CHEMISTRY

pounds, 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: CI. An integrated treatment of the conceptual and factual aspects of the traditionally less familiar elements, including noble-gas elements, unfamiliar non-metals, alkali and alkaline-earth metals, and the transition elements. Lecture.

CHM 621. ADVANCED ANALYTICAL CHEMISTRY (4)
PR: CI. A study of complete analytical process, including sample handling, separations, the analysis step, and statistical interpretation of data. Emphasis placed on separations and statistics. Lecture.

CHM 623. ELECTROCHEMISTRY (4)

CHM 625. ADVANCED ANALYTICAL TOPICS (4)
PR: CI. 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 (4)
PR: CHM 532 or CI. A survey of theoretical and synthetic organic chemistry. Problems of structure and reactivity will be considered. Lecture.

CHM 632. ADVANCED ORGANIC CHEMISTRY II (4)

CHM 633. ADVANCED ORGANIC CHEMISTRY III (4)

CHM 634. ADVANCED ORGANIC CHEMISTRY IV (4)
CR: CHM 532. 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: CI. Application of statistical mechanics to thermodynamics, the relation of molecular structure to thermodynamic properties. Lecture.

CHM 643. QUANTUM CHEMISTRY I (4)

CHM 645. QUANTUM CHEMISTRY II (4)
PR: CHM 643. Applications of quantum mechanics to problems in chemistry; molecular structure and spectra. Lecture.

CHM 647. CHEMICAL KINETICS (4)
PR: CI. Theory and methods for the study of reaction rates and the elucidation of reaction mechanisms. Lecture.

CHM 651. ADVANCED BIOCHEMISTRY I ENZYMES (4)
PR: CHM 553 or CI. A study of biochemical systems with emphasis on enzymes. Lecture.

CHM 652. ADVANCED BIOCHEMISTRY II. PROTEIN AND NUCLEIC ACIDS (4)
PR: CHM 553 or CI. A study of biochemical systems with emphasis on proteins and nucleic acids. Lecture.

CHM 653. ADVANCED BIOCHEMISTRY III. BIOORGANIC MECHANISMS (4)
PR: CHM 553 or CI. A study of biochemical systems with emphasis on mechanisms of biological reaction. Lecture.

CHM 654. ADVANCED BIOCHEMISTRY IV. BIOPHYSICAL CHEMISTRY (4)
PR: 553 or CI. A study of biochemical systems with emphasis on physical methods of experimentation and interpretation. Lecture.
CHM 681.  GRADUATE RESEARCH (1-15)
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.  MASTER’S THESIS (1-15)

CHM 781.  GRADUATE RESEARCH (1-15)

CHM 783.  SELECTED TOPICS (1-15)
The course content will depend on the interest of faculty members and student demand.

CHM 799.  PH.D. DISSERTATION (1-15)
PR: CI.

CLASSICS AND ANCIENT STUDIES

Faculty: Gessman, chairman; Henley, Zbar.

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)
Study of the character, ideas and cultural achievements of the peoples of the Ancient Near East and Mediterranean and their relevance for modern Western civilization, with special emphasis on the 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 354. GREEK LITERATURE IN TRANSLATION I: POETRY AND PROSE (4)
An introduction to the masterworks of Greek poetry and prose including the epic, lyric poetry and history. This course is an elective for students who do not have a reading knowledge of Greek, and does not count toward the Classics and Ancient Studies major.

CLS 355. GREEK LITERATURE IN TRANSLATION II: DRAMATIC LITERATURE. (4)
An introduction to the masterworks of Greek drama in their cultural context. The course concentrates on comedy and tragedy of the fifth century B.C. An elective for students who do not have a reading knowledge of Greek, this course does not count toward the Classics and Ancient Studies major.

CLS 356. ROMAN LITERATURE IN TRANSLATION. (4)
An introduction to the poetry and prose of the Republican Age, the Augustan Age, and the Silver Age. This course is an elective for students who do not have a reading knowledge of Latin, and does not count toward the Classics and Ancient Studies major.

CLS 359. CLASSICAL WORD ROOTS IN SCIENCE (2)
A course in the Greek and Latin word stock used in all sciences (including medicine), technology, and law. Students' needs determine specific content of the course.

CLS 371. FOUNDATIONS OF LANGUAGE (4)
Introduction to synchronic linguistics, basic concepts, general features of language. Dialects, kinship groups, language types, writing systems. Methods or structural analysis with emphasis on the Trubetzkoy-Jacobson approach. (Alternate years.)

CLS 383. SELECTED TOPICS (2-5)
Course contents depend on student demand and instructor's interest and may range over the field of Latin language, literature, or civilization.

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.)

CLS 483. SELECTED TOPICS (2-5)
Course contents depend on student demand and instructor's interest and may range over the whole field of Ancient languages, literatures, and civilizations, in particular Latin, Greek, and Hebrew. Enrollment can be repeated for different topics.

CLS 485. DIRECTED READING (2-5)
Readings in special topics chosen by the student in cooperation with the instructor. Reading of literature also possible in English translation. Arrangement with department chairman before registration necessary.
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 CIVILIZATION (4)  
PR: CLS 321 or a course in Greek history or CI. Detailed study of the Aegean and Hellenic civilizations from their beginnings in Crete to the Roman period. Greek discoveries, explorations, and colonization. (Alternate years.)

CLS 529. ROMAN CIVILIZATION (4)  
PR: CLS 321 or 527 or a course in Roman history; or Latin major; or CI. Prehistoric Italy and the Etruscan civilization. History of the civilization of Rome and the Empire with emphasis on the Greek, Carthaginian, and Oriental influences. (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, glottogonic theories. Ethnolinguistics. (Alternate years.)

CLS 551. INDIVIDUAL RESEARCH (2-5)  
PR: CI. Specialized individual work in particular areas of student’s interests.

CLS 553. SELECTED TOPICS (2-5)  
For description see CLS 483.

CLS 585. DIRECTED READING (2-5)  
For description see CLS 485.

COOPERATIVE EDUCATION


COE 071. COOPERATIVE EDUCATION AND CAREER PLANNING (0)  
Course content covers career planning via the Cooperative Education Program, explores values of cooperative education, blending of theory and practice, and providing relevance in the educational process.

COE 171. COOPERATIVE EDUCATION, 1ST TRAINING PERIOD (0)  
PR: 24 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 271.

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 400. COOPERATIVE EDUCATION RESEARCH REPORT (1-5)  
PR: COE 071.

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.
DANCE 173

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)

COE 871. COOPERATIVE EDUCATION, TRAINING PERIOD (0)

COE 872. COOPERATIVE EDUCATION, TRAINING PERIOD (0)

DANCE

Faculty: Hug, chairman; Holt

DAN 201. MODERN DANCE I (3)
Study of basic principles of modern dance technique, for those without previous training. Practical work in beginning exercises and movement phrases utilizing changing rhythms and dynamics. May be repeated.

DAN 202. BALLET I (3)
Study of basic positions, barre and fundamental steps using the ballet vocabulary. For those without previous ballet training. Practical work in class. May be repeated.

DAN 203. CHOREOGRAPHY I (3)
Study and execution of basic principles of improvising. Preparation of studies in theme and variations, breath phrases and metric phrases.

DAN 301. MODERN DANCE II (3)
PR: DAN 201 or CI. Continuation of DAN 201. Further emphasis on style and phrasing. Work in projecting mood and quality by dancing and rehearsing in more advanced student choreography, leading to performance. Rehearsal hours to be arranged. May be repeated.

DAN 302. BALLET II (3)
PR: DAN 202 or CI. Continuation of DAN 202, progressing into adagio and allegro. Application of phrasing and style. May be repeated.

DAN 303. CHOREOGRAPHY II (3)
PR: DAN 203 or CI. Preparation of studies in rhythm, dynamics, form and motivation, culminating in a solo.

DAN 313. HISTORY OF DANCE TO THE 20TH CENTURY (3)
Study of the development of dance from its inception through the nineteenth century. Reading, lecture.

DAN 401. MODERN DANCE III (3)
PR: DAN 301 or DAN 302 or CI. Continuation of DAN 301 on an advanced level. Work in improvisation and individual invention creating an awareness of many possibilities of movement. Dancing in student choreography leading to performance. Rehearsal hours to be arranged. May be repeated.

DAN 402. BALLET III (3)
PR: DAN 302 or DAN 301 or CI. Continuation of DAN 302. Introducing pointe work. Each class member will dance in student choreography. Rehearsal hours to be arranged. May be repeated.

DAN 403. CHOREOGRAPHY III (3)
PR: DAN 303 or CI. Work directed toward duets and group dances. The students will submit choreographic ideas for instructor's approval, then proceed with rehearsals. The best dances will be performed and fully produced under supervision of student choreographers. Reading, lecture, laboratory.

DAN 413. HISTORY OF 20TH CENTURY BALLET (3)
DAN 481. DIRECTED STUDY (1-6)
PR: CC. May be repeated. Independent studies in the various areas of Dance. Course of study and credits must be assigned prior to registration.

DAN 501. MODERN DANCE IV (3)
PR: DAN 401 or CI. Continuation of DAN 401. Intensive work on the growth of personal performance style as a means to communication. Equal emphasis will be given to training the body in the development of technical excellence. Dancing in student choreography leading to performance. Rehearsal hours to be arranged. May be repeated.

DAN 502. BALLET IV (3)
PR: DAN 402 or CI. Continuation of DAN 402. Great emphasis to final shaping of the body into excellent execution and projection of Ballet technique. Dancing in student choreography leading to performance. Rehearsal hours to be arranged. May be repeated.

DAN 503. PRODUCTION (3)
Admission by audition. Open to all university students and required of dance majors for two quarters. The rehearsal and stage performance of new choreography. Actual production work in which members of the class assist the choreographer in costumes, taping and props. May be repeated.

DAN 513. HISTORY OF MODERN DANCE (3)
Study of the development of modern dance in the 20th Century in America; the different techniques, concepts in choreography and leading artists of our time. Reading, film, and lecture.

DEVELOPMENTAL COURSES

DRE 001. DEVELOPMENTAL READING (0)
Designed to help students develop maximum reading efficiency. Includes extensive instruction and laboratory practice in the improvement of adequate rates of reading, vocabulary and comprehension skills. An independent study approach is also available for students who prefer to assume responsibility for their own progress.

DMA 001. BASIC CONCEPTS OF ALGEBRA (0)
A programmed learning course in algebra from a modern point of view for the convenience of persons without adequate knowledge of simple algebraic manipulations and for persons without adequate preparation for MTH 101.

DMA 002. ANALYTICAL TRIGONOMETRY (0)
A programmed learning course in the study of the trigonometric functions as functions of real numbers and their application to triangles.

DRS 001. DEVELOPMENTAL STUDY SKILLS (0)
Designed to help students develop efficient learning methods needed for college success. Includes instruction and practice in effective study techniques, ranging from listening and taking notes to preparing for and taking exams.

ECONOMICS

Faculty: Pasternak, chairman; J.A. Anderson, Burton, Cloninger, Cooke, K. W. Davey, Herman, James, Kauder, J. B. Kennedy, McElhattan, Mellish, R. J. Murphy, R. F. Shannon, Shows, L. W. Small, F. G. Whartenby.

ECN 201. ECONOMIC PRINCIPLES I (4)
Economics as a social science; theoretical analysis of price determination of the product and factor markets.
ECN 202. ECONOMICS 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 product pricing
and recourse pricing.

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 bar-
ning.

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 function-
ing of the monetary system.

ECN 331. BUSINESS AND ECONOMIC STATISTICS I (5)
PR: MTH 211 or equivalent. The collection, presentation, analysis, and inter-
pretation of quantitative data as they pertain to economic and business problems.
This course should be taken, at the latest, in the junior year. Students who suc-
cessfully complete one or both of these courses may not also receive credit for
either SSI 301 Social Statistics or MTH 345 Introductory Statistics.

ECN 341. ECONOMICS OF TRANSPORTATION (4)
PR: ECN 201-202. Functions of transportation agencies, rate structure of trans-
portation 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 pro-
tect workers.
ECN 423. PUBLIC FINANCE (5)

ECN 425. MONETARY THEORY (5)
PR: ECN, 301, 323. A discussion of the impact of the financial sector upon real economic magnitudes. The course approaches its subject matter through the theory of capital and portfolio adjustments with emphasis upon the contributions of Pigou, Friedman, Heynes, Tobin, Gurley, and Shaw.

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 or CI. Problems, policies, and dynamics of economic growth in emerging nations. The benefits and relevance of the theory of economic development is examined within the context of the social and political milieu of today’s underdeveloped areas.

ECN 471. THEORY OF ECONOMIC DYNAMICS (4)
PR: ECN 323.
Economic theories of the business cycle and growth processes. Empirical studies, models for forecasting, and problems of policy are also considered.

ECN 489. SEMINAR IN SELECTED ECONOMIC TOPICS
(Variable 3-5 hours)
PR: Senior Standing and CI.
Topics to be selected by the instructor or instructors on pertinent economic issues.

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.

ECN 561. ECONOMETRICS (5)
PR: ETK 301 or C.I., and ECN 301, 323, 331, 361. An advanced discussion of simple and multiple regression and correlation analysis, miscellaneous regression problems, and applications in statistical demand functions, and production and cost analysis. Simultaneous equation models in macro economics.

FOR GRADUATE STUDENTS ONLY

ECN 601. RESEARCH METHODOLOGY (3)
PR: ECN 331 or 503 or equivalent. An investigation of research concepts, objectives, and methods including an introduction to linear programming, game theory, and end-use analysis.
ECN 603. MANAGERIAL STATISTICS I (3)
PR: ECN 331 or 503, or equivalent. The use of economic and business data in managerial control and analysis with an introduction to forecasting. Collection and presentation of data, tables charts, index numbers, linear and nonlinear secular trends, constant and changing periodic movements, and estimating cyclical fluctuations.

ECN 604. MANAGERIAL STATISTICS II (3)
PR: ECN 331 or 503, or equivalent. Simple and multiple correlation and regression analysis with applications in estimating and forecasting and an introduction to the use of statistical inference in managerial decisions.

ECN 605. MICRO-ECONOMICS (3)
PR: ECN 201 and 202 or equivalent. An investigation of the concepts, tools and methods of micro-economics analysis.

ECN 607. AGGREGATE ECONOMICS (3)
PR: ECN 605. 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


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 498 to be taken concurrently.
EDA 441. TEACHING METHODS IN THE SECONDARY SCHOOL ART (4)
PR: EDA 377. Techniques and materials of instruction in art, on the secondary level. EDA 498 to be taken concurrently.
EDA 498. FIELD WORK IN ART EDUCATION (2-6)
PR: CI. Supervised participation in activities related to art education in community centers, non-school youth programs, planned workshops and research.

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.

Curriculum

EDC 101. INTRODUCTION TO TEACHING (4)
PR: Freshmen only or CI. The people with whom teachers work, the types of tasks they perform and the challenges they can anticipate. Observation of teaching at several grade levels.
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.
EDC 480. DIRECTED STUDY (1-4)
Extension of competency in teaching field.
EDC 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. May be repeated for a total of 4 quarter hours.
EDC 498. SENIOR SEMINAR IN EDUCATION (3)
PR: Senior standing. Synthesis of teacher candidate’s courses in his complete college program. Required concurrently with student teaching.
EDC 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.

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 510. HEALTH PROBLEMS IN CHILDREN (4)
Health problems prevalent in the culturally disadvantaged child and the teacher’s role in referral or educational adaptation in classroom activities.
EDC 515. DIRECTING SPEECH ACTIVITIES IN THE SECONDARY SCHOOL (4)
Coaching and directing co-curricular activities in discussion, debate, oratory, oral
interpretation, and extemporaneous speaking. Planning and supervision of forensic
tournaments and speech contests.

EDC 555. EDUCATION WORKSHOP: (1-5)
Professional in-service workshop in various areas of education. May be repeated
when subjects differ. Not normally used in degree programs.

FOR GRADUATE STUDENTS ONLY

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 673. SCHOOL LAW (4)
Basic essentials of school law, a review of court decisions affecting American
education, with emphasis upon the study of Florida State Statutes as they
pertain to the question of Florida public schools.

EDC 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 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 ap-
propriate.

EDC 699. THESIS (1-9)

EDC 781. GRADUATE RESEARCH (1-5)
PR: CC. Directed study related to educational research, including participation
in regular seminars. May be repeated for credit to a maximum of 15 hours.

EDC 783. SELECTED TOPICS (1-5)
PR: CC. Selected topics in advanced Education. May be repeated for credit to a
maximum of 15 hours.

EDC 791 GRADUATE SEMINAR (1-5)
PR: CC. Seminar in advanced Education. May be repeated for credit to a ma-
imum of 15 hours.

EDC 799. DISSERTATION (1-5)
PR: CC. May be repeated for credit to a maximum of 15 hours.

Elementary Education

EDE 409. READING FOR THE CHILD (5)
PR: CBS 101-102. Readiness, word recognition, (phonic, visual and contextual
analysis) development of word meanings, basic study skills, comprehension abili-
ties 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)

EDE 417. SCIENCE FOR THE CHILD (5)

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 (3)
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. Observation and participation included.

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.

* The purchase of a coupon book to cover expendable items may be required for these courses.
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 607. 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 607 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.

