOR AND PROCESSES (5)

PR: SPE 203 or CI. Study of the theories of the simple and complex acoustical phenomenon of speech; intensive analysis of the stimulus-feedback variables of speech.

SPE 441. TELEVISION PRODUCTION AND DIRECTION (5)

PR: SPE 241. An introductory course in the techniques of producing and directing television programs.

SPE 442. ADVANCED TELEVISION PRODUCTION AND DIRECTION (5)

PR: SPE 441. Intensive study and practice of the techniques of television production and direction with emphasis on both creative and administrative aspects.

SPE 481. UNDERGRADUATE RESEARCH (credits vary)

PR: Senior standing and CI. Individual investigations with faculty supervision.

SPE 483. SELECTED TOPICS (credits vary)

PR: Senior standing and CI.

SPE 485. DIRECTED READINGS (credits vary)

PR: Senior standing and CI.

SPE 491. SENIOR SEMINAR: PROBLEMS IN ORAL COMMUNICATION (2)

PR: Senior Standing. Exploration of problems in all aspects of speaking and listening with emphasis upon an overview of the arts and sciences of oral communication.

SPE 492. SENIOR SEMINAR: PROBLEMS IN ORAL COMMUNICATION (3)

PR: SPE 491. Intensive analysis of the complexities of scholarly investigation in special areas of the arts and sciences of oral communication.

FOR UPPER LEVEL AND GRADUATE STUDENTS

SPE 503. APPLIED PHONETIC TRANSCRIPTION (5)

PR: SPE 203 or CI. Intensified training in auditory discrimination of the sounds of American English. Detailed use of the International Phonetic Alphabet in rapid transcription of normal and disordered speech.

SPE 511. EXPERIMENTAL PHONETICS (5)

PR: SPE 203. Understanding and application of experimental methods in analyzing speech sounds. Emphasis upon important research findings, instruments and methodologies in the laboratory study of normal speech. Development of phonetic skills of discrimination and reproduction of speech sounds.

SPE 521. ORAL INTERPRETATION OF POETRY AND DRAMA (5)

PR: SPE 321 or CI. Critical appreciation of poetic and dramatic literature and communication of that appreciation to an audience. The presentation of public programs.

SPE 523. LITERARY ADAPTATION AND ORAL INTERPRETATION (5)

PR: SPE 521. Practice in composition and adaptation of literary materials for oral presentation; an investigation of the more advanced problems in oral interpretation as in Choral Speaking and Chamber Theatre.

SPE 565. HISTORY AND CRITICISM OF PUBLIC ADDRESS (5)

PR: SPE 363 or CI. The principles of rhetorical criticism applied to selected great speeches of Western civilization.

SPE 593. LANGUAGE AND SPEECH FOR CHILDREN (5)

PR: SPE 203 or CI. A diagnostic study of language development; the analysis of speech behavior and oral language needs of children; techniques of speech improvement for children.

FOR GRADUATE STUDENTS ONLY

SPE 621. HISTORY AND THEORIES OF ORAL INTERPRETATION (5)

A study of the history, critical writings, uses, and development of the art of oral interpretation, with analysis of the principles and practices.

SPE 611. COMMUNICATION: ANALYSIS AND MEASUREMENT (5)

A study of selected modes of communication. Includes analysis of communication symbology, and presents the theory and application of selected instruments for measuring and producing speech.

SPE 661. CLASSICAL RHETORIC (5)

Greek and Roman theory and practice; emphasis on Aristotle, Plato, Cicero, and Quintilian, selected other readings.

SPE 662. MODERN RHETORICAL THEORY (5)

Studies of Eighteenth and Nineteenth Century theorists and the historical and cultural forces influencing them; relationship to contemporary theory and practice.

SPE 665. HISTORY AND CRITICISM OF AMERICAN PUBLIC ADDRESS (5)

Criticism of selected speeches and speakers of American public address, studied against a background of political, social, and intellectual issues.

SPE 667. CONTEMPORARY RHETORICAL THEORY (5)

Studies in Speech and language; Speech as symbol, theories of meaning, the relation of language, thought, and action.

SPE 668. EXPERIMENTAL RESEARCH IN ORAL COMMUNICATION (5)

Critical examination of research design, procedures, and reporting of experimental studies in small group communication and persuasive discourse.

SPE 681. GRADUATE RESEARCH (1-5)

Directed study in special projects. Recommended only when material cannot be studied in scheduled courses.