Foundations

EDF 303. INTRODUCTION TO MEASUREMENT AND EVALUATION (4)
Elementary concepts basic to a general understanding of measurement and evaluation procedures. Students may not receive credit for both EDF 303 and PSY 413, Tests and Measurement in Psychology.

EDF 305. HUMAN DEVELOPMENT AND LEARNING (4)
PR: CBS 201, 203 and 75 hours completed. 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. Should not be taken concurrently with EDF 307.

* The purchase of a coupon book to cover expendable items may be required for these courses.
EDF 307. SOCIAL FOUNDATIONS OF EDUCATION (4)
PR: 75 hours completed. Social, economic and political context within which schools function and the values which provide direction for our schools; the culture as a motivating influence in instruction. Should not be taken concurrently with EDF 305.

EDF 309. PHILOSOPHY OF EDUCATION (4)
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.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

EDF 502. ADOLESCENCE (4)
A study of the educational, intellectual, personality, physical, social and vocational factors in adolescence.

EDF 575. AMERICAN DEMOCRACY AND PUBLIC EDUCATION (4)
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 612. CHILD DEVELOPMENT (4)
PR: EDF 611 or CI. Educational, emotional, hereditary, intellectual, social and physical factors influencing child growth and development.

EDF 613. PRINCIPLES OF LEARNING (5)
A consideration of several theories of learning and related research studies in regard to classroom application.

EDF 615. BIOLOGICAL BASES FOR LEARNING AND BEHAVIOR (5)
PR: One course in Educational Psychology. A study of human biological development and its influence upon learning and behavior.

EDF 617. MEASUREMENT OF INDIVIDUAL INTELLIGENCE (5)
PR: EDF 305 or 611 or equivalent and a course in educational measurement or statistics. Administration and interpretation of individual measures of intelligence. Students may not receive credit for both EDF 617 and PSY 617, Individual Intelligence Testing.
EDF 621.  SOCIO-ECONOMIC FOUNDATIONS OF AMERICAN EDUCATION  
(4)  
Significant socio-economic factors as they relate to major problems facing American education.

EDF 623.  HISTORICAL FOUNDATIONS OF AMERICAN EDUCATION  
(4)  
Historical and comparative problems in American education which are relevant to contemporary issues.

EDF 625.  PHILOSOPHICAL FOUNDATIONS OF AMERICAN EDUCATION  
(4)  
Major philosophies of education which are relevant to an understanding of contemporary educational issues.

EDF 627.  PROSEMINAR IN COMPARATIVE EDUCATION  
(4)  
Contemporary policies and practices in education in selected countries of the world. Methodology in Comparative Education. Consideration will be given to needs and interests of individual students.

**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.

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.

Library—Audio-Visual

EDL 411. SCHOOL LIBRARY ADMINISTRATION AND SERVICE (5)
Development, philosophy, objectives, standards and current trends in school libraries. Introduction to library operations, programs and services in the school and in the community.

EDL 412. ORGANIZATION OF THE SCHOOL LIBRARY AS A MATERIALS CENTER (5)
Media quarters (materials center), facilities and equipment. The application of the principles of library organization and service to the administration and service of all media in the school.

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)
Utilization of open and closed circuit broadcasting in the instructional process.
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 (4)
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 for the school library.

EDL 517. BOOKS AND RELATED MATERIALS FOR YOUNG PEOPLE—Part I (3)

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)
Lab fee $10.00. Basic techniques for the preparation of a variety of audio-visual instructional materials.

EDL 524. STORYTELLING FOR ELEMENTARY SCHOOL CHILDREN (4)
Review of the literature of storytelling; criteria in selection of storytelling materials; practice in using the arts and skills of oral communication in transmitting the literary heritage to young children.

FOR GRADUATE STUDENTS ONLY

EDL 600. FOUNDATIONS OF LIBRARIANSHIP (5)
PR: EDL 411 or its equivalent. Overview of and introduction to the study of library service: history; organization; specialized literature; outstanding leaders; current trends, issues and problems. Place of the library in society with its contributions to that society.

EDL 601. BIBLIOGRAPHY AND BOOK SELECTION (5)

EDL 602. HISTORY OF LIBRARIES (4)
Development of libraries as found from the earliest records to the great libraries of modern times and the library as a social institution.

EDL 603. HISTORY OF BOOKS AND PRINTING (4)
PR: EDL 600 or consent of the instructor. The making of books from earliest times to the beginning of the Twentieth Century, including the manuscript book, the invention and spread of printing, type design, methods and styles of illustration.

EDL 604. CONTEMPORARY PUBLISHING AND PRINTING (4)

EDL 605. HISTORY OF CHILDREN’S LITERATURE (5)
Historical bibliographical survey of imaginative and informational literature for children.

† Only two out of sequence EDL 602, 603, 604 may be taken for any one program.
EDL 607. THE CURRICULUM AND INSTRUCTIONAL TECHNOLOGY (5)
Effective utilization of instructional materials as they relate to specific areas of the
curriculum in elementary and high school programs.

EDL 609. SUPERVISED FIELD WORK IN SCHOOL LIBRARIES (4)
PR: Consent of major adviser.

EDL 610. BOOKS AND RELATED MATERIALS OF LATIN AMERICAN
COUNTRIES SUITABLE FOR CHILDREN AND YOUNG PEOPLE (4)
Bibliographic sources, aids and tools for the selection and utilization of Latin
American books and related materials suitable for children and young people.
Examination of representative materials in terms of the basic principles and
criteria of selection for libraries.

EDL 611. ADVANCED SUBJECT REFERENCE AND BIBLIOGRAPHY (4)
PR: EDL 513. Literature of the humanities, social sciences, science, and
technology.

EDL 612. THE ORGANIZATION AND ADMINISTRATION OF THE SCHOOL
MEDIA CENTER (5)
PR: EDL 600 or its equivalent. Media quarters, facilities and equipment. Basic
principles of organization and administration of media programs in elementary
and secondary schools.

EDL 615. CLASSIFICATION AND CATALOGING OF NON-BOOK MATERI­
ALS (3)
Principles and practice in the cataloging of non-book materials for the media
center.

EDL 621. AUDIO-VISUAL ADMINISTRATION (5)
PR: EDL 523 and 607. Audio-visual administrative practices in school systems
and junior colleges.

EDL 623. ADVANCED PREPARATION AND PRODUCTION OF INSTRUC­
TIONAL MATERIALS (4)
By permission of instructor. Lab fee $10.00. Designed for the media specialist.
Advanced techniques for the preparation of audio-visual materials of instruction.

EDL 625. READING GUIDANCE PROGRAMS IN LIBRARIES AND CLASS­
ROOMS (4)
The factors and forces that influence reading interests and habits of youth;
programs for teaching the investigative and library skills; the materials and
methods for the guidance of reading, grades 1-12.

EDL 629. RADIO AND TELEVISION TECHNIQUES FOR EDUCATORS (4)
Utilization and broadcasting techniques for educators. Stress will be placed on
local school production, micro-teaching, and studio broadcasting.

EDL 681. INDIVIDUAL RESEARCH AND INDEPENDENT STUDY (1-5)
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. VOCAL MUSIC IN THE SENIOR HIGH SCHOOL (5)
PR: EDM 437.

* Each class meets as a performing group. Score reading, conducting, organizational pro­
cedures, historical relationships, and methods at the appropriate grade levels. Teaching
techniques concerning the presentation of elements of theory, general music, and literature.
FOR GRADUATE STUDENTS ONLY

EDM 601. TECHNIQUES OF RESEARCH IN MUSIC EDUCATION (4)
Professional bibliography and individual research projects.

EDM 603. MUSIC SUPERVISION AND ADMINISTRATION (3)
The music curriculum in relation to the total school program; staff and budgetary needs.

EDM 605. THE TEACHING OF MUSIC LITERATURE (3)
Music literature appropriate for grades K-12 and methods of presentation to develop music concepts and sensitivity.

EDM 614. VOCAL MATERIALS AND CONDUCTING (4)
A study of materials appropriate for use in vocal groups. Emphasis is given to vocal materials appropriate for use in secondary schools.

EDM 617. INSTRUMENTAL MATERIALS AND CONDUCTING (4)
A study of materials appropriate for use in instrumental groups. Emphasis is given to instrumental materials appropriate for use in secondary schools.

EDM 633. CURRENT TRENDS IN SCHOOL INSTRUMENTAL MUSIC (3)
New materials, equipment, techniques of teaching and recent historical trends in instrumental music.

EDM 635. CURRENT TRENDS IN SCHOOL VOCAL MUSIC (3)
New materials, equipment, techniques of teaching and recent historical trends in vocal music.

Natural Science—Mathematics

EDN 425. NEW TRENDS IN TEACHING THE PHYSICAL SCIENCES (4)
Physical Science Study Committee Physics, Chemical Education Materials Study and other new approaches to the teaching of the physical sciences. Recommended for teachers of Physics, Chemistry and Earth Sciences.

EDN 427. NEW TRENDS IN TEACHING BIOLOGY (4)
Recent developments in curriculum materials and in strategies for teaching biological sciences, grades 7-12. Recommended for pre-service teachers of secondary school biology.

EDN 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 schools sciences.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

EDN 583. SELECTED TOPICS IN SCIENCE EDUCATION (1-5).
May be repeated when topics are not duplicated.

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.

Physical Education

*EDP 255. FIRST AID (3)
Meets American Red Cross certification requirements in standard and advanced first aid.

*EDP 311. SEMINAR AND FIELD EXPERIENCE IN PHYSICAL EDUCATION (5)
Approximately two hours per day are spent teaching in an elementary school which provides a variety of experiences designed to lead students to an understanding of children and how they learn in the elementary school.

*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 cardiorespiratory 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 321. SEMINAR AND FIELD EXPERIENCE IN PHYSICAL EDUCATION (5)
Elementary school physical education teaching experiences are provided for students. Seminars emphasize planning and teaching methodology. Health and recreation as they relate to elementary school children are studied.

*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 331. SEMINAR AND INTERNSHIP IN PHYSICAL EDUCATION (5)
Physical education teaching experience is provided at various grade levels. Seminars are concerned with organization, evaluation, and extra-class activities. Individual teaching is analyzed and programmed.

*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)
Includes analyzation and methodology of teaching swimming skills, conducting class activities, and the organization and conducting of aquatic programs in the school and the community.

*EDP 411. SEMINAR AND FIELD EXPERIENCE IN PHYSICAL EDUCATION (5)
Students spend approximately two hours a day at either the junior or senior high school level working in team teaching situations. Emphasis is placed on understanding the secondary level student and how teaching behavior can affect the learner.

*EDP 412, 422, 432. APPLIED HUMAN KINETICS (4 each)
A three course sequence which stresses the biomechanical analysis, motoric

* Enrollment in these courses requires admission to the Physical Education Program.
learning, the teaching techniques of dance, and the skills and strategies common
to a number of individual and team sports.

EDP 421. SEMINAR AND INTERNSHIP IN PHYSICAL EDUCATION (5)
Students reverse teaching levels from EDP 411 so that they will have experience
at both junior and senior high school levels. Team teaching prevails, however,
a transition is made to teaching larger numbers of students. Seminars empha-
size individualization techniques.

EDP 431. SEMINAR AND INTERNSHIP IN PHYSICAL EDUCATION (5)
Students have an option of teaching at the elementary, junior or senior high
school level as well as teaching mentally retarded students. Students will teach
for a full day for a period of from one to three weeks.

EDP 459. ATHLETIC TRAINING (3)
PR: CI. Principles and techniques of conditioning athletes for competition;
prevention and care of injuries in physical education and athletic activities.

EDP 460. HEALTH EDUCATION PROJECT (5)
PR: CI. A practicum in health education through field experiences with official
and voluntary health agencies.

EDP 465. 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 prob-
lems 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 psychol-
ogy to competitive athletics.

EDP 566. PHYSICAL EDUCATION FOR THE MENTALLY RETARDED (4)
An analysis of the neuromuscular and perceptual motor development of children
in regard to the special problems of the mentally retarded child and a study of
activities designed to improve his motor skills, physical fitness, and social
development.

* Enrollment in these courses requires admission to the Physical Education Program.
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 (4)
PR: EDF 601, EDE 609 or EDR 509. Critical analysis of current reading research; individual report or paper required.

Special Education

*EDS 211. INTRODUCTION TO SPECIAL EDUCATION (3)
Characteristics of exceptional children and professional opportunities available in 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 312. COMMUNICATION DISORDERS IN THE CLASSROOM (4)
Aiding the child with a speech, hearing, or language disorder in a classroom setting.

EDS 322. INTRODUCTION TO MENTAL RETARDATION (4)
PR: EDF 305, EDS 311, or CI. Classification, diagnosis, characteristics, and treatment of the mentally retarded.

EDS 329. UNDERGRADUATE SUPERVISED PRACTICUM IN MENTAL RETARDATION (1-14)
Supervised Practicum experiences in the educational, social and vocational planning of mentally retarded individuals.

* EDS 211 restricted to freshmen and sophomores; EDS 311 restricted to juniors and seniors. Credit cannot be received for both courses.
EDS 423 I & II. EDUCATIONAL PROCEDURES FOR THE EDUCABLE MENTALLY RETARDED (4,4)
PR: EDS 322 and concurrent enrollment in EDC 401, EDE 440, 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 479. SCHOOL PRACTICUM IN SPEECH PATHOLOGY (1-14)
Supervised practicum in Speech Pathology & Audiology in the school setting.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

EDS 511. THE SLOW LEARNER IN THE SCHOOL (4)
To provide educational planning for the slow learning child.

EDS 529. GRADUATE SUPERVISED PRACTICUM IN MENTAL RETARDATION (1-14)
Supervised graduate practicum encompassing teaching and supervising experiences in public school classes for the mentally retarded.

EDS 531. BEHAVIOR DISORDERS IN THE SCHOOLS (4)
PR: EDF 305 or EDF 377 or PSY 201 or CI. Survey of emotional and social disorders in children and the implications for educational programs. Students may not receive credit for both EDS 513 and PSY 613, Behavioral Disorders of Children.

EDS 541. THE CULTURALLY DISADVANTAGED AND THE SCHOOLS (4)
Characteristics and needs of the culturally disadvantaged and their implications for educational programming.

EDS 550. NATURE AND NEEDS OF THE GIFTED (4)
Characteristics and educational needs of gifted children and youth.

EDS 551. EDUCATIONAL PROCEDURES FOR THE GIFTED (4)
PR: EDS 550 or CI. Curriculum adjustments, methods and techniques, classroom organization necessary for teaching the gifted.

EDS 552. CREATIVE PROBLEM SOLVING FOR THE GIFTED (4)
Exploration of the concept of creativity, its factors, measurement and application to education. Opportunities are given to work with children in a laboratory setting and to prepare materials to be used with small groups of children.

EDS 559. FIELD WORK FOR THE GIFTED (1-14)
Planned supervised participation in activities related to specific areas of the gifted.

EDS 579. SCHOOL PRACTICUM IN SPEECH PATHOLOGY (1-14)
Supervised practicum in Speech Pathology & Audiology in the school setting.

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. Educational planning for exceptional children based on diagnostic information.

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 607, or CI. Evaluation of relevant literature.

EDS 621. SOCIOLOGICAL AND EDUCATIONAL ASPECTS OF MENTAL RETARDATION (4)  
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: EDS 531 and 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: EDS 531, 632, or 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 639. FIELD WORK IN EMOTIONALLY DISTURBED CHILDREN (1-14)  
PR: EDS 531 and CI. Field work and practicum experiences with emotionally disturbed children.

EDS 649. FIELD WORK WITH POTENTIALLY HANDICAPPED (CULTURALLY DISADVANTAGED): (1-9)  
Teaching and participation in activities related to teaching disadvantaged young children (N-3).

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.

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 SENIOR LEVEL AND GRADUATE STUDENTS

EDT 531. CURRENT TEACHING OF THE ENGLISH LANGUAGE (4)  
Application of recent techniques of language study, including structural and transformational grammar, to classroom teaching of English, especially in relation to current textbooks. (For graduate credit: PR-ENG 517 and certification in English.)
FOR GRADUATE STUDENTS ONLY

EDT 631. CURRENT TRENDS IN SECONDARY ENGLISH EDUCATION (4)
Curricular patterns and instructional practices in secondary English.

Vocational and Adult Education

EDV 141. INTRODUCTORY TYPEWRITING (3)
Basic skills of typewriting for personal use, common types of business letters, manuscripts, reports and tabulated materials. Credit by examination may be given to those students who have had less than one year prior instruction in typewriting.

EDV 143. ADVANCED TYPEWRITING (3)
Development of speed and accuracy, and a continuation of skill building procedures in production typewriting, emphasizing mailable transcripts.

EDV 251. INTRODUCTORY SHORTHAND (5)
PR: EDV 141 or equivalent. Introduction to basic skills and vocabulary in the Diamond Jubilee series of Gregg Shorthand.

EDV 252. INTERMEDIATE SHORTHAND (4)
PR: EDV 143, 251 or equivalent of each. Review of basic skills and vocabulary and emphasis on dictation speeds.

EDV 351. ADVANCED SHORTHAND DICTATION AND TRANSCRIPTION (4)
PR: EDV 143 and 252, or equivalent of each. Emphasis on advanced dictation speeds and transcription of mailable business communications.

EDV 353. ADMINISTRATIVE OFFICE MANAGEMENT (5)
Functions of the business office to include systems and procedures, communications, records management, office employee behavior, controlling the work of the office, principles of office organization, and planning for office equipment and supplies.

EDV 361. BUSINESS AND OFFICE MACHINES (4)
Instruction and practice on selected business and office machines to acquaint students with capabilities and limitations of the machines.

EDV 407. MAN, EDUCATION, AND WORK (4)
A study of man’s struggle for authenticity, the relationship of a job to man’s life, and the concept of education as a life-long process.

*EDV 431. SUPERVISED FIELD EXPERIENCE: (Specialization) (4-8)
Planned supervised functions in the area of specialization and co-ordinated with selected schools, government, offices, social agencies, businesses and industries on site.

*EDV 443. SPECIAL TEACHING METHODS: (Specialization) (4)
Methods, techniques, and materials for skill development.

*EDV 445. METHODS OF TEACHING: (Specialization) (4)
Methods, techniques, and materials for instruction.

EDV 461. OFFICE OCCUPATIONS PROCEDURES (4)
PR: EDV 143, 351, 361, and Senior standing. This course is designed to integrate learnings from preceding business and office education courses. Applications involve actual and simulated office situations, problems, and evaluation. Emphasis is placed on the qualifications needed for efficient business office operations.

* Areas of specialization in these courses are: Adult Education, Business Education, Distributive Education, and Industrial-Technical Education.
EDV 480. FACILITY DESIGN AND MANAGEMENT: (Specialization) (4) 
Design and develop instructional facility floor plans consistent with modern and efficient methods of instruction as well as evaluate existing classrooms, laboratories, and shops. Selection and location of equipment. Review and prepare operational plans for the management of equipment, furniture, tools, and supplies as they relate to effective student learning.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

EDV 503. LEARNING AND CURRICULUM CONSTRUCTION: (Specialization) (4)
Planning and organizing an instructional program for the purpose of developing an occupational competency.

EDV 504. PREPARATION AND DEVELOPMENT FOR TEACHING: (Specialization) (4)
The development of selected instructional materials, use of new educational media, performance evaluation instruments, and counseling techniques.

EDV 506. PROGRAM MANAGEMENT: (Specialization) (4)
Organization, co-ordination, and budgeting of adult, co-operative, and special programs.

EDV 507. PRINCIPLES OF ADULT AND VOCATIONAL EDUCATION (4)
An overview of current policies and principles to include their historical, sociological and philosophical bases out of which principles of adult and vocational education have been accepted and implemented.

EDV 511. SCHOOL-COMMUNITY DEVELOPMENT (4)
An approach to identifying and analyzing, developing and maintaining working relationships between appropriate school and community institutions, their channels of communication for the purpose of cooperative program involvement.

FOR GRADUATE STUDENTS ONLY

EDV 621. INDIVIDUALIZED INSTRUCTION: (Specialization) (4)
Attention is given to individualized instruction to include the special needs student, the slow learner, and the more capable student.

EDV 631. CURRENT TRENDS: (Specialization) (4)
Historical information, issues, current trends, new dimensions and problems in the area of specialization.

EDV 641. STAFF DEVELOPMENT: (Specialization) (4)
Implementation of new procedures addressed to discreet developmental needs of the staff as identified by an educational agency.

EDV 651. PRACTICUM: (Specialization) (4-8)
A problem-centered field study in the local community, school, government, office, social agency, business or industry.

EDV 661. SUPERVISION OF LOCAL PROGRAMS (4)
A study of the factors involved in the supervision of instruction including plans for teacher education, improvement of instruction, coordination of activities, and personnel relations.

EDV 671. ADMINISTRATION OF LOCAL PROGRAMS (4)
A study of the organization, selection of personnel, assignment of duties and responsibilities, and establishment of policies and procedures to accomplish the objectives of the local program within the federal, state, and local requirements.

* Areas of specialization in these courses are: Adult Education, Business Education, Distributive Education, and Industrial-Technical Education.
EDV 687. SEMINAR: (Specialization) (4)
PR: EDF 605 & 607. Applied research techniques and investigation of important current issues or theses in the area of specialization.

Social Studies

EDW 461. TEACHING METHODS IN 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.

Foreign Languages

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.

ENGINEERING


* Areas of specialization in these courses are: Adult Education, Business Education, Distributive Education, and Industrial-Technical Education.
Basic Engineering Course Work

EGB 101. GRAPHIC ANALYSIS I (4)
The theory and application of projective systems and related topics. Basic problems in descriptive geometry. (lec-lab)

EGB 102. GRAPHIC ANALYSIS II (3)

EGB 103. GRAPHIC ANALYSIS III (3)
CR: EGB 101. An elective course designed for students with limited background in pre-calculus mathematics necessary for graphical processes. Emphasis on graphical concepts of algebraic and trigonometric relationships.

EGB 104. GRAPHIC ANALYSIS IV (3)
CR: EGB 102. Continuation of EGB 103.

EGB 201. ENGINEERING PROBLEMS I (2)

EGB 203. ENGINEERING MEASUREMENTS (3)
PR: EGB 102. An introduction to the concepts of a systems approach and various techniques of measurement in engineering systems, both discrete and continuous. (lec-lab)

EGB 231. FORTRAN PROGRAMMING I (1)
Basic computer operation, programming a computer using machine language, assembly languages and FORTRAN. (lab)

EGB 232. FORTRAN PROGRAMMING II (1)
PR: EGB 231. Continuation of EGB 231. (lab)

EGB 301. ENGINEERING PROBLEMS II (2)
CR: MTH 303. Continuation of EGB 201.

EGB 302. ENGINEERING PROBLEMS III (2)
CR: MTH 304. Continuation of EGB 301.

EGB 303. ENGINEERING PROBLEMS IV (2)
CR: MTH 305. Continuation of EGB 302.

EGB 311. INTRODUCTION TO ELECTRICAL SYSTEMS I (3)

EGB 312. INTRODUCTION TO ELECTRICAL SYSTEMS II (3)
PR: EGB 311. Continuation of EGB 311.

EGB 313. INTRODUCTION TO ELECTRICAL SYSTEMS III (3)
PR: EGB 311. Continuation of EGB 311 or EGB 312.

EGB 321. THERMODYNAMICS I (3)

EGB 322. THERMODYNAMICS II (3)

EGB 325. DYNAMIC RESPONSE OF ENGINEERING SYSTEMS I (4)
PR: EGB 340, MTH 304. Linear dynamic analysis of electrical, mechanical, pneumatic, hydraulic and thermal systems. Introduction to analog computers; LaPlace transformation. Block diagram representation, transient and frequency response. (lec-lab.)
EGB 333. FORTRAN PROGRAMMING III (1)

EGB 337. ENGINEERING VALUATION I (3)
PR: EGB 231, MTH 303. A study in analyzing the economic limitations imposed on engineering activities using basic models which consider the time value of money.

EGB 340. SOLID MECHANICS I (5)
CR: PHY 221. Principles of statics, equilibrium of rigid bodies, elestostatics of simple structural elements. (lec-problem)

EGB 341. SOLID MECHANICS II (4)
PR: EGB 340. Dynamics of discrete particles and distributed mass bodies; spatial kinematics and kinetics. (lec-problem)

EGB 342. ENGINEERING MATERIALS I (6)
PR: CHM 213, EGB 340. An introduction to the structure and properties of engineering materials. (lec-lab)

EGB 343. FLUIDS I (6)
PR: EGB 341. Fundamental and experimental concepts in ideal and viscous fluid theory; momentum and energy considerations; compressible flow; boundary layer, Navier-Stokes equation. (lec-lab)

EGB 401. ENGINEERING ANALYSIS I (4)

EGB 501, 502, 503, 504, 505. ENGINEERING ANALYSIS II, III, IV, V, VI (3 each)
PR: CC 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.

EGB 601. ENGINEERING ANALYSIS VII (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.

Electrical and Electronic Systems

EGE 301, 302, 303, 404, 405, 406. LABORATORIES I through 6 (1 each)
PR: EGB 311, 312; CR: EGE 410, 420, 421, 430, respectively.

EGE 310, 410. NETWORK ANALYSIS AND DESIGN I, II (3 each)

EGE 320, 420. ELECTRONICS I, II (3 each)
PR: EGB 312. A second course in the physical principles of electronic devices with emphasis on semi-conductor electronics. Includes the analysis and design of amplifiers and switching circuits.

EGE 330, 430. FIELDS AND WAVES I, II (3 each)
PR: PHY 225-226. A basic introduction to electromagnetic field theory, including static and dynamic electromagnetic fields.

EGE 404, 405, 406. SEE EGE 301
EGE 410. SEE EGE 310.

EGE 411. LINEAR SYSTEMS ANALYSIS (3)
PR: EGE 310; CR: EGE 410. Provides further study in the analysis of linear networks and systems. Includes time and frequency domain points of view. LaPlace, Fourier and Super-position integrals.

EGE 420. SEE EGE 320.
EGE 421. COMMUNICATION CIRCUITS (3)
PR: EGE 420. Provides further study in electronic circuits. Includes oscillator, modulator, and detector analysis and design.

EGE 425. COMMUNICATION ENGINEERING (3)
PR: EGE 421. System considerations of electronic circuits; radio propagation; antennas; transmitters and receivers.

EGE 430. SEE EGE 330.

EGE 432. DISTRIBUTED NETWORKS (3)
PR: EGE 430. Transmission lines, standing waves, impedance, waveguides.

EGE 440. LINEAR CONTROL SYSTEMS (3)
PR: EGB 325. Introduction to analysis and design of linear feedback control systems. Covers block diagrams, flow charts, Bode, Nyquist and Root Locus techniques.

EGE 441. CONTROL LABORATORY (1)
CR: EGE 440.

EGE 444. LOGIC DESIGN (3)
PR: EGE 420. Binary number system; Boolean functions; cannonical forms; Boolean Algebra; minimization of combinational logic circuits; digital switching circuits; switching matrices logic circuits in computers.

EGE 445. LOGIC LABORATORY (1)
CR: EGE 444.

EGE 450. MICROELECTRONICS ENGINEERING (3)

EGE 451. MICROELECTRONICS LABORATORY (1)
CR: EGE 450.

EGE 460, 462, 464. ELECTROMECHANICS I, II, III (3 each)

EGE 461, 463, 465. ELECTROMECHANICS LAB 1, 2, 3 (1 each)
CR: EGE 460, 462, 464 respectively.

EGE 474, 476, 478. 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.

EGE 475, 477, 479. SYSTEMS LABORATORIES 1, 2, 3 (1 each)
CR: EGE 474, 476, 478 respectively.

EGE 480, 481, 482. SPECIAL ELECTRICAL TOPICS I, II, III (1-4 each)
PR: CC. An individual or team project involving the design of an electrical component or system. Required of all electrical seniors.

EGE 499. DESIGN PROJECT (3)
PR: Senior Standing. An individual or team project involving the design of an electrical component or system. Required of all electrical seniors.

EGE 520. PULSE CIRCUIT PRINCIPLES (3)
PR: EGE 411, 421. An introduction to the analysis and design of pulse and timing circuits with applications.

EGE 530. UHF PRINCIPLES (3)
PR: EGE 411, 421, 430. A study of tubes, devices and circuits peculiar to systems which operate at ultra high and super high frequencies.

EGE 531. UHF LABORATORY (1)
CR: EGE 530.

EGE 540. NONLINEAR CONTROL SYSTEMS (3)

EGE 541. CONTROL LABORATORY (1)
CR: EGE 540.
EGE 544. DIGITAL COMPUTERS (3)
  PR: EGE 444. Digital arithmetic; computer subsystems, arithmetic units; control units; memory units; general purpose computers.

EGE 545. DIGITAL LABORATORY (1)
  CR: EGE 544.

EGE 548. ELECTRICAL MEASUREMENTS (2)
  PR: EGE 411. Techniques and principles of electronic measurement.

EGE 549. MEASUREMENTS LABORATORY (1)
  CR: EGE 548.

EGE 560. POWER SYSTEMS ANALYSIS (3)
  PR: CC. Analysis techniques for AC power systems.

EGE 580, 581, 582. SPECIAL ELECTRICAL TOPICS I, II, III (1-3 each)
  PR: CC

EGE 585. ENGINEERING SEMINAR (1)
  PR: CC

EGE 599. RESEARCH OR DESIGN (1-9)
  PR: CC

EGE 610, 611. 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.

EGE 612. NONLINEAR CIRCUITS (3)
  PR: CC. Analytical and topological approaches to nonlinear circuits; nonlinear resonance; relaxation oscillations.

EGE 614, 615, 616. 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.

EGE 622. NOISE THEORY (3)
  PR: CC. Electrical noise and signals through linear filters and electronic systems.

EGE 626, 627, 628. 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.

EGE 630, 631, 632. 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 activities, antennas and radiation.

EGE 635. MICROWAVE GENERATION AND AMPLIFICATION (3)

EGE 636. ELECTRICAL LABORATORY (1)
  CR: EGE 635.

EGE 637. MICROWAVE COMPONENTS (3)
  PR: CC. A study of directional couplers, junctions, cavities and other passive microwave components including microwave integrated circuits.

EGE 638. MICROWAVE NETWORKS (3)
  PR: CC. Scattering and transfer representations of n-ports. Odd and even mode theory. Wave filters.

EGE 640. DIGITAL CONTROL SYSTEMS (3)
  PR: EGE 440 or CC. Sample-data and digital control processes.
EGE 641. RANDOM PROCESSES IN CONTROL SYSTEMS (3)
PR: EGE 440 or CC. Analysis and design of control systems subject to random inputs and disturbances.

EGE 642. MODERN CONTROL THEORY (3)
PR: EGE 440, 540, 640, 641 or CC. A study of modern control techniques including optimum and adaptive control.

EGE 644. DIGITAL MACHINES I (3)
PR: EGE 444. Mathematical Foundation; minimization, design of sequential logic circuits, state diagrams.

EGE 645. DIGITAL MACHINES II (3)
PR: EGE 644. Digital arithmetic; binary codes in computers; design of special purpose computers; introduction to sequential machine theory; examples of sequential machines.

EGE 647. SIMULATION TECHNIQUES FOR ELECTRICALS (3)
PR: CC. Theory of simulation of systems characterized by lumped and distributed parameters.

EGE 648. ELECTRICAL MEASUREMENTS (2)
PR: CC. Advanced techniques and principles of electronic measurement.

EGE 649. MEASUREMENTS LABORATORY (1)
CR: EGE 648.

EGE 650, 651, 652. SOLID STATE ELECTRONICS I, II, III (3 each)
PR: CC. Theory of operation and application of circuits and devices.

EGE 660, 661, 662. 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.

EGE 680. SPECIAL ELECTRICAL PROBLEMS I (1-3 each)
PR: CC.

EGE 690. ADVANCED ENGINEERING SEMINAR (1)
PR: CC.

EGE 699. RESEARCH OR DESIGN (1-18)
PR: CC.

Energy Conversion and Mechanical Design

EGR 311. THERMODYNAMICS III (3)
PR: EGB 322. The study of energy conversion processes and cycles as modified for optimization of capacity and efficiency. Applications include pumps, compressors, turbines, internal combustion engines, power and refrigeration cycles.

EGR 315. HEAT TRANSFER I (4)
PR: EGB 322. The basic laws of conduction, convection and radiation; analysis of the effect on heat transfer of thermal conductivity, emissivity, fluid transport properties and Reynolds number. (lec-lab.)

EGR 326. DYNAMICS OF MECHANICAL SYSTEMS (3)
PR: EGB 341. 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 350. ENERGY CONVERSION LABORATORY I (2)
CR: EGB 322. 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.)