SPE 683. SELECTED TOPICS IN SPEECH (1-5)

SPE 685. DIRECTED READINGS (1-5)

SPE 691. GRADUATE SEMINAR IN ORAL COMMUNICATION (5)

THEATRE ARTS

Faculty: Whaley, chairman; Belt, A. Golding, Lorenzen, Mecham, O'Sullivan, Zachary.

TAR 101. INTRODUCTION TO THEATRE (3)

The nature of theatre as an art form. "How does a play mean?" Orientation and identification for the understanding of theatre. Open to all students and required of Theatre Arts Majors.

TAR 111. FUNDAMENTALS OF STAGE PERFORMANCE (3)

Elementary principles and methods of stage performance with emphasis on inner creativity and physical expression.

TAR 112. STAGE MOVEMENT AND SPEECH (3)

PR: TAR 111 or CI. An exercise investigation of the nature and possibilities of human movement and sound in the theatre.

TAR 113. INTRODUCTION TO DANCE (3)

Study of the literature, choreographers, and concepts related to the development of Dance in Twentieth Century America. Emphasis on artists currently prominent. Reading, film, lecture-discussion.

TAR 123. INTRODUCTION TO DANCE TECHNIQUE (2)

PR: Sequence enrollment. The preparation and development of the instrument through study of the movement, styles, and forms of some major artists. May be repeated.

TAR 133. BASIC ELEMENTS OF DANCE COMPOSITION (3)

An introduction to shaping the materials of Dance: to develop an awareness and ability of student to shape, space, rhythm, dynamics, levels, and focus in creating dance design for movement. May be repeated.

TAR 201. STAGE MAKE-UP (1)

History, theory, and practice of make-up for the stage.

TAR 221. STAGECRAFT (3)

Basic design practice, color and drafting as applied to stage and television settings. Practical exercises in construction, painting, and mounting of scenery, with participation in performance productions.

TAR 223. STAGE PROPERTIES (3)

An investigation of historic architecture, decor, and furnishings for the theatre designer and director with practical exercises in duplication for the stage.

TAR 301. PERFORMANCE (1)

The study, rehearsal, and performance of major theatrical works. Open to all University students by audition on a credit or non-credit basis. Credit members subject to critical examination. May be repeated.

TAR 302. EXPERIMENTAL THEATRE PERFORMANCE (2)

PR: TAR 111, 112, 301, or CI. The study, rehearsal, and laboratory performance of new and experimental works for the theatre. May be repeated to a total of 6 credits.

TAR 303. MODERN THEATRE PRACTICE (5)

Initial readings and exercises in theatre; play analysis, performance, and technical theatre. For non-theatre majors.

TAR 311. ACTING I (3)

PR: TAR 111, 112, or CI. Intermediate principles and methods of stage performance: mime, improvisation, speech, deportment, and characterization.

TAR 313. DIRECTING I (3)

PR: TAR 411. Staging the play, including script analysis, business, composition, movement and rhythm; rehearsal procedures and general organization. Lecture-laboratory using illustrative exercises and scene work.

TAR 315. INTRODUCTION TO PUPPETRY (3)

Principles and methods of puppetry with an historical survey of major forms and practical problems with laboratory production.

TAR 325. TECHNICAL DIRECTING (3)

PR: TAR 221. Mounting the physical production. Lecture-lab using selected readings and practical problems in planning and producing the technical aspects of production.

TAR 339. HISTORY OF THE THEATRE (5)

A survey of the chronological development of world theatre.

TAR 403. PLAYWRITING I (3)

PR: TAR 303 or equivalent, 3 hours of creative writing, and CI. Basic dramatic writing practices and conventions. Evaluation of student work in conferences. Study of selected readings. May be repeated.

TAR 404. PLAYWRITING II (3)

PR: TAR 403. Continuation of TAR 403 PLAYWRITING I. May be repeated.

TAR 411. ACTING II (3)

PR: TAR 311 or CI. Intermediate exercises in stage performance with special emphasis on problems of genre, style, and interpretation.

TAR 413. DIRECTING II (3)

PR: TAR 313. Problems in directing. Script interpretation, composition and movement for genre and period, coaching the actor, designing the *mise en scène*.

TAR 415. PERFORMANCE PRODUCTION (3)

PR: TAR 413, 414, majors only, CI. Actual production work in which members of the class assist the director of a play for public performance, teamed with designers from TAR 429.

TAR 421. SCENE DESIGN I (3)

PR: TAR 325 or CI. Aesthetics and theories of stage design with a historical study of the development of the physical theatre and scenery. Practical design problems.