EGR 411. THERMODYNAMICS IV (3)
PR: EGR 311. Introduction to mathematical thermodynamics, the Maxwell relations, real gas behavior, ideal mixtures and solutions, introduction to phase and chemical equilibrium.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisite</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 413</td>
<td>FLUID MACHINERY (4)</td>
<td>EGB 342</td>
<td>Performance characteristics of pumps and fans; energy conversion in fluid machines; design of piping and duct systems; proper selection of pumps and fans for given fluid systems; analysis of system efficiency parameters; correlation of design predictions with experimental data.</td>
</tr>
<tr>
<td>EGR 417</td>
<td>FUELS AND COMBUSTION (3)</td>
<td>EGB 322</td>
<td>A study of the combustion characteristics of gaseous, solid and liquid fuels and equipment needed to safely and economically control combustion processes. (lec-lab.)</td>
</tr>
<tr>
<td>EGR 419</td>
<td>POWER PLANT ANALYSIS AND DESIGN (3)</td>
<td>EGR 315</td>
<td>Parameters affecting utility power production; daily load curves; estimation of future loads; economics of power generation; system efficiency as affected by the thermodynamic cycle, multunit scheduling, and load variation; heat transfer regions in the steam generator; water treatment methods.</td>
</tr>
<tr>
<td>EGR 421</td>
<td>INTRODUCTION TO NUCLEAR ENGINEERING I (3)</td>
<td>PHY 323</td>
<td>Neutron density and thermalization parameters; criticality calculations; transient flux parameters; reactor operation; control instrumentation.</td>
</tr>
<tr>
<td>EGR 424</td>
<td>REFRIGERATION AND AIR CONDITIONING (3)</td>
<td>EGR 315</td>
<td>Application of thermodynamics, heat transfer and fluid flow to the design of systems for controlling our environment; heating and cooling load calculations; psychrometrics of air conditioning processes.</td>
</tr>
<tr>
<td>EGR 425</td>
<td>MACHINE ANALYSIS AND DESIGN (3)</td>
<td>EGB 340</td>
<td>Stress analysis, stress strain relations, deflection analysis, shock and impact, selection of materials, strength of materials. Principles of design. (lec-lab.)</td>
</tr>
<tr>
<td>EGR 429</td>
<td>MECHANICAL DESIGN I (3)</td>
<td>EGR 326, EGR 428</td>
<td>Application of the principles of engineering mechanics, materials and manufacturing to the analysis and design of mechanical elements. (lec-lab.)</td>
</tr>
<tr>
<td>EGR 441</td>
<td>ANALOG COMPUTERS I (3)</td>
<td>EGB 325 or CI</td>
<td>The study of linear and nonlinear engineering systems using analog computers. Magnitude and time scaling. (lec-lab.)</td>
</tr>
<tr>
<td>EGR 445</td>
<td>DYNAMIC RESPONSE OF ENGINEERING SYSTEMS II (3)</td>
<td>EGB 325</td>
<td>Analysis of response of dynamic systems with emphasis on the interdisciplinary nature of such response. A continuation of Dynamic Response I, EGB 325.</td>
</tr>
<tr>
<td>EGR 450</td>
<td>ENERGY CONVERSION LABORATORY II (1)</td>
<td>EGR 350</td>
<td>Continuation of EGR 350 with emphasis on measurement techniques, energy balances of operating systems and technical report writing. (lec-lab.)</td>
</tr>
<tr>
<td>EGR 453</td>
<td>MECHANICAL MEASUREMENT AND CONTROL (3)</td>
<td>EGB 211, 325</td>
<td>Analysis of devices for measurement and control. Transmitters, error detectors, controllers and final control elements. Block diagram representation. (lec-lab.)</td>
</tr>
<tr>
<td>EGR 481</td>
<td>SPECIAL TOPICS ENERGY CONVERSION I (1-4)</td>
<td>CC</td>
<td></td>
</tr>
<tr>
<td>EGR 482</td>
<td>SPECIAL TOPICS ENERGY CONVERSION II (1-4)</td>
<td>CC</td>
<td></td>
</tr>
<tr>
<td>EGR 511</td>
<td>STATISTICAL THERMODYNAMICS (3)</td>
<td>EGR 311</td>
<td>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.</td>
</tr>
<tr>
<td>EGR 515</td>
<td>HEAT TRANSFER II (4)</td>
<td>EGR 315</td>
<td>Analysis of non-steady state heat transfer by mathematical and graphical means. Radiation from and through flames. Design of heat transfer equipment. (lec-lab.)</td>
</tr>
</tbody>
</table>
EGR 517. ENERGY TRANSFORMATION AND STORAGE (3)  
PR: EGB 311. Analysis of direct energy conversion systems; photoelectric cells, thermocouples, fuel cells, thermionic converters, magnetohydrodynamic devices, solar energy cells, rectifiers, inverters, energy storage devices.

EGR 521. INTRODUCTION TO NUCLEAR ENGINEERING II (3)  

EGR 522. ACOUSTICS AND NOISE CONTROL (3)  
PR: CC. 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 526. ANALYSIS METHODS FOR MECHANICAL DESIGN (3)  

EGR 528. MECHANICAL DESIGN II (3)  
PR: EGR 429. A continuation of EGR 429. (lec-lab.)

EGR 529. PROJECT DESIGN (3)  
PR: EGR 429. Correlation of previously acquired mechanical design experiences with a creative design project. (lec-lab.)

EGR 533. MECHANICAL VIBRATION AND BALANCING (3)  
PR: EGB 341, 401. Transient and steady state vibration analysis of mechanical systems with lumped parameters. Dynamic balancing, vibration isolation and simulation of systems.

EGR 535. LUBRICATION (3)  
PR: EGB 343, 401. The theoretical basis of lubrication and hydromonic bearing theory. The study of lubrication requirements of different types of machines.

EGR 541. ANALOG COMPUTERS II (3)  
PR: EGR 441. A continuation of EGR 440. Logical mode control, constrained mechanical systems, parameter identification techniques. (lec-lab.)

EGR 551. PHYSICAL MEASUREMENTS (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 554. HYDRAULIC CONTROL (3)  
PR: EGB 325, EGR 441, EGR 453, or CC. Hydraulic control system components and their effects on closed loop system performance. (lec-lab.)

EGR 556. 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 560. POWER UTILIZATION SYSTEMS (3)  

EGR 581. SPECIAL TOPICS ENERGY CONVERSION III (1-4)  
PR: CC.

EGR 582. SPECIAL TOPICS ENERGY CONVERSION IV (1-4)  
PR: CC.

EGR 611. THERMODYNAMICS OF FLUID FLOW (3)  
PR: CC. Interrelationship of the equations of fluid motion and of thermodynamics for ideal gases; subsonic and supersonic gas flows; flows with friction and with heat transfer; supersonic nozzle design; parameters of fluid thrust.

EGR 612. ADVANCED THERMODYNAMICS (3)  
PR: CC. Advanced treatment of the general equations of thermodynamics,
principal equations of chemical reaction; the chemical potential and equilibrium; analysis of metastable states. Irreversibility and steady flow.

EGR 615. 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; "grey" body calculations. Analysis of convective heat transfer by boundary layer theory and equations of fluid motion.

EGR 629. ADVANCED MECHANICAL DESIGN (3)
PR: CC. A technical application course involving the problem of developing machines to perform specified functions. The machine to be designed will be designated by the instructor. The analysis will include evaluating all parts for stress, vibration, wear and proper consideration of manufacturing processes involved. (lec-lab.)

EGR 630. APPLIED ENGINEERING ASPECTS OF FATIGUE (3)

EGR 633. VIBRATION ANALYSIS (3)
PR: EGB 533. Application of generalized coordinates, LaGranges's equation, matrix iteration, and other specialized methods to discrete multimass systems. Lateral vibrations of uniform machine elements.

EGR 642. DIMENSIONAL ANALYSIS AND MODEL THEORY I (3)
PR: CC. Theory of dimensional analysis, similitude, and design of models.

EGR 643. DIMENSIONAL ANALYSIS AND MODEL THEORY II (3)
PR: EGR 642. Continuation of EGR 642. Including model testing and correlation of tests with fractional analysis.

EGR 657. FLUID AMPLIFIERS AND CIRCUITS (3)
PR: CC. Analysis and design of fluid devices for use as amplifiers, logic devices and memory elements in instrumentation and control systems.

EGR 681. SPECIAL PROBLEMS I (1-4)
PR: CC.

EGR 682. SPECIAL PROBLEMS II (1-4)
PR: CC.

EGR 698. ADVANCED SEMINAR (1-3)
PR: CC.

EGR 699. RESEARCH OR DESIGN (1-9)
PR: CC.

Industrial Systems

EGS 401. INDUSTRIAL SYSTEMS (3)
Introduction to organizational, planning and control functions in industrial systems.

EGS 402. INDUSTRIAL PROCESSES (3)
PR: EGB 337. Introduction to basic industrial processes emphasizing interdependency and similarities among industries. Students research specific industries and visit local industrial plants. Lec-Lab.

EGS 403, 404. PRODUCTION DESIGN I, II (3 each)
PR: EGS 402, 461. Methods study, predetermined time systems, wage administration, work measurement techniques including stop-watch time study, work sampling, standard data and production studies. Lec-Lab.

EGS 405, 406. PRODUCTION CONTROL SYSTEMS I, II (3 each)
PR: EGS 404, 441. Principles and techniques of industrial planning and control systems design. Cost analysis, forecasting and controlling production activities, including the use of CPM, PERT and LOB.

EGS 407. ENGINEERING VALUATION II (3)
PR: EGB 337 or equivalent. Analysis of economic limitations on engineering
projects. Income tax considerations, replacement models, MAPI and obsolescence.

EGS 409. PLANT FACILITIES DESIGN I (4)
PR: EGS 405. Design and modification of plant facilities, including design of a complete manufacturing operation. Problems in plant location, layout, material handling and equipment selection.

EGS 421. HYBRID COMPUTERS (3)

EGS 429. COMPUTER PROJECTS (3)
PR: CC. Special projects involving the use of and operation of digital/analog computers.

EGS 441, 442. OPERATIONS RESEARCH I, II (3 each)
PR: EGS 461. An introduction to the basic operations research techniques—linear programming, dynamic programming, simulation and queueing.

EGS 461, 462. ENGINEERING STATISTICS I, II (3 each)
PR: MTH 303. An introduction to the basic concepts of statistical analysis. Probability, distribution functions, estimating and testing procedures, regression and correlation analysis.

EGS 471. CHEMICAL PROCESS CALCULATIONS (3)

EGS 472. TRANSPORT PHENOMENA (4)
PR: EGB 321, EGS 471. An introduction to momentum transfer, energy transfer, and mass transfer as applied to industrial chemical process problems.

EGS 473, 474. CHEMICAL PROCESS PRINCIPLES I, II (4 each)
PR: CHM 442, EGB 343, EGS 472. 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.

EGS 475. INDUSTRIAL CHEMISTRY (3)
PR: CHM 332, EGS 474. 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.

EGS 503. HUMAN FACTORS (3)
PR: CC. Problems in the design, analysis and evaluation of man-machine systems from the viewpoint of physical, mental and psychological characteristics and limitations encountered.

EGS 505. INVENTORY CONTROL (3)
PR: EGS 406 or equivalent. Properties of inventory systems and the fundamentals of deterministic and probabilistic inventory models.

EGS 507. ENGINEERING VALUATION STUDIES (3)
PR: CC. The analysis of economic considerations affecting engineering decision making. Not open to students who have had EGS 407.

EGS 521, 522. COMPUTER SIMULATION I, II (3 each)
PR: CC. Use of digital, analog and hybrid computers in simulating physical and industrial systems.

EGS 540. OPERATIONS RESEARCH (3)
PR: CC. Linear programming, game theoretic models, economic optimization. Not open to students who have had EGS 442.

EGS 541, 542. 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.
EGS 560. INDUSTRIAL STATISTICS (3)
PR: CC. Industrial applications of probability, testing of hypotheses, regression techniques and analysis of variance. Not open to students who have had EGS 462.

EGS 561, 562. DESIGN OF EXPERIMENTS I, II (3 each)
PR: EGS 462 or equivalent. Development of the basic experimental designs. Randomized block, latin squares and factorial designs.

EGS 563. ENGINEERING STATISTICS III (3)
PR: EGS 462 or equivalent. Application of non-parametric statistics, sequential analysis, orthogonal polynomials and other optimization techniques to industrial problems.

EGS 565. STATISTICAL QUALITY CONTROL (3)
PR: EGS 461 or equivalent. Application of statistical techniques to the control of industrial processes. Control charts and acceptance procedures. Sequential sampling.

EGS 566. RELIABILITY ENGINEERING (3)

EGS 580, 581, 582. SPECIAL INDUSTRIAL PROJECTS I, II, III (1-3 each)
PR: CC.

EGS 603. MAN/MACHINE SYSTEMS (3)
PR: EGS 503. Principles of work measurement, process analysis, value analysis, and human factors and their application to industrial situations.

EGS 605. PRODUCTION CONTROL SYSTEMS III (3)
PR: EGS 406 or equivalent. Forecasting procedures, development of production plans, scheduling techniques and inventory models. Application of EDP to production control systems.

EGS 607. ADVANCED ENGINEERING VALUATION (3)
PR: EGS 407 or equivalent. Statistical models for analyzing engineering alternatives from an economic viewpoint. The use of advanced engineering economy concepts in solving industrial problems.

EGS 609. PLANT FACILITIES DESIGN II (3)
PR: EGS 409 or CC. Advanced techniques for evaluation of alternative plans for plant arrangement, including equipment location and material handling systems.

EGS 641. LINEAR PROGRAMMING (3)
PR: EGS 442 or equivalent. The simplex method, degeneracy, duality theory; applications of linear programming to industrial problems.

EGS 642. NONLINEAR AND DYNAMIC PROGRAMMING (3)

EGS 644. QUEUEING THEORY (3)
PR: EGS 442, 462. Deterministic and probabilistic queueing models. Poisson queues and special non-Poisson queues with exponential and non-exponential services. Single and multiple channel queues.

EGS 646. MULTIVARIABLE OPTIMIZATION (3)

EGS 647, 648. STOCHASTIC PROCESSES I, II (3 each)
PR: EGS 662. 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.

EGS 666. THEORY OF RELIABILITY (3)
PR: EGS 462 or equivalent. Topics in statistical methodology which have ap-
applications in the field of reliability. Discrete and continuous distribution models, reliability estimation, reliability structure and growth models, and statistical design for reliability.

**EGS 668. SPECIAL TOPICS IN STATISTICS (3)**
PR: CC. Special topics in statistics related to research in engineering.

**EGS 680, 681, 682. SPECIAL INDUSTRIAL TOPICS I, II, III (1-3 each)**
PR: CC.

**EGS 687, 688. INDUSTRIAL SYSTEMS DESIGN I, II (3 each)**
PR: EGS 521. Design of integrated systems using statistical and operations research models. Simulation of integrated systems using digital, analog and hybrid computers.

**EGS 698. ADVANCED ENGINEERING SEMINAR (1-3)**
PR: CC.

**EGS 699. RESEARCH OR DESIGN (1-12)**
PR: CC.

**Structures, Materials and Fluids**

**EGX 401. STRUCTURES I (5)**
PR: EGB 340. Elastic analysis of structural members, concepts of variational energy principles including virtual work, minimum potential energy, and complementary energy, elastic and inelastic stability.

**EGX 402. ENGINEERING MATERIALS II (4)**
PR: EGB 342, EGB 321. Thermodynamics of Solid Materials. Entropy and free energy concepts applied to equilibrium and rate processes in metallic, ceramic and polymer systems. Metallography. (lec-lab.)

**EGX 410. CONCEPTS OF STRUCTURAL DESIGN (4)**
CR: EGX 401. Applications of solid mechanics, materials science, and structural analysis; local effects and connections, critical review of current code and design practices.

**EGX 420. CONCEPTS OF MATERIALS ENGINEERING (3)**
PR: EGX 402. Application and selection of metals, ceramics, and polymers in engineering problems. Materials technology an failure analysis. (lec.)

**EGX 481. TRANSPORTATION I (4)**
PR: EGB 203, CI. Introduction to Transportation Engineering. (lec.)

**EGX 485. SOIL MECHANICS I (4)**
PR: EGB 341. Fundamental and experimental concepts in soil mechanics with emphasis on soil properties, soil moisture, soil structure and shearing strength. (lec.)

**EGX 503. FREE SURFACE FLOW (4)**
PR: EGB 343. Fundamental and applied aspects of free surface flow, emphasizing open channel and estuary hydraulics.

**EGX 504. EXPERIMENTAL SMF I (4)**
PR: EGB 343. An introduction to the experimental methods used in the study of structures, materials, fluids.

**EGX 505. SOLID MECHANICS III (3)**
PR: EGB 341. Dynamics of discrete and distributed mass, spatial kinematics, and kinetics, inertia tensor, Euler equations.

**EGX 510. STRUCTURES II (4)**
PR: EGX 401. Elastic and inelastic structures of composites and structural laminates, and matrix media; prestressed structural systems.

**EGX 511. STRUCTURES III (5)**

**EGX 520. ENGINEERING MATERIALS III (4)**
PR: EGB 342. The Structure of Solid Materials. Crystalline and glassy states in

EGX 521. ENGINEERING POLYMERS (3)
PR: CC. Structure and bulk properties of polymers. High elasticity, topics in viscoelasticity, the glass transition, irreversible deformation. Technology of plastics, fibers and elastomers.

EGX 522. CORROSION (3)

EGX 523. DIFFUSION (3)
PR: EGX 402. Theoretical and practical analysis of diffusion in solids including the physical meaning and implications of the concepts which influence and apply to diffusion in crystalline solids.

EGX 524. FRACTURE MECHANICS (3)
PR: CI. Introduction to mechanics of fracture. Design and testing for fracture toughness; microscopic plastic deformation, crack propagation, fatigue, ductile-brittle transition. (lec-lab.)

EGX 530. FLUID MECHANICS III (4)
PR: EGB 343. Mathematical hydrodynamics, inviscid flow. (lec-lab.)

EGX 535. WATER RESOURCES ENGINEERING I (4)
PR: EGB 343. A study of the engineering principles involved in the sustaining and managing of the quality and quantity of water available for human activities with particular emphasis on hydrology and hydraulics. (lec.)

EGX 536. WATER RESOURCES ENGINEERING II (4)
PR: EGB 343. A study of the engineering principles involved in the sustaining and managing of the quality and quantity of water available for human activities with particular emphasis on water uses, engineering economy, and regional water resource development. (lec.)

EGX 538. AERODYNAMICS (3)
PR: EGB 343. Fundamentals of compressible flow and flight dynamics. Structural Design; materials consideration. (lec.)

EGX 540. EXPERIMENTAL SMF II (4)
PR: CC. Review of elasticity, boundary value problems, finite element solutions; static and dynamic applications, circuitry; grid, brittle coating methods.