TAR 422. SCENE DESIGN II (3)

PR: TAR 421. Continuation of Scene Design.

TAR 423. COSTUME DESIGN I (3)

Aesthetics, design, and techniques of stage costuming. A survey of fashion of the

Western World and its interpretation as costume for the stage.

TAR 424. COSTUME DESIGN II (3)

PR: TAR 423. Continuation of Costume Design.

TAR 425. STAGE LIGHTING I (3)

PR: TAR 325. Theories and techniques of lighting as they relate to play production and theatre architecture.

TAR 426. STAGE LIGHTING II (3)

PR: TAR 425. Continuation of Stage Lighting, with emphasis on designing the production.

TAR 429. TECHNICAL PRODUCTION (3)

PR: Any two of TAR 421-422, 423-424, 425-426, and CI. Actual production work in which students assist in design and execution of scenery, costumes, properties, and lighting for public performance, teamed with directors from TAR 415.

TAR 431. THEATRE LITERATURE OF MYTH AND RITUAL: CLASSIC (3)

A study of the development of dramatic form out of early religious rites and its full flowering in the works of Aeschylus, Sophocles, Euripides, Aristophanes, Menander, Plautus, and Terrence.

TAR 432. THEATRE LITERATURE OF MYTH AND RITUAL: MEDIEVAL (3)

The rebirth of drama in the ancient Christian Church and a study of the theatre literature which grew out of these early beginnings.

TAR 433. LITERATURE OF THE RENAISSANCE THEATRE (3)

Historical study of Renaissance drama; readings from the plays of Machiavelli, Goldoni, Lope de Vega, Calderon, Marlowe, Jonson, Corneille, Moliere, and Racine.

TAR 435. LITERATURE OF THE EIGHTEENTH CENTURY THEATRE (3)

A study of English and Continental theatre literature from the restoration of the English monarchy to the fall of Napoleon.

TAR 436. LITERATURE OF THE NINETEENTH CENTURY THEATRE (3)

A study of theatre literature from the late Romanticism of Hugo to the "Free Theatre" movement of the continent.

TAR 437. LITERATURE OF THE MODERN AND CONTEMPORARY THEATRE (3)

Readings of contemporary American, British, and Continental drama from Apollinaire to Albee.

TAR 451. THEATRE MANAGEMENT (3)

A study of commercial, community, and educational theatre operation with special emphasis on box office management, production costs, contracts, publicity, and public relations.

TAR 481. DIRECTED STUDIES (1-6)

PR: CC. Independent studies in the various areas of Theatre Arts. Course of study and credits must be assigned prior to registration.

TAR 483. REPERTORY PERFORMANCE (1-9)

PR: CC. Advanced performance, theory, and practice, with practical examination. All course work is by directed study and must relate to Department Productions.

FOR SENIOR LEVEL AND GRADUATE STUDENTS**TAR 501. DRAMATIC CRITICISM I (3)**

A study of basic critical writings on the theatre from Aristotle to the present.

TAR 502. DRAMATIC CRITICISM II (3)

PR: TAR 401. Continuation of TAR 501.

TAR 503. ADVANCED PLAYWRITING (3)

PR: TAR 403, 404, or CI. Concentration on the writing of the full length play form, with selected readings and analysis of dramatic structure. May be repeated.

TAR 504. WRITING FOR THE SCREEN (3)

PR: TAR 403, 404, and CI. Planning and writing of the film short and feature film from rough scenario to finished screenplay. Selected readings and critical analysis of screenplays by Agee, Bergman, Kurosawa, Hitchcock, etc. May be repeated.

TAR 511. STYLES OF ACTING (3)

PR: TAR 311, 411, or CI. Exercises in the performance problems of the actor in pre-modern plays.

ZOOLOGY

(See also *Interdisciplinary Biology*)

Faculty: Briggs, chairman; Brown, Cowell, DeWitt, Friedl, Gratzner, Hopkins, Krivanek, Lawrence, Linton, Meyerriecks, Simon, Snyder, Woolfenden.

ZOO 271. HUMAN ANATOMY (3)

PR: CBS 207 or BIO 201. An introduction to the basic structure of the human body.

ZOO 272. *HUMAN PHYSIOLOGY (4)

PR: ZOO 271. The function of human organs and organ systems. lec-lab.

ZOO 311. *COMPARATIVE VERTEBRATE ANATOMY (6)

PR: BIO 201-3. Anatomy of selected vertebrate types emphasizing evolutionary trends. lec-lab.