EGX 550. SOLID MECHANICS IV (3)

EGX 551. VIBRATIONS (3)
PR: EGX 505. Wave motion in solids and fluids, thermal and mechanical shock, wave transmission and attenuation; blast loading, Phase-plane analysis.

EGX 570. INTRODUCTION TO CONTINUUM (3)
PR: CC. Development of techniques of applied mathematics to SMF problems; partial differential equations, complex variable, vector and tensor analysis.

EGX 571. CONTINUUM I (3)
PR: CC. Development of fundamental problems in solids and fluids from a unified viewpoint; application to ideal media; elastic, plastic, viscoelastic, and fluids.

EGX 572. CONTINUUM II (3)
PR: EGX 571. 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.

EGX 575, 576. FINITE ELEMENT METHODS (3 ea.)
PR: EGX 571 or CI. Finite element methods in continuum mechanics. Application to solid and fluid mechanics problems. Computer solutions. (lec.)
EGX 580. SPECIAL TOPICS IN SMF (1-4)  
PR: CC.

EGX 581. TRANSPORTATION II (4)  
PR: EGX 481. Transportation system planning. (lec.)

EGX 585. SOIL MECHANICS II (4)  
PR: EGX 485. A study of the application of the principles of soil mechanics to problems in soils engineering. (lec.)

EGX 598. RESEARCH IN SMF (1-4)  
PR: CC.

EGX 599. RESEARCH IN SMF (1-4)  
PR: CC.

EGX 610. STRESSED SURFACE STRUCTURES (5)  
PR: EGX 401. Elastic and plastic behavior of plate and shell structures, smooth and ribbed surfaces. (lec-lab.)

EGX 611. STRUCTURAL STABILITY (5)  
PR: EGX 401. Elastic and plastic stability of trusses and frames, local buckling of structural members, local and generalized buckling of shell and plate structures.

EGX 612. STRUCTURAL DYNAMICS (4)  
PR: EGX 401. Behavior of structural components and systems when subjected to periodic and random dynamic loads.

EGX 620. ENGINEERING MATERIALS IV (4)  
PR: CC. Electronics processes in materials. Conductors and semi-conductors. Magnetic and Dielectric properties of solids, Quantum and statistical models. (lec-lab.)

EGX 621. ENGINEERING MATERIALS V (4)  

EGX 622. MICROMECHANICS (3)  
PR: CC. The discrete and continuum concepts in crystalline, polycrystalline and composite materials. Size effect and the continuum limit. (lec.)

EGX 623. ADVANCED X-RAY METHODS (4)  
PR: CI. X-Ray diffraction analytical and experimental studies of defects, texture, residual stress, crystal, and polycrystalline aggregates. (lec-lab.)

EGX 630. FLUID MECHANICS IV (4)  
PR: CC. Flow of Newtonian and Non-Newtonian viscous fluids. (lec-lab)

EGX 631. GAS DYNAMICS (3)  
PR: CI. Fundamentals of compressible flow. Wave and shock motion in unsteady and steady flow. Subsonic and supersonic speeds. (lec.)

EGX 640. EXPERIMENTAL SMF III (4)  
PR: EGX 504. Moiré and photoelastic experimental techniques. (lec-lab.)

EGX 641. EXPERIMENTAL SMF IV (4)  
PR: EGX 504. Theory and application of photoelasticity (lec.-lab.)

EGX 642. EXPERIMENTAL SMF V (4)  
PR: EGX 504. Three dimensional stress analysis methods. (lec-lab.)

EGX 643. EXPERIMENTAL SMF VI (4)  
PR: EGX 504. Theory and application of holography and optical imagery.

EGX 650. SOLID MECHANICS V (3)  

EGX 651. NONLINEAR DYNAMICS (3)  
EGX 660, 661, 662. HYDROSPACE ENGINEERING I, II, III, (3 each)
PR: CC. Advanced analysis of structural, material and fluid systems for marine environment, including underwater acoustics.

EGX 670. CONTINUUM MECHANICS III (3)
PR: CC. Theory of Plasticity. Initial and subsequent yield surfaces, incremental and deformation theories, flow theories; problems in ideal plasticity, strain hardening and slip line fields.

EGX 671. CONTINUUM MECHANICS IV (3)

EGX 672. NUMERICAL METHODS IN ENGINEERING ANALYSIS (3)
PR: CI. Application of mathematical techniques and principles to advanced engineering problems concerning structures, materials, fluids. (lec.)

EGX 673. ADVANCED ELASTIC ANALYSIS (3)
PR: CI. Contemporary elasticity theory and applications. (lec.)

EGX 674. APPLIED TENSOR ANALYSIS (3)
PR: CI. Tensor analysis applied to structures, materials, fluids. (lec.)

EGX 675. WATER RESOURCE SYSTEMS (5)
PR: EGX 536. The planning, design, and operation of water resource systems by the use of systems analysis and operations research techniques. (lec.)

EGX 680. SPECIAL TOPICS IN SMF (1-4)
PR: CC.

EGX 698. ADVANCED ENGINEERING SEMINAR (1-3)
PR: CC.

EGX 699. RESEARCH IN SMF (1-9)
PR: CC.

EGX 798. RESEARCH AND DISSERTATION (1-9)
PR: CC. Supervised independent research.

EGX 799. RESEARCH AND DISSERTATION (1-12)
PR: CC. Supervised independent research.

Computer Systems and Technical Service

ETK 301, 302. COMPUTER PROGRAMMING I, II (2 each)
Basic principles of computer operation, machine language, assembly language, and FORTRAN language programming principles.

ETK 303. COBOL PROGRAMMING I (3)
PR: ETK 301 or equivalent. Computer programming using the COBOL language.

ETK 420. INFORMATION SYSTEMS—PLANNING & DEVELOPMENT (4)
PR: ETK 412. Analysis, design and development of information systems. Specification and evaluation of computer systems.

ETK 501. COMPUTER SYSTEMS (3)
PR: ETK 302 or equivalent. Study of computer systems components, I/O devices, memory devices, theory of computer operation.

ETK 502, 503. COMPUTER LANGUAGES AND COMPUTATION I, II (3 each)

ETK 505, 506. THEORY OF DATA PROCESSING I, II (3 each)
PR: ETK 501. Structure and automatic processing of data files, data classification, information theory and information retrieval.

ETK 601. SPECIAL TECHNICAL TOPICS I (1-4)
PR: CC.
ETK 602. SPECIAL TECHNICAL TOPICS II (1-4)
PR: CC.

ETK 603. SPECIAL TECHNICAL TOPICS III (1-4)
PR: CC.

ENGLISH


ENG 131. READING ACCELERATION (2)
Designed to change the reading habits and patterns of students. (Also see Developmental Reading.)

ENG 201. MAJOR BRITISH WRITERS TO 1640 (4)
PR: CBS 102. An introduction to the poetry, prose, and drama of English literature from its beginning through the Metaphysical poets.

ENG 202. MAJOR BRITISH WRITERS, 1640-1780 (4)
PR: CBS 102. English literature from Milton to the pre-Romantics.

ENG 203. MAJOR BRITISH WRITERS, 1750-1912 (4)
PR: CBS 102. English literature from the Romantics through the late Victorians. For courses in writing for mass communications, see COM 300-341.

ENG 301. CURRENT LITERATURE (2)
An examination of significant fiction, drama, and poetry written since World War II.

ENG 305. MAJOR AMERICAN WRITERS TO 1865 (4)

ENG 306. MAJOR AMERICAN WRITERS, 1865-1912 (4)
PR: CBS 102. 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)
PR: CBS 102. Works by such American and British writers as Eliot, Pound, Yeats, Thomas, Shaw, Fitzgerald, Hemingway, Faulkner, Huxley, Woolf, Joyce, Lawrence, and others.

ENG 319. THE BIBLE AS LITERATURE (4)
PR: CBS 102. 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)

ENG 325. ADVANCED EXPOSITORY WRITING (4)
PR: CBS 102. Composition techniques in exposition, methods and styles of writing the article and the report.

ENG 335. WORLD LITERATURE (4)
PR: CBS 102. Masterpieces of the western world, in translation, including ancient, medieval, and Renaissance literature.

ENG 336. WORLD LITERATURE (4)
PR: CBS 102. Translated masterpieces of the Neoclassical, Romantic, Realistic and Naturalistic, Symbolist and Modern periods.
ENG 337. FOLK LITERATURE (4)
PR: CBS 102. Legends and myths, fairytales, and folktales; the imaginative source for much of our great literature, thought, and culture.

ENG 383. SELECTED TOPICS IN ENGLISH STUDIES (1-4)
PR: Sophomore standing. This course will examine in depth a recurring literary theme of the work of a small group of writers. Special courses in writing may also be offered under this title.

ENG 411. PLAYS OF SHAKESPEARE (4)
PR: ENG 201 and 12 hours of literature. A study of ten representative plays by Shakespeare.

ENG 415. BLACK FICTION.
Studies in the development of Black Fiction. Writers to be studied include Wright, Baldwin, Ellison, and others.

ENG 416. BLACK POETRY AND DRAMA.
Examination of representative black poets and dramatists, including Hughes, Jones, Cullen, Brooks; Hansberry, Davis, Baldwin, and Jones.

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 and sections of the novel. Evaluation of student work in conferences, selected readings. May be taken twice for credit.

ENG 425. THE AMERICAN NOVEL (4)
PR: 16 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 426. THE AMERICAN DRAMA (4)
PR: 16 hours of literature. American dramatic literature from the beginnings to the present.

ENG 429. EIGHTEENTH CENTURY BRITISH NOVEL (4)
PR: 16 hours of literature. The historical development of the British novel; precursors of the novel; Richardson, Fielding, Smollett, Sterne, and the Gothic novelists.

ENG 430. NINETEENTH CENTURY BRITISH NOVEL (4)
PR: 16 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 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 (1-5)
PR: 12 hours of literature. Directed study in special projects. Special permission of chairman required.

ENG 483. SELECTED TOPICS IN ENGLISH STUDIES (1-4)
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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Description and Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 501</td>
<td>CHAUCER (4)</td>
<td>20 hours of literature.</td>
<td>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.</td>
</tr>
<tr>
<td>ENG 502</td>
<td>THE LITERATURE OF MEDIEVAL ENGLAND (4)</td>
<td>20 hours of literature.</td>
<td>An examination of the historical and social backgrounds of medieval literature and representative works of the period.</td>
</tr>
<tr>
<td>ENG 503</td>
<td>ENGLISH DRAMA FROM THE BEGINNINGS THROUGH MARLOWE (4)</td>
<td>20 hours of literature.</td>
<td>Readings in representative tropes, cycle plays, morality plays, interludes and school plays; and in early Elizabethan dramatists: Lyly, Peele, Greene, Kyd, with an emphasis on Marlowe.</td>
</tr>
<tr>
<td>ENG 504</td>
<td>ENGLISH DRAMA FROM BEN JONSON TO 1642 (4)</td>
<td>20 hours of literature.</td>
<td>Chapman, Marston, Dekker, Middleton, Tourneur, Beaumont and Fletcher, Shirley; with emphasis upon Jonson, Webster, and Ford.</td>
</tr>
<tr>
<td>ENG 505</td>
<td>SEVENTEENTH CENTURY POETRY (4)</td>
<td>20 hours of literature.</td>
<td>Emphasis upon leading Metaphysical and Cavalier poets: Donne, Herbert, Jonson, Herrick, Marvell, and others.</td>
</tr>
<tr>
<td>ENG 507</td>
<td>MILTON (4)</td>
<td>20 hours of literature.</td>
<td>An examination of Paradise Lost, Paradise Regained, Comus, the shorter poems, and selected prose works.</td>
</tr>
<tr>
<td>ENG 511</td>
<td>RELIGIOUS AND EXISTENTIAL THEMES IN MODERN LITERATURE (4)</td>
<td>20 hours of literature.</td>
<td>Theological and philosophical ideas, allusions, and symbols in the writings of Dostoevski, Nietzsche, Mann, Joyce, Eliot, Camus, Sartre, and others.</td>
</tr>
<tr>
<td>ENG 513</td>
<td>THE ROMANTIC WRITERS (4)</td>
<td>20 hours of literature.</td>
<td>The poetry and poetics of Blake, Wordsworth, Coleridge, Byron, Shelley, Keats; with attention to lesser figures.</td>
</tr>
<tr>
<td>ENG 515</td>
<td>HISTORY OF THE ENGLISH LANGUAGE (4)</td>
<td>24 hours of literature.</td>
<td>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.</td>
</tr>
<tr>
<td>ENG 517</td>
<td>STRUCTURE OF AMERICAN ENGLISH (4)</td>
<td>20 hours of literature.</td>
<td>The phonology, morphology, and syntax of American English. Structural grammar; the application of linguistics to the teaching of English.</td>
</tr>
<tr>
<td>ENG 518</td>
<td>LINGUISTICS AND LITERATURE (4)</td>
<td>ENG 517 or equivalent or CI.</td>
<td>The analysis and interpretation of British and American literature, poetry, prose, and drama, using relevant materials from the field of descriptive and comparative linguistics.</td>
</tr>
<tr>
<td>ENG 519</td>
<td>SHAKESPEARE’S COMEDIES AND HISTORIES (4)</td>
<td>ENG 411.</td>
<td>An intensive study of Shakespeare’s major comedies and histories.</td>
</tr>
<tr>
<td>ENG 520</td>
<td>SHAKESPEARE’S TRAGEDIES (4)</td>
<td>ENG 411.</td>
<td>An intensive study of Shakespeare’s major tragedies.</td>
</tr>
<tr>
<td>ENG 521</td>
<td>RESTORATION AND 18TH CENTURY LITERATURE (4)</td>
<td>ENG 411.</td>
<td>(exclusive of the drama and novel) Concentration upon selected figures of the period: Dryden, Pope, Swift, Johnson and others.</td>
</tr>
<tr>
<td>ENG 523</td>
<td>NINETEENTH-CENTURY BRITISH LITERATURE (4)</td>
<td>20 hours of literature.</td>
<td>Essays of Carlyle, Newman, Mill, Ruskin, Arnold, Pater; poetry of Tennyson, Browning, Swinburne; novels of Dickens, Meredith; plays of Wilde, Shaw.</td>
</tr>
<tr>
<td>ENG 527</td>
<td>MODERN BRITISH AND AMERICAN POETRY (4)</td>
<td>20 hours of literature.</td>
<td>Selected poets from Hopkins to the present, with attention to modern poetic theory.</td>
</tr>
</tbody>
</table>
ENGLISH 213

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 531. LITERARY CRITICISM (4)
PR: 24 hours of literature. Emphasis on either the great critics and the principles of criticism or on applied criticism of fiction, poetry and drama.

ENG 535. TRANSFORMATIONAL GRAMMAR (4)
PR: 90 hours or CI. An introduction to the basic concepts of generative-transformational grammar with emphasis upon its implications for teachers of English.

ENG 559. RESTORATION-EIGHTEENTH CENTURY DRAMA (4)
PR: 20 hours of literature. Dryden, Congreve, Sheridan, Goldsmith, and others.

ENG 581. INDIVIDUAL RESEARCH (1-5)
PR: 20 hours of literature. Directed study in special projects. Special permission of chairman required.

ENG 583. SELECTED TOPICS IN ENGLISH STUDIES (1-4)
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.

ENG 585. DIRECTED READING (4)
Readings in special topics.

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 657. BRITISH RENAISSANCE PROSE (4)
PR: 24 hours of literature in English. A study of the thematic, generic, and rhetorical development of prose in England from 1500 to 1660. Lyly, Greene, Bacon, Donne, Browne, Hobbes, Milton, and others.

ENG 659. STUDIES IN RESTORATION-EIGHTEENTH CENTURY LITERATURE (4)
PR: 24 hours of literature in English. Concentration on selected works, authors or movements between 1660 and 1800.

ENG 667. STUDIES IN NINETEENTH CENTURY BRITISH NOVEL (4)
PR: 24 hours of literature in English. Dickens, Thackeray, Eliot, and others.

ENG 681. INDIVIDUAL RESEARCH (1-5)
PR: CI and 24 hours of literature in English. Directed study in special projects. Special permission of chairman required.

ENG 683. SELECTED TOPICS IN ENGLISH STUDIES (1-4)
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 (1-5)
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.
FINANCE

Faculty: Longstreet, chairman; Bolles, Brunhild, Deaux, Deiter, Kares, Landry, Modrow, Power, C.T. Smith.

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 202. INTRODUCTION TO INVESTMENTS (3)
Designed for non-business administration students who have not taken accounting or corporation finance, it emphasizes the operations of the security markets in the U. S. and the risks and returns of alternative investment media. 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 321. MONEY AND BANKING (4)
PR: ECN 202. Examines the structure and operations of our monetary system, commercial banking, central banking, money and capital markets, and provides an introduction to monetary theory and policy.

FIN 351. INTERNATIONAL FINANCE (5)
PR: ECN 201 and 202 or Cl. 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 institutional 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: FIN 321. A study of financial intermediaries and the capital markets and their interaction in the capital formation process.

FIN 451. FEDERAL RESERVE SYSTEM AND MONETARY POLICY (4)
PR: ECN 323 or FIN 321. 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.

FOR SENIOR LEVEL AND GRADUATE STUDENTS ONLY

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 Administration.

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: G. Johnson, Kase, McCracken, Strawn

FNA 443. FINE ARTS FORUM (1)
PR: CC. To aid Fine Arts students in understanding and appraising the various arts through systematic attendance at performances and other aesthetically significant events. Critical evaluation sessions will be held.

FNA 453. FINE ARTS SEMINAR FOR OFF-CAMPUS TERM (1-9)
PR: CC. CR: FNA 543. To facilitate an intensive study of the fine arts through primary experiences with creative activities which are uniquely available in major artistic centers.

FNA 543. COMPARATIVE ARTS/ISSUES IN CREATIVITY (3)
PR: Two history courses, theory or literature courses in major area or CC. An analysis of various theories of art and the intellectual implication of differing propositions about aesthetics. Students are urged to also take PHI 522, Aesthetics, as an elective. The combination of these two courses is a desirable approach to knowledge.

FNA 553. FINE ARTS 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 judgements of their colleagues. Discussion and critical evaluation.
Section 001 is reserved for Music and Music Education students.
Section 002 is reserved for Theatre Arts students.
Section 003 is reserved for Visual Arts and Art Education students.
Section 004 is reserved for Dance students.
FRENCH

Faculty: Arzybushev, Cherry, DeJongh, Glenisson, Milani de la Menardiere, Liaugminas, Wall, Whartenby.

Basic courses listed under Basic Studies.
Also see Romance Languages.

FRE 221. FRENCH FOR READING PROFICIENCY (0)
A rapid coverage of basic grammar and the acquisition of vocabulary necessary for passing the French Reading Knowledge Test.

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 310. HIGHLIGHTS OF FRENCH LITERATURE IN TRANSLATION (4)
A study in English of the most important writers since the French Revolution. Elective for students in all departments (except French majors).

FRE 383. SELECTED TOPICS (1-6)
Course content depends upon student demand and instructor's interest.

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 483. SELECTED TOPICS (1-6)
PR: CI. Junior standing. Course content depends upon student demand and instructor’s interest.

FRE 491. SENIOR SEMINAR (4)
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


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 516. FRENCH STYLISTICS (3)
PR: Graduate standing or by special permission. A study of advanced grammar and composition based on an analysis of various styles of writing.

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, Romains 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 (1-6)
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 (4)
A study of Old French morphology, phonetics and syntax with an introduction to the reading of Old French texts.

FRE 602. MEDIEVAL FRENCH LITERATURE (4)
A study of French literature in the Middle Ages.

FRE 611. RABELAIS. (3)
A detailed study of the works of the author with emphasis on his role as a humanist of the Renaissance.

FRE 612. MONTAIGNE (3)
A study of the complete works of Montaigne.

FRE 613. LA PLEIADE (3)
A study in depth of the writers of the Pleiade.

FRE 621. RACINE (3)
A study of the complete works of Racine.

FRE 622. MOÎRIÈRE (4)
A study of the works of Molière, designed to cover the major areas of his contribution to French literature.

FRE 623. PROSE WRITINGS OF THE SEVENTEENTH CENTURY (3)
A study of the prose writings of the seventeenth century.

FRE 631. VOLTAIRE (3)
A study in depth of the works of Voltaire.

FRE 632. ROUSSEAU (3)
A study in depth of the works of Rousseau.

FRE 641. BALZAC AND THE NOVEL (3)

FRE 642. ROMANTIC DRAMA AND POETRY (4)
A study in depth of the poetry and drama of the four major poets, Lamartine, Vigny, Musset and Hugo.

FRE 643. THE SYMBOLIST POETS (3)
A study in depth of Rimbaud, Verlaine, Baudelaire and Mallarme, including their influence on poetry of the twentieth century.
FRE 653. EXISTENTIAL NOVEL AND DRAMA (4)
A study in depth of the works of Sartre and Camus.

FRE 654. DRAMA BETWEEN THE TWO WORLD WARS (3)
A study of drama which was revised after World War I and ended with the formation of new schools at the beginning of World War II.

FRE 655. SAINT EXUPERY AND THE NOVEL OF ACTION (3)
A study of the literature of action by men of action, with emphasis on Saint Exupery, also J. Kessel, A. Malraux, H. de Montherlant, H. de Monfreid.

FRE 656. F. MAURIAC AND THE NOVEL OF THE UNCONSCIOUS (3)
A study of the novels of Mauriac from the point of view of the contribution of the unconscious to French literature and its place in the contemporary novel.

FRE 661. MINOR WRITERS IN FRENCH LITERATURE (3)
A study of the minor writers who are important as precursors of developing literary schools.

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 (4)
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: English, Grant, Kahn, Kenerson, Lyons, Miller, Reynolds, Rogier, Tucker, Tyree, Walsh, Welker.

GBA 351. ANALYTICAL DECISION MAKING: AN INTERDISCIPLINARY COMPUTER APPROACH (5)
The involvement of the computer in the business decision making process is examined. Programs are developed to solve typical problems in diverse business areas. Peripheral and hardware concepts are presented.

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.
GEOGRAPHY

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.

GBA 699. THESIS (6)

GEOGRAPHY

Faculty: Fuson, chairman; Limoges, Palmer, Rothwell, Schaleman, Stafford, Stowers.

GPY 301. SYSTEMATIC GEOGRAPHY (5)
Principles and concepts of the discipline; maps, earth-sun relations, weather, climate, soils, vegetation.

GPY 302. SYSTEMATIC GEOGRAPHY (5)
PR: GPY 301. Landforms and conservation of resources. Latter part of course deals with man's use of the natural environment.

GPY 303. HUMAN GEOGRAPHY (5)
PR: GPY 301-302. Systematic treatment of man's activities on earth: population, settlement, agriculture, industry, trade, transportation, and political aspects are among those considered.

GPY 371. WORLD GEOGRAPHY (5)
Man and nature in selected geographic regions. Open to anyone in the university.

GPY 403. PHYSICAL GEOGRAPHY (5)
PR: 301-302. 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 (5)
PR: GPY 301-302-303. 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 (5)
PR: GPY 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 regions may not be repeated for credit.

GPY 409. GEOGRAPHIC TECHNIQUES AND METHODOLOGY (5)
PR: 301-302-303. 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 501. GEOGRAPHIC LITERATURE AND HISTORY (4)
PR: Senior or graduate standing in geography, or CI. The origins and development of the discipline as revealed through an examination of the principal written sources. Special attention paid to leading personalities and modern periodicals.

GPY 503. METHODOLOGY I: QUANTITATIVE (4)
PR: Senior or graduate standing in geography, and a course in statistics, or CI. The application of quantitative techniques to geographic problems; factor, sensitivity, and spatial analysis.

GPY 505. METHODOLOGY II: CARTOGRAPHIC (4)
PR: Senior or graduate standing in geography, GPY 409 (Cartography), or CI. Application of various techniques for presenting graphic illustrations as research tools.
GEOLOGY

GPY 507. METHODOLOGY III: FIELD WORK (4)
PR: Senior or graduate standing in geography, GPY 503, 505. Data collection in a field situation, including observation, classification, interpretation, and presentation of the data.

GPY 581. INDIVIDUAL RESEARCH (1-5)
PR: 30 hours in geography and CL, or graduate standing in geography. Arrangement must be made with chairman prior to registration. May be repeated.

GPY 585. DIRECTED READING (1-5)
PR: 30 hours in geography and CL, or graduate standing in geography. Arrangement must be made with chairman prior to registration. May be repeated.

FOR GRADUATE STUDENTS ONLY

GPY 601. METHODOLOGY IV: ACADEMIC (4)
PR: Graduate standing in geography. Current trends in college geography, with the emphasis on the junior college program. Not available to thesis students.

GPY 603. SEMINAR IN ADVANCED PHYSICAL GEOGRAPHY (4)
PR: Graduate standing in geography. Analytic study of a problem selected from one or more aspects of the atmosphere, biosphere, hydrosphere, or lithosphere. May be repeated once for credit, but topic may not be repeated.

GPY 605. SEMINAR IN ADVANCED CULTURAL GEOGRAPHY (4)
PR: Graduate standing in geography. Analytic study of a problem selected from one or more aspects of the cultural landscape (urban, political, economic, population, settlement). May be repeated once for credit.

GPY 607. SEMINAR IN ADVANCED REGIONAL GEOGRAPHY (4)
PR: Graduate standing in geography. Analytic study of a selected region of the world. May be repeated once for credit, but region may not be repeated.

GPY 609. SEMINAR IN ADVANCED TECHNIQUES & METHODOLOGY (4)
PR: Graduate standing in geography. Analytic study of a selected geographic technique (such as remote sensing, graphics, photo interpretation, or computer applications) or an investigation into an aspect of methodology. May be repeated once for credit, but topic may not be repeated.

GPY 689. DIRECTED TEACHING (1-9)
GPY 699. THESIS (1-9)

GEOLOGY

Faculty: Ragan, chairman; Boulware, Griffin, O'Donnell, Spangler, 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.
GEOLOGY

GLY 311. MINERALOGY (4)
PR: GLY 201 and General Chemistry, or equivalent; or CI. Origin, occurrence, and chemistry of mineral groups. Identification of common minerals by physical and chemical properties. lec-lab.

GLY 351. INTRODUCTION TO HYDROGEOLOGY (5)
PR: GLY 201, 301 and CC. Occurrence, circulation, and distribution of subsurface water, its chemical and physical properties, relation to the geologic environment, exploration and development. lec-field-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 371. GEOLOGY OF OUR NATION'S PARKS (4)
Representative parks used to illustrate current concepts in Geology of general interest. Designed for the student not majoring in science. (May not be counted for credit toward a Geology or divisional major in Geology).

GLY 401. FIELD AND SUBSURFACE METHODS (5)
PR: 24 hours of geology courses, CC. 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)

GLY 412. OPTICAL MINERALOGY (4)
PR: GLY 311 (Non-majors from other departments, CC). Theory and use of the polarizing microscope. Techniques for identification and analysis of minerals using the polarizing microscope, with emphasis on rock-forming minerals. lec-lab.

GLY 441. ECONOMIC MINERAL DEPOSITS (4)
PR: or CR: GLY 412. 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)
Earth's environment in space, including a selected study of its materials, processes, climate, oceans, soils and history. lec-disc.
(No credit for geology or natural science divisional geology majors)

GLY 475. HYDROGEOLOGY AND HUMAN AFFAIRS (5)
PR: Open to all junior and senior level students. Geologic analyses of the present critical and urgent problems of water resources, pollution control, water supply, flood control, and underground waste disposal as they relate to economic, legal and other social aspects of modern society. No credit for Geology majors.

GLY 481. UNDERGRADUATE RESEARCH (1-15)
PR: Senior or advanced junior standing and permission of department chairman prior to registration. Individual experimental investigations with faculty supervision.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

GLY 503. SEDIMENTATION I (4)
PR: GLY 303 and 412. Geologic factors governing chemical, physical, and biological interactions and deposition of sediments. lec-lab.

GLY 504. SEDIMENTATION II (4). The second half of GLY 503.
GLY 512. MARINE GEOLOGY (4)
PR: Senior or graduate standing in a natural science and CC. Geological interpretation of marine processes and products. Seminar and field studies. lec-lab.

GLY 513. PETROGRAPHY (5)
PR: GLY 511 and 412. Systematic study of igneous and metamorphic complexes using modern methods of rock study, emphasizing use of the polarizing petrographic microscope for thin-section analysis. lec-lab.

GLY 521. PRINCIPLES OF APPLIED GEOPHYSICS (4)
PR: Senior or advanced Junior standing, one year of Physics, or CI. Elementary treatment of gravimetric, magnetic, electric and seismic geophysical techniques as applied to site investigations and mineral deposits. lec-lab.

GLY 531. PRINCIPLES OF STRATIGRAPHY (4)
PR: GLY 361 or CI. Environmental and paleogeographic reconstruction of sedimentary basins. Seminar. lec-lab.

GLY 532. ADVANCED STRATIGRAPHY (5)
PR: GLY 531 or CI. Study of the stratigraphy and paleotectonic development of North America and Europe.

GLY 533. GEOMORPHOLOGY (4)
PR: Senior or advanced junior standing and CC. Origin, evolution, and distribution of land forms.

GLY 534. QUANTITATIVE GEOMORPHOLOGY (4)
PR: GLY 533 or CI. Quantitative methods and their application to geomorphic problems; review and concepts of recent theories and literature. lec-lab.

GLY 541. GEOPHOTO INTERPRETATION (5)
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 553. ADVANCED HYDROGEOLOGY (5)
PR: GLY 351, MTH 213 or 303, PHY 215-216, or CI. Aquifer evaluation and quantitative determination of the hydraulic characteristics of hydrogeologic systems. lec-field-lab.

GLY 561. X-RAY ANALYSIS (2)
PR: GLY 412 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 513. Application of the laws of chemical equilibrium and resultant chemical reactions to natural earth systems. lec.

GLY 575. GEOTECHNICS (4)
PR: Senior or advanced Junior standing or CI. Concept of soil and rock mechanics, and their relationship to geological conditions influencing the location, design, construction and maintenance of engineering projects. lec-field-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, Palynology, Sedimentary Processes, Sedimentary Techniques, Universal Stage, Seismology, Marine Geophysics, Exploration Geophysics and Ground Water Problems. Department permission prior to registration.

GLY 591. GEOLOGY SEMINAR (1)
PR: Senior or advanced Junior standing and CC. May be repeated once.

FOR GRADUATE STUDENTS ONLY

GLY 603. RECENT NERITIC SEDIMENTATION (5)
PR: GLY 504 or CC. Environmental/tectonic factors and resulting sediment
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLY 604</td>
<td>RECENT FLUVIAL AND TRANSITIONAL SEDIMENTATION (4)</td>
<td>GLY 504 or CI.</td>
<td>4</td>
<td>Environmental factors and resulting sediment types accumulated in fluvial and transitional environments.</td>
</tr>
<tr>
<td>GLY 605</td>
<td>OCEANIC SEDIMENTATION (5)</td>
<td>GLY 504 or CI.</td>
<td>5</td>
<td>Structural development, sedimentation processes, and sediments of shoreline, continental slope, continental rise, and abyssal plain environments.</td>
</tr>
<tr>
<td>GLY 607</td>
<td>CARBONATE PETROLOGY I (4)</td>
<td>GLY 503 or CC.</td>
<td>4</td>
<td>Genesis of recent carbonate sediments and the interpretation of ancient carbonate rocks by the use of conceptual models.</td>
</tr>
<tr>
<td>GLY 608</td>
<td>CARBONATE PETROLOGY II (4)</td>
<td></td>
<td>4</td>
<td>The second half of GLY 607.</td>
</tr>
<tr>
<td>GLY 611</td>
<td>ADVANCED IGNEOUS PETROGENESIS (4)</td>
<td>CI.</td>
<td>4</td>
<td>Detailed study of igneous rocks and their origin.</td>
</tr>
<tr>
<td>GLY 612</td>
<td>ADVANCED METAMORPHIC PETROGENESIS (4)</td>
<td>CI.</td>
<td>4</td>
<td>Detailed study and interpretation of metamorphism and the origin of metamorphic rock complexes, utilizing thin section microscopy, X-ray diffraction, and chemical analyses.</td>
</tr>
<tr>
<td>GLY 621</td>
<td>MARINE MICROPALAEONTOLOGY (6)</td>
<td>GLY 301, 303 or equivalents and CC.</td>
<td>6</td>
<td>Principal groups of microfossils in marine sediments and cores. Paleocoeology, correlation, and application to petroleum and paleomarine problems.</td>
</tr>
<tr>
<td>GLY 631</td>
<td>CENOZOIC STRATIGRAPHY (3)</td>
<td>GLY 531 or CI.</td>
<td>3</td>
<td>Structural elements, paleogeography, stratigraphy, and economic resources of the Gulf of Mexico coastal plain.</td>
</tr>
<tr>
<td>GLY 652</td>
<td>DEVELOPMENT OF GROUND-WATER RESOURCES (5)</td>
<td>GLY 553 or CC.</td>
<td>5</td>
<td>Analysis of cause-effect relationships between ocean, streams, lakes and aquifers; planning and design of hydrogeology resources investigations.</td>
</tr>
<tr>
<td>GLY 661</td>
<td>CLAY PETROLOGY (4)</td>
<td>GLY 313, 561, or CC.</td>
<td>4</td>
<td>Composition, structures, origin, and diagenesis of clay minerals. Identification of clay minerals by x-ray diffraction techniques.</td>
</tr>
<tr>
<td>GLY 673</td>
<td>HISTORY OF GEOLOGY (2)</td>
<td>CC.</td>
<td>2</td>
<td>Historical development of geologic thought.</td>
</tr>
<tr>
<td>GLY 675</td>
<td>GEOLOGY OF FLORIDA (5)</td>
<td>24 hours of earth science credits or CI.</td>
<td>5</td>
<td>Designed for teachers of earth science. Mineralogy, structure, stratigraphy, paleontology, geomorphology, tectonics, and petrology of Florida and contiguous areas.</td>
</tr>
<tr>
<td>GLY 681</td>
<td>GRADUATE RESEARCH GEOLOGY (1-15)</td>
<td>CC.</td>
<td>1-15</td>
<td></td>
</tr>
<tr>
<td>GLY 691</td>
<td>GRADUATE SEMINAR (2)</td>
<td>CC.</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>GLY 699</td>
<td>THESIS (1-9)</td>
<td>CC.</td>
<td>1-9</td>
<td></td>
</tr>
</tbody>
</table>
GERMAN

Faculty: Grothmann, Nagosky, Price, Stelzmann.