ZOO 312. *COMPARATIVE EMBRYOLOGY (6)

PR: BIO 201-3. A comparative study of developmental processes among selected invertebrates and vertebrates with emphasis on experimental approaches. lec-lab.

ZOO 313. *INVERTEBRATE ZOOLOGY (5)

PR: BIO 201-3. An introduction to the major invertebrate groups, with emphasis on local marine forms. Field work will be required. lec-lab.

ZOO 319. FISH AND GAME MANAGEMENT (3)

PR: BIO 201-203. An introduction to the principles of fish and game management and conservation.

ZOO 411. *HISTOLOGY (4)

PR: ZOO 311 and/or ZOO 312. Comparative approach to the study of tissues and the relation of their structure and function. lec-lab.

ZOO 415. INTRODUCTION TO ENTOMOLOGY (4)

PR: BIO 201-3. An introduction to general aspects of insect morphology, develop-

* The purchase of a coupon book to cover breakage is required for these courses.

ment and classification. The identification of local forms will be emphasized. lec-lab.

ZOO 416. AQUATIC ENTOMOLOGY (4)

PR: ZOO 415. Taxonomy, development, and ecology of aquatic insects with emphasis on local forms. lec-lab.

ZOO 446. TERRESTRIAL ANIMAL ECOLOGY (3)

PR: BIO 445. Field and laboratory investigations of the basic principles of ecology as applied to terrestrial animals. lec-lab.

ZOO 447. MARINE ANIMAL ECOLOGY (3)

PR: BIO 445 and ZOO 313. Investigations of community structure in local marine habitats. Field work is required. lec-lab.

ZOO 481. UNDERGRADUATE RESEARCH (1-6)

PR: CI. Individual investigation with faculty supervision.

ZOO 483. SELECTED TOPICS IN ZOOLOGY (1-6)

PR: CI. Each topic is a program in directed study under supervision of a faculty member.

ZOO 491. SEMINAR IN ZOOLOGY (1)

PR: Upper division. May be repeated once.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

ZOO 513. *PARASITOLOGY (5)

PR: BIO 201-3. Fundamentals of animal parasitology and parasitism; the biology of selected animal parasites, including those of major importance to man. lec-lab.

ZOO 515. LIMNOLOGY (4)

PR: CI. An introduction to the physical, chemical, and biological nature of freshwater environments. lec-lab.

ZOO 516. HERPETOLOGY (4)

PR: BIO 201-3. The biology of amphibians and reptiles with emphasis on taxonomy. lec-lab.

ZOO 517. ORNITHOLOGY (4)

PR: BIO 445 or CI. The biology of birds with emphasis on the local avifauna.

ZOO 518. MAMMALOLOGY (4)

PR: ZOO 311 or 312. The biology of mammals, including systematics, ecology, natural history, and geographical distribution.

ZOO 519. ICHTHYOLOGY (5)

PR: ZOO 311. Systematics of fishes, including major classification, comparative anatomy, embryology, and general distribution. lec-lab.

ZOO 521. COMPARATIVE PHYSIOLOGY (5)

PR: CI. The evolution of physiological mechanisms. lec-lab.

ZOO 523. PHYSIOLOGY OF MARINE ANIMALS (5)

PR: BIO 421-2. A study of the physiological mechanisms of animals in the marine environment. lec-lab.

ZOO 524. COMPARATIVE ENDOCRINOLOGY (5)

PR: ZOO 521 or CI. An analysis of the similarities and differences between the hormonal mechanisms of mammals, other vertebrates, and invertebrates. lec-lab.

*The purchase of a coupon book to cover breakage is required for these courses.

ZOO 533. PHYSIOLOGY OF FISHES (4)

PR: ZOO 521 or CI. An analysis of the physiological mechanisms of metabolism and integration in fishes with emphasis on marine forms. lec-lab.

ZOO 545. ZOOGEOGRAPHY (3)

PR: BIO 445. Zoogeographic principles and general patterns of terrestrial and marine distributions.

ZOO 561. ANIMAL SOCIAL BEHAVIOR (5)

PR: CI. An introduction to comparative ethology, with emphasis on social behavior and the evolution of behavior. lec-lab.

ZOO 562. MECHANISMS OF ANIMAL BEHAVIOR (4)

PR: BIO 201-3, CHM 331-333 and CI. A comparative approach to communication and orientation in animals including homing behavior and biological clocks. lec-lab.

FOR GRADUATE STUDENTS ONLY

ZOO 609. BIOCHEMICAL SYSTEMATICS (4)

PR: CI. A research oriented course on techniques for obtaining biochemical information for use in animal systematics. lec-lab.