Basic courses listed under Basic Studies.

GER 221. GERMAN FOR READING PROFICIENCY (0)
A rapid coverage of basic grammar and the acquisition of vocabulary necessary for passing the German Reading Knowledge Test.

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 Baroque.

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.

GER 310. HIGHLIGHTS OF GERMAN LITERATURE IN TRANSLATION (4)
A study in English of selections from the works of W. von Eschenbach, Luther, Goethe, Schiller, Kant, Hegel, Hesse, Mann, Broch, Musil, Kafka and others.

GER 383. SELECTED TOPICS (1-6)
Course content depends upon student demand and instructor’s interest.

GER 483. SELECTED TOPICS (1-6)
PR: CI. Junior standing. Course content depends upon student demand and instructor’s interest.

FOR SENIOR LEVEL AND GRADUATE STUDENTS


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 516. GERMAN STYLISTICS (4)
PR: Completion of GER 300 requirements. A study of syntax, grammar, and stylistic devices of the language based on an analysis of various styles of writing.

GER 521. GOETHE’S FAUST (3)
Sources, form, content, and literary significance of Urfaust and Faust I.

GER 531. CLASSICAL PERIOD: GOETHE (4)
Novels, novelle and autobiographical writings; lyric poems and epics; dramas (except Faust).

GER 532. CLASSICAL PERIOD: SCHILLER (4)
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 (4)
Dramatists: Grillparzer, Grabbe, Büchner and Hebbel. Critics: Heine, Laube and Immermann.

GER 542. LITERATURE OF THE 19TH CENTURY (4)
GER 551. LITERATURE OF THE 20TH CENTURY (4)
Novelists and dramatists of Naturalism, Symbolism, and Expressionism: Holz, Hauptmann, Schnitzler, Hofmannsthal, Brecht, Hesse, Mann, Kafka, Musil and others.

GER 552. LITERATURE OF THE 20TH CENTURY (3)
Poets: Rilke, Schröeder, Loehrke, Heym, Trakle, Lasker-Schüler, Benn and Aichinger.

GER 553. CONTEMPORARY GERMAN LITERATURE (3)
PR: Completion of GER 300 requirements. A study of Post World War II writers.

GER 553. SELECTED TOPICS IN GERMAN STUDIES (1-6)
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

GER 611. THE INTELLECTUAL BACKGROUNDS OF GERMAN LITERATURE (4)
The connection between German idealism, vitalism, and existentialism and the literature of the eighteenth, nineteenth, and twentieth century.

GER 621. SEMINAR IN BAROQUE LITERATURE (4)
The dramatists, poets, and aestheticians of the Baroque era.

GER 631. FAUST II (4)
The second part of Goethe’s Faust.

GER 651. MODERN GERMAN NOVEL (4)
The great novelists from 1900-1945: Mann, Kafka, Broch, Musil, Doeblin, Holz and others.

GER 652. MODERN GERMAN DRAMA (4)
The drama of the early 20th century to World War II and aftermath: Hauptmann, Hofmannsthal, Brecht, Kaiser, Dürenmatt and others.

GERONTOLOGY

Faculty: Rich, director, Coppinger, Gilmore, Kaplan, Krivanek, Lawton, Radtke, Saxon, Taulbee, Williams, Wilson, Davis.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

AGE 501. SURVEY OF MANAGEMENT (3)
See MAN 501.

FOR GRADUATE STUDENTS ONLY

AGE 601. BIOLOGY OF AGING (3)
Lectures and discussions concerned with the biological bases of the aging phenomenon as it occurs on the levels of the cell, the tissue, the organ, and the organism.

AGE 602. PSYCHOLOGY OF AGING (3)
Consideration of basic psychological processes as related to the aging process. Changes in functioning in perceptual, motor, and cognitive areas from a developmental perspective.

AGE 603. SOCIAL RESEARCH METHODS APPLIED TO GERONTOLOGY (4)
Systematic study of the methods and techniques employed in social, psychological, and health studies of population groups. It is directed toward the
consumers of research findings—persons whose positions call for the ability to interpret, evaluate, and apply the findings produced by others.

**AGE 604. AGING AND PERSONALITY (3)**
Personality theory and concepts of adjustments are studied with an introduction to counseling techniques and rehabilitative efforts with the aged.

**AGE 606. INSTITUTIONAL ADMINISTRATION (3)**
This course deals with the management problems and practices in the administration of institutions in the field of aging. Consideration will be given to the economics of aging, federal and state legislation, the management of people, and fiscal management.

**AGE 607. SOCIOLOGICAL ASPECTS OF AGING IN THE UNITED STATES (4)**
Examines, within a sociological frame of reference, the interrelationship between the aged (or aging) and the structure and function of the social system and its major institutionalized subsystems.

**AGE 608. HUMAN RELATIONS IN ORGANIZATIONS (3)**
An analytical view of the modern human relations movement with stress on development since the 1930’s. Incorporates the philosophy of the behavioral sciences and alternative theories and relates them to the management process in gerontology.

**AGE 609. LEISURE FOR THE AGING (3)**
The seminar will consist of general data and observations on trends and research in the leisure field, directed theoretical analysis of these studies as they pertain to the elderly and contact with programs by visits, interviews and reports.

**AGE 610. ADMINISTRATIVE APPLICATIONS OF DEMOGRAPHY (3)**
Acquaints the student with various sources of demographic data and its use. Emphasis is placed upon applicability in program planning and student experience in locating, tabulating, and interpreting data from selected publications.

**AGE 691. SEMINAR IN SOCIAL GERONTOLOGY (3)**
Designed to give the graduate student an opportunity to integrate concepts within the field of gerontology and relate these to other fields of study. Guest lecturers from a variety of disciplines participate in the seminar.

**AGE 692. SEMINAR IN SOCIAL GERONTOLOGY (3)**
See above.

**AGE 693. SEMINAR IN SOCIAL GERONTOLOGY (3)**
See above.

**AGE 694. SEMINAR IN SOCIAL GERONTOLOGY (3)**
See above.

**AGE 695. FIELD PLACEMENT (12)**

---

**HISTORY**

Faculty: Berry, Billingsley, Burke, Currey, DellaGrotte, Dilkes, Jordan, Kleine, Mayer, Parker, Rollins, Silbert, Silver, Swanson, Tipps, Tsangadas.

**PART I**

**HTY 100. THE IDEA OF HISTORY (4)**
Required of all history majors. The course deals with history conceived as a mode of inquiry, 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.
HTY 201, 202. ANCIENT HISTORY (4,4)
PR: HTY 100 or CI. A survey study of the ancient civilizations 201 treats Near Eastern and Greek history to the beginning of the career of Alexander the Great; 202 treats the career of Alexander, the Hellenistic World, and Rome to the death of Constantine. Attention is drawn to the correlative work in CLS 321, Ancient Civilizations.

HTY 211, 212. AMERICAN HISTORY (4,4)
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 (4,4)
PR: HTY 100 or CI. A thematic survey of the Middle Ages. 221 deals with the nascent, Christian civilization of Europe, circa 300-1050 A.D.; 222 treats the mature medieval civilization of Europe, circa 1050-1500.

HTY 231, 232. MODERN EUROPEAN HISTORY (4,4)
PR: HTY 100 or CI. A thematic survey of Europe in the modern age. 231 treats the period from the Renaissance to the French Revolution; 232, from the French Revolution to the present.

HTY 251, 252. LATIN AMERICAN HISTORY (4,4)
PR: HTY 100 or CI. A thematic survey of the Iberian-Indian civilization in the New World from the 15th through the 20th Centuries. 251 treats the period from discovery to the independence movements of the 19th Century; 252, the Ibero-American states from the Wars of Independence to the 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 303, 304. AGE OF EXPANSION AND CONTINENTAL DEVELOPMENT (4,4)
PR: HTY 100, 211, 212, or CI. A study of the formation of the American national state and its continental expansion. 303 covers the period from 1783 to 1815; 304 focuses on the years to the Compromise of 1850.

HTY 315, 316. THE CIVIL WAR AND ITS AFTERMATH (4,4)
PR: HTY 100, 211, 212 or CI. A study of the causes of the Civil War and the factors, forces, and atmosphere which produced the reconstruction policy following the war.

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.

HTY 319, 320. THE EMERGENCE AND GROWTH OF MODERN AMERICA (4,4)
PR: HTY 100, 211, 212, or CI. A study of the transition of American society from the end of Reconstruction to the present. 319 treats the era from 1877 to World War I; 320 focuses on the period from World War I to the present.

HTY 321, 322. ANCIENT GREECE (4,4)
PR: HTY 100, 201, 202, or CI. A study of Greece in the ancient period. 321 offers instruction in the pre-Hellenic and Hellenic periods, to the death of Philip II of Macedon; 322 treats the career of Alexander the Great and the Hellenistic period. Attention is drawn to the correlative work in CLS 527, Greek Civilization.

HTY 324. MEDIEVAL SPAIN AND PORTUGAL (4)
PR: HTY 100, 221, 222, or CI. A study of the peoples of the Iberian Peninsula in the Middle Ages.
HITY 325, 326. ANCIENT ROME (4,4)
PR: HITY 100, 201, 202, or CI. A study of Rome in the ancient period. 325 treats the development of Rome to the end of the Republic, 27 B.C.; 326 offers instruction in the development of the Roman Empire from 27 B.C. to the death of Constantine, A.D. 337. Attention is drawn to the correlative work in CLS 529, Roman Civilization.

HITY 327, 328. MEDIEVAL INSTITUTIONAL HISTORY (4,4)
PR: HITY 100, 221, 222, or CI. A study of the major institutions of feudal Europe. 327 treats the history of the Empire and Papacy; 328 deals with the history of the Western monarchies.

HITY 329. MEDIEVAL ENGLISH HISTORY (4)
PR: HITY 100, 221, 222, or CI. A study of the major developments in England from the Anglo-Saxon period to the 15th Century.

HITY 333, 334. FRENCH HISTORY (4,4)
PR: HITY 100, 231, 232, or CI. A study of the major developments of French history in the modern period. 333 deals with the period from the Renaissance to the French Revolution; 334, from the Revolution to the present.

HITY 335, 336. GERMAN HISTORY (4,4)
PR: HITY 100, 231, 232, or CI. A study of the major developments of German history. 335 deals with the period from the Reformation to the French Revolution; 336, from the Revolution to the present.

HITY 337, 338. RUSSIAN HISTORY (4,4)
PR: HITY 100, 231, 232, or CI. A study of the primary social, economic, and cultural forces which have shaped the historical development of Russia. 337 treats the period to 1855; 338, 1855 to present.

HITY 340. HISTORY OF MODERN ITALY—1861 TO PRESENT (4)
PR: HITY 100, 231, 232, or CI. A critical thematic approach with emphasis on a socio-psychological examination of bourgeois liberalism and nationalism, the crisis of liberalism, the rise of the Italian socialist movement, World War I, and the Fascist synthesis.

HITY 341, 342. BRITISH HISTORY (4,4)
PR: HITY 100, 231, 232, or CI. A study of the major developments of British history. 341 treats the period from the Reformation to 1715; 342, from 1715 to present.

HITY 345, 346. BRITISH EMPIRE AND COMMONWEALTH (4,4)
PR: HITY 100, 231, 232, or CI. A study of the old and new empires with emphasis upon the evolution of the Commonwealth.

HITY 347. HISTORY OF CANADA (4)
PR: HITY 100 or CI. A study of the major themes in the political and social development of Canada, with particular emphasis on the origins and development of French-Canadian nationalism, continentalism, and dominion-provincial relations.

HITY 355. HISTORY OF MEXICO (4)
PR: HITY 100, 251, 252, or CI. A study of Mexican history from discovery to the present, with emphasis on the empire and republican periods.

HITY 355. HISTORY OF BRAZIL (4)
PR: HITY 100, 251, 252, or CI. A study of Brazilian history from discovery to the present with emphasis on the empire and republican periods.

HITY 365, 366. BYZANTINE HISTORY (4,4)
PR: HITY 201-202, or HITY 221-222, or CI. A thematic treatment of the history of the Byzantine Empire, including social, economic, religious, political, military, ecclesiastical developments, together with consideration of literature, learning, and the arts. HITY 365 deals with the period from 324 A.D. to 867; HITY 366 deals with the period of Imperial Byzantium, including its decline and fall: 867-1453 A.D.
PART III

HTY 401, 402. SOCIAL & INTELLECTUAL HISTORY OF THE ANCIENT WORLD (4, 4)
PR: HTY 100 and 201-202 and 321-322 or 325-326 or CI. Selected topics in the social and intellectual history of the ancient world. 401 treats the period of ancient Greece; 402 treats the period of ancient Rome.

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, 412. AMERICAN SOCIAL AND INTELLECTUAL HISTORY (4,4)
PR: HTY 100, 211, 212, or CI. A study of the major religious and philosophical ideas of the American people in relation to the nation's social environment. 411 deals with the earlier period to 1865; 412, from 1865 to present.

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 423. MEDIEVAL THOUGHT AND CULTURE (4)
PR: HTY 100, 221, 222, or CI. A study of the culture and the major intellectual developments of the medieval period.

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 427, 428. EUROPE IN THE BAROQUE AND ENLIGHTENMENT PERIODS (4,4)
PR: HTY 100, 231, and any two of courses 333, 335, 337 and 341 or CI. A study with emphasis on comparative developments. 427 deals with major topics of the Baroque period; 428, with the Enlightenment.

HTY 429, 430. EUROPE IN THE NINETEENTH AND TWENTIETH CENTURIES (4,4)
PR: HTY 100, 231, 232, or CI. A study with emphasis on comparative developments. 429 treats the Nineteenth Century; 430, the Twentieth Century.

HTY 431, 432. EUROPEAN SOCIAL AND INTELLECTUAL HISTORY (4,4)
PR: HTY 100, 231, 232, or CI. Selected topics in the social and intellectual history of modern Europe. 431 treats the early modern period; 432, the Nineteenth and Twentieth Centuries.

HTY 451. A HISTORY OF INTER-AMERICAN RELATIONS (4)
PR: HTY 100, 251, 252, 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 453. SOCIAL AND INTELLECTUAL HISTORY OF LATIN AMERICA (4)
PR: HTY 100, 251, 252, or CI. A study of the origins and development of major intellectual and social trends affecting the histories of the Latin American people.

HTY 455. STUDIES IN TUDOR-STUART ENGLAND (4)
PR: HTY 100, 231, 232, or CI. Selected topics in the history of Sixteenth and Seventeenth Century England.

HTY 461. REVOLUTION IN THE MODERN WORLD (4)
PR: HTY 100, 231, 232, or CI. An analytical and comparative study of the nature of revolution in modern history leading to a development of a paradigm of the revolutionary process.
HTY 464. FASCIST AND OTHER TOTALITARIAN SYSTEMS (4)
PR: HTY 100, 231, 232, or CI. A critical and comparative study of the growth of Fascist and other bureaucratic totalitarian movements in the 19th and 20th century western world: a socio-psychological analysis.

HTY 465. SCIENCE AND CIVILIZATION (4)
PR: HTY 100, 231, 232, or CI. A comparative survey of the impact of science on Western civilization from the ancient Egyptians to the present, emphasizing the relationship of science to the 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

HTY 587. THEORY OF HISTORY (4)
PR: To be taken during the senior year. An investigation of the philosophical problems of history, with emphasis on the evolution of the discipline.

HTY 591. PRO-SEMINAR IN HISTORY (4)
Advanced topics in the fields emphasizing readings and discussion of research and writing. One pro-seminar is required of all history majors. Non-majors may enroll with the consent of the instructor. Topics vary within each field.

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 600. ANALYSIS OF HISTORICAL KNOWLEDGE (4)
A study of history as a form of knowledge with emphasis on epistemological considerations of the explanation devices and models of the discipline.

HTY 601. THEORY AND INTERPRETATION (4)
A systematic examination and evaluation of various schools of historical interpretation.

HTY 602. HISTORY AND THE SOCIAL SCIENCES (4)
An examination of the conceptual modes and methodology of the other disciplines with emphasis upon their application to historical research.

HTY 680. COLLOQUIUM IN HISTORY (4)
Reading and discussion of selected topics within the fields. Subject and scope to be determined by the instructor. May be repeated for credit.

HTY 685. READINGS IN HISTORY (1-4)
Arrangement with instructor prior to registration and CC. Individual reading and discussion of selected problems. May be repeated for credit.

HTY 691. SEMINAR IN HISTORY (4)
Research in selected problems within the fields. Subject and scope to be determined by the instructor. May be repeated for credit. The master's candidate is required to satisfactorily complete work in at least one graduate seminar to fulfill the requirement for the master's degree in History.

HTY 699. THESIS IN HISTORY (1-8)
Required of all candidates for the master's degree in History.

HUMANITIES

Faculty: Kiefer, chairman; T. Burns, J. B. Camp, C. Cooper, Gowen, Hoffman, Juergensen, Kashdin, Koenig, MacKay, McRae, Rutenberg, Shackson, Spillane, Watkins, Zylstra.
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. TWENTIETH-CENTURY ARTS AND LETTERS (5,5)
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 (4,4)
PR: CBS requirements in humanities or CI. Case studies in the arts and letters of the romantic period.