ZOO 611. EXPERIMENTAL EMBRYOLOGY (5)

PR: ZOO 312, BIO 421-2 and CI. Lectures, laboratories, readings, and discussions relating to contemporary advances in the area of biochemistry of development. Experimental techniques will be studied. lec-lab.

ZOO 613. ADVANCED INVERTEBRATE ZOOLOGY (3)

PR: ZOO 313 or CI. An advanced zoological study of selected invertebrate groups with emphasis on regionally significant forms. Laboratory and field work required. lec-lab.

ZOO 614. PLANKTONOLOGY (4)

PR: ZOO 313. The ecology, systematics, and dynamics of marine planktonic organisms. lec-lab.

ZOO 617. SYSTEMATIC ORNITHOLOGY (3)

PR: ZOO 517 and CI. The classification and distribution of the birds of the world. lec-lab.

ZOO 618. ADVANCED MAMMALOLOGY (4)

PR: ZOO 518. Important literature and developments in mammalogy. Students will undertake individual research problems. lec-lab.

ZOO 619. ADVANCED ICHTHYOLOGY (5)

PR: CI. Systematic ichthyology with particular reference to the important literature together with a historical introduction. Laboratory devoted to completion of a systematic problem by each student. lec-lab.

ZOO 620. FIELD ORNITHOLOGY (3)

PR: ZOO 517 and CI. The use of local populations in the study of avian biology. lec-lab.

ZOO 621. PHYSIOLOGICAL ECOLOGY (5)

PR: CI. Effect of environmental factors on animal function at the cellular and organ system level with emphasis on control mechanisms. lec-lab.

ZOO 622. INVERTEBRATE PHYSIOLOGY (3)

PR: CI. A research-oriented study of selected topics in invertebrate physiology. Laboratory and field work required.

ZOO 631. ADVANCED GENETICS (5)

PR: BIO 332 and CI. A course in contemporary genetics, with special reference to molecular genetics, genetic fine structure analysis, and control of protein synthesis. lec-lab.

ZOO 661. ADVANCED ANIMAL BEHAVIOR (4)

PR: ZOO 561 and CI. Recent advances in comparative animal behavior (ethology). lec-lab.

ZOO 681. GRADUATE RESEARCH (1-9)

PR: CI. Directed research on non-thesis topics. May be repeated.

ZOO 683. SELECTED TOPICS IN ZOOLOGY (1-6)

PR: CI.

ZOO 691. GRADUATE SEMINAR IN ZOOLOGY (1)

PR: Graduate standing. May be repeated.

ZOO 699. M.A. THESIS (1-9)

PR: CI. May be repeated to a maximum of 9 credits.

GLOSSARY

An explanation of terms with which the reader may not be familiar.

Academic Year: Beginning of First Quarter to end of Fourth Quarter; usually considered as September 1 to August 31.

Admission: Acceptance of a student for enrollment.

Class Standing Codes:

- | | |
|---------------------------|--|
| 1. Freshman | 6. Student enrolled in master's program |
| 2. Sophomore | 7. Student accepted to candidacy in master's program |
| 3. Junior | 8. Master's degree holder |
| 4. Senior | 9. Student enrolled in doctoral program |
| 5. BA or BS degree holder | |

College: Unit within the University responsible for providing instruction in a given area of knowledge.

Course: A unit of instruction in a particular subject; usually one quarter in length.

Curriculum: A group of courses, forming a major field of study, required for a degree.

Elective: Any of a number of courses from which a student is allowed to select. A *free elective* is one not required in the student's curriculum.

Faculty: Persons in teaching and research; the instructional staff of the University.

Grade Point Ratio (GPR): Ratio of grade points to quarter hours attempted. (See Grading System, page 31.)

Graduate Program: A course of study leading to an advanced degree.

Hour, Credit Hour, Quarter Hour: Unit of academic work. The number of quarter hours specified for a course is usually equal to the number of times the class meets each week.

Lower Level: A general term applying to courses and programs offered at the freshman and sophomore levels.

Major: Student's academic area of concentration or field of specialization.

Matriculation: The first registration following admission as a classified student.

Prerequisite: Prior study or authorization required to qualify for enrollment in a course.

Quarter: Period of instruction into which the academic year is divided.

Registration: Process of enrolling for classes.

Term: Period of instruction into which the academic year is divided (i.e., Quarter).

Upper Level: A general term applying to courses and programs offered at the junior and senior levels.

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