HUM 417, 418. NINETEENTH-CENTURY ARTS AND LETTERS (4,4)
PR: CBS requirements in humanities or CI. Case studies in the arts and letters of the nineteenth century.

HUM 419, 420. THE ENLIGHTENMENT (4,4)
PR: CBS requirements in humanities or CI. Case studies in the arts and letters of the Enlightenment.

HUM 423, 424. RENAISSANCE ARTS AND LETTERS (4,4)
PR: CBS requirements in humanities or CI. Case studies in the arts and letters of the Renaissance.

HUM 427, 428. MEDIEVAL ARTS AND LETTERS (4,4)
PR: CBS requirements in humanities or CI. Case studies in the arts and letters of the middle ages.

HUM 431, 432. CLASSICAL ARTS AND LETTERS (4,4)
PR: CBS requirements in humanities or CI. Case studies in the arts and letters of the ancient world.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

HUM 535, 536, 537. HUMANITIES IN AMERICA (4,4,4)
PR: CBS requirement in humanities or CI. Case studies in the arts and letters of the United States.

HUM 539, 540. SELECTED NON-WESTERN HUMANITIES (4,4)
PR: CBS requirement in humanities or CI. Materials chosen from the arts and letters of Asia, Africa, Oceania, and the Middle East.

HUM 541. HUMANITIES IN THE ORIENT: INDIA (4)
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 (4)
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 (4)
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 (4)
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 interest.

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 (4)
Concentration on major artists and recent trends.

HUM 623. STUDIES IN THE RENAISSANCE (4)
Masterpieces and major artists of the Renaissance in Europe and England.

HUM 681. DIRECTED STUDY (1-4)
Specialized independent study determined by the student's needs and interests.

HUM 683. SELECTED TOPICS IN HUMANITIES (1-4)
Each topic is a course of study in a subject not covered by a regular course.

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 310. HIGHLIGHTS OF ITALIAN LITERATURE IN TRANSLATION (4)
A study in English of the most important writers since the Fourteenth Century. Elective for students in all departments (except Italian majors).

ITA 338. SELECTED TOPICS (1-6)
Course content depends upon student demand and instructor's interest.

ITA 483. SELECTED TOPICS (1-6)
PR: CI. Junior standing. Course content depends upon student demand and instructor's interest.

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 (4)
A presentation of the cultural milieu of Dante's time, with emphasis on his minor literature.

ITA 512. DANTE (4)

ITA 513. DANTE (4)
An analysis of the Divine Comedy, concentrating on the Purgatorio and Paradiso segments.
ITALIAN LITERATURE (4)

Romanticism in Italy.

ITALIAN LITERATURE (4)

Realism and Naturalism in Italy.

TWENTIETH CENTURY ITALIAN LITERATURE (4)

A comprehensive study of the major writers through the "Decadentismo." Special emphasis on D'Annunzio.

TWENTIETH CENTURY ITALIAN LITERATURE (4)

A comprehensive study of the major writers from the "Idealismo filosofico" up to the present time.

SELECTED TOPICS (1-6)

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

See MASS COMMUNICATIONS

LANGUAGE-LITERATURE (Interdisciplinary)

Faculty: Bentley, Carr, Cole, Deer, Gould, O'Hara, Robertson, Stanton.

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: 1500-1720; 302: 1720-present.

THE IDEA OF PROGRESS (3)

A study of the ways in which the idea of progress has affected philosophical, social, political and literary theory since the Renaissance to the French revolution. Among the authors considered are: Bacon, Descartes, Pascal, Locke, Condorcet, Malthus, and Adam Smith.

THE IDEA OF UTOPIA (3)

A study of the relationship between the idea of progress and the growth of modern ideologies. Emphasis will be placed on the development of liberalism, Utopian socialism, social Darwinism and conservatism by the study of such authors as: Burke, T. Paine, J. S. Mill, R. Owen, T. Huxley, G. Orwell, and A. Malraux.

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.

PHILOSOPHY AND THE FILM (3)

For course description, refer to Language-Literature (Interdisciplinary) section.

INTRODUCTION TO FILM WRITING (4)

For course description, refer to Language-Literature (Interdisciplinary) section.

THE IDEA OF FREEDOM (3)

An analysis of the idea of freedom, both in general and in particular. Various philosophical, literary, and journalism aspects will be analyzed: metaphysical, ethical, political, social, religious and economic.
LLI 383. SELECTED TOPICS (3-5)
Course contents depend on students' need and instructor's interest. Agreement with instructor required prior to registration.

LLI 401. THREE CENTRAL IDEAS IN WESTERN CULTURE: HIERARCHY, MECHANISM AND ORGANISM (4)
A humanistic study of the structure and function of the three seminal ideas of hierarchy, mechanism and organism, with the main emphasis upon their significant influence in art, science and letters to 1900.

LLI 402. DOMINANT IDEAS IN THE 20TH CENTURY (4)
The impact of major scientific hypothesis on the various forms of cultural expression.

LLI 483. SELECTED TOPICS (2-5)
PR: CI. Junior standing. Course contents depend on students' need and instructor's interest. Agreement with instructor required prior to registration.

LLI 583. SELECTED TOPICS (2-5)
PR: CI. Course contents depend on students' need and instructor's interest. Agreement with instructor required prior to registration.

LINGUISTICS

Faculty: Cole, chairman; Gessman, O'Hara.

LIN 483. SELECTED TOPICS (3-5)
PR: CI. Course content depends upon students' needs and instructor's interest and may range over the entire field of linguistics.

FOR UPPER LEVEL AND GRADUATE STUDENTS

LIN 501-502. DESCRIPTIVE LINGUISTICS (4, 4)
Introduction to the basic concepts of linguistic science.

LIN 530. FIELD METHODS (4)
PR: LIN 501. An introduction to the techniques for gathering language data from native informants in the field and making a preliminary analysis and description of such data.

LIN 540. THE SOCIAL STRUCTURE OF LANGUAGE (4)
PR: CI. An analysis of the interrelationship between 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.

LIN 541. PSYCHOLINGUISTICS (4)
PR: CI. The nature of language and its psychological implications. Linguistic structures and their correlates in behavior, thought, and perception. Examination of the hypotheses of Whorf, Chomsky, and others.

LIN 551. STUDIES IN COMPARATIVE STRUCTURE (5)
PR: CI. An introduction to linguistic typology. The structure of Sanskrit will be compared to that of several non-Indo-European languages, such as Hebrew, Swahili, Maylay and others. No knowledge of any of these languages is presumed on the part of the student.

LIN 581. INDIVIDUAL RESEARCH (3-5)
PR: CI. Specialized individual work in area of student's interest.

LIN 583. SELECTED TOPICS (3-5)
PR: CI. Course content depends upon students' needs and instructor's interest and may range over the entire field of linguistics. Study of languages not otherwise offered is possible. Enrollment can be repeated.
LIN 585. DIRECTED READING (4)
PR: CI. Readings in special topics. Must be arranged prior to registration.
ANT 318. LANGUAGE AND CULTURE (4)
See course description under Anthropology.
CLS 371. FOUNDATIONS OF LANGUAGE (4)
See course description under Classics and Ancient Studies.
CLS 517. LATINO-ROMANCE LINGUISTICS (4)
See course description under Classics and Ancient Studies.
CLS 571. LANGUAGE IN CHANGE (4)
See course description under Classics and Ancient Studies.
EDT 531. CURRENT TRENDS IN TEACHING THE ENGLISH LANGUAGE (4)
See course description under Education.
ENG 515. HISTORY OF THE ENGLISH LANGUAGE (4)
See course description under English.
ENG 517. STRUCTURE OF AMERICAN ENGLISH (4)
See course description under English.
ENG 518. LINGUISTICS AND LITERATURE (4)
See course description under English.
ENG 535. TRANSFORMATIONAL GRAMMAR (4)
See course description under English.
FRE 403. FRENCH PHONETICS AND DICTION (2)
See course description under French.
FRE 601. OLD FRENCH
See course description under French.
GER 513-514. HISTORY OF THE GERMAN LANGUAGE (4,4)
See course description under German.
PHI 531. PHILOSOPHY OF LANGUAGE (4)
See course description under Philosophy.
PSY 506. VERBAL LEARNING AND INFORMATION PROCESSING (4)
See course description under Psychology.
ROM 517-518. ROMANCE PHILOLOGY (4,4)
See course description under Romance Languages.
RUS 515-516. HISTORY OF THE RUSSIAN LANGUAGE (4,4)
See course description under Russian.
SPA 403. SPANISH PHONETICS AND DICTION (2)
See course description under Spanish.
SPA 601. OLD SPANISH (4)
See course description under Spanish.
SPE 503. APPLIED PHONETIC TRANSCRIPTION (5)
See course description under Speech.
SPE 511. EXPERIMENTAL PHONETICS (5)
See course description under Speech.
SPE 611. COMMUNICATION: ANALYSIS AND MEASUREMENT (5)
See course description under Speech.

MANAGEMENT
(Former prefix: MGT)

MAN 301. PRINCIPLES OF MANAGEMENT (5)
Organized system of concepts running the gamut from quantitative to behavioral sciences which provide broad overview of science of management.

MAN 311. MANAGEMENT SYSTEMS (3)
PR: MAN 301, GBA 351, ECN 331. Study of interface between environment and open systems. Analysis and design of computer and noncomputer systems as tools in management planning and control.

MAN 321. BEHAVIORAL FACTORS IN ORGANIZATIONS (3)
PR: MAN 301 or CI. Integrates concepts learned in CBS Behavioral Area (or equivalent) into managerial framework. Includes theories of communication, delegation, discipline, groups, motivation, needs, perception and rules.

MAN 331. INDUSTRIAL RELATIONS (3)
PR: MAN 301 or CI. Impact of unionization on management flexibility in decision making. Emphasis on theories and models that when applied bear upon how best to manage in union organized workplace.

MAN 341. PERSONNEL MANAGEMENT (3)
PR: MAN 301 or CI. Systematic analysis of multitude of functions in personnel: recruiting, selection, job evaluation, performance appraisal, wage and salary, incentives, training & development, etc., utilizing case approach.

MAN 421. OPERATIONS MANAGEMENT (3)
PR: MAN 301, GBA, 351, ECN 331 or CI. Develops conceptual framework and principles applicable for any managerial decision process including proper utilization by line of staff expertise. Integrates previous courses into planning & control model.

MAN 431. ORGANIZATION THEORY (3)
PR: MAN 465 or 471 or CI. Theory and research findings from all previous management courses integrated by means of a rigorous conceptual model.

MAN 451. INTERPERSONAL DYNAMICS LABORATORY (3)
PR: MAN 321 or CI. More structured, content-oriented t-group model to provide, through task accomplishment, better awareness of application to modern management theory of concepts and tools from social sciences.

MAN 453. CHANGING ORGANIZATIONS (3)
PR: MAN 321 or CI. Central unifying concept is the Change Agent. Student exposed to total range of theory related to resistance to change and introduction of change including whether locus should be in or out of organization.

MAN 461. LEGAL CONSTRAINTS AND MANAGEMENT DECISION MAKING (3)
PR: MAN 331, GBA 361 or CI. Case analysis of legal constraints on managerial decision-making: FLSA; Workmen’s Compensation; Anti-discrimination laws; Lie Detectors & Psychological Testing; NLRB rulings, court decisions, statutes.

MAN 463. SEMINAR IN MANAGEMENT CONTRACT ADMINISTRATION AND SETTLEMENT (3)
PR: MAN 331 or CI. Case exercises to test application of tools and theories pertaining to I.R. and other management functions involving conflicting interest groups that must integrate or co-exist, interact and cooperate.

MAN 465. LABORATORY IN THE RESOLUTION OF CONFLICT (3)
PR: MAN 321 or CI. In depth exposure to panorama of interdisciplinary theories having relationship to dispute settlement in any context. Controlled laboratory testing of said theories through cases and/or management game.

MAN 471. MANAGEMENT SCIENCE I (3)
PR: MAN 421 or CI. Heavy emphasis upon population of calculus, matrix algebra, boolean algebra, set theory, probability and game theories, and other operations research techniques to management problem analysis.

MAN 472. MANAGEMENT SCIENCE II (3)
PR: MAN 471 or CI. Examination of Linear Programming, dynamic programming,
queuing, stochastic inventory models, markov chain analysis for applications to problem analysis and decision making under uncertainty.

MAN 473. QUANTITATIVE METHODS OF OPERATION: PLANNING AND CONTROL (3)
PR: MAN 472 or CI. Review of all conceptual tools, methods and techniques available to modern scientific manager including depth integration of how and why of quantitative decision process at policy level.

MAN 489. GUIDED RESEARCH IN MANAGEMENT (3)
PR: Graduating Quarter or CC. Student engages in integrating field project, or other research, where all of his course work can be utilized. Only most general departmental supervision is exercised; management is by results.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

MAN 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

MAN 601. HUMAN RELATIONS IN ORGANIZATIONS (3)
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.

MAN 603. COMMUNICATIONS THEORY IN INDUSTRY (3)
PR: MAN 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.

MAN 606. ADVANCED MANAGEMENT SCIENCE (3)
PR: MAN 471 or equivalent. Study of current operations research techniques, including dynamic (non-linear) programming, Markov chain analysis as they apply to problems in the business firm.

MAN 607. SEMINAR IN INDUSTRIAL RELATIONS (3)
An in-depth study and analysis of critical and/or current problems in industrial relations.

MAN 608. SEMINAR IN OPERATIONS ANALYSIS (3)
PR: MAN 606. Analytical study of planning and control with particularly stress on operational problems and decision-making. The use of simulation will be treated.

MAN 609. ADVANCED INTERPERSONAL DYNAMICS (3)
PR: MAN 601 or equivalent. The study of personal and interpersonal behavior through experiencing the information via experiments, as well as a study of the relevant literature.

MAN 610. SEMINAR IN QUANTITATIVE METHODS I (3)
PR: MAN 606, 608. Operational analysis of management measurements including: value analysis, cost-benefit analysis, payoff-trees and tables, PERT/CPM, the computer as a tool in managerial decisions. Stresses the functional use of quantitative methodology.

MAN 611. SEMINAR IN ORGANIZATION THEORY (3)
PR: MAN 601. The study of the structure, functions, and dynamics of modern organizations. Stress is given to the contributions of behavioral science to analysis of formal and informal organizations.
MAN 613. SEMINAR IN ORGANIZATIONAL CHANGE (3)
PR: MAN 601, 609, 611. The study of organizational change with special stress on adaptation of the firm, or sub-strata of the firm, to environmental alteration. Intra-firm analysis, and sensitivity training are also covered.

MAN 615. SEMINAR IN ADMINISTRATIVE POLICY (3)
A course designed to present an organized and integrated approach to the managerial decision-making process. This course should be taken in the final quarter of the program.

MAN 699. FIELD RESEARCH OR THESIS (6).

MARINE SCIENCE
Faculty: Humm, director & chairman; Full-time at St. Petersburg Campus—Baird, Carder, Hopkins, Pyle; Associate faculty—Betz, Bloch, Briggs, Dawes, Flynn, Friedl, Griffin, Lawrence, Linton, Martin, Ross, Simon, Strong, Taft, Wagner.

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.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

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.

OGY 531. GEOLOGICAL OCEANOGRAPHY (4)
PR: Graduate standing or CI. An introduction to the physical, historical sedimentary, and structural geology of the ocean basins and their borders. lec-lab.

OGY 541. PHYSICAL OCEANOGRAPHY (4)
PR: Graduate standing or CI, Phy 225. The world ocean including its morphology, physical properties, currents, waves, tides, heat budget, and related topics. lec-lab.

OGY 551. BIOLOGICAL OCEANOGRAPHY (4)
PR: Graduate standing or CI, BIO 201-203. The study of life in the sea with special reference to distribution, reproduction, adaptation, competition, and populations. lec-lab.

FOR GRADUATE STUDENTS ONLY

OGY 681. GRADUATE RESEARCH (1-9)
PR: CI. Directed research on non-thesis topics. May be repeated.

OGY 691. GRADUATE SEMINAR IN OCEANOGRAPHY (1)
PR: Graduate standing. May be repeated.

OGY 699. M. A. THESIS (1-9)
PR: CI. May be repeated to a maximum of 9 credits.

MARKETING
Faculty: Sleeper, chairman; Borchers, Carmichael, DeBord, Futhey, Nicholas, Oescher, Stevens, Wallace, B. M. Williams.
MKT 301. BASIC MARKETING (5)
PR: ECN 201-202 or CI. Survey of the marketing of goods and services within the economy. The integration of functional, commodity, and institutional approaches from the consumer and managerial viewpoints.

MKT 311. PRINCIPLES OF SALESMAHSHIP AND SALES MANAGEMENT (3)
PR: MKT 301. Personal selling and sales management as basic elements in the marketing strategy of firms. Includes the scientific management of resources and the dynamics of interpersonal and small group behavior and decision processes.

MKT 312. PRINCIPLES OF ADVERTISING AND SALES PROMOTION (3)
PR: MKT 301. 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 (3)
PR: MKT 301. A detailed study of marketing channels as a functional area of marketing management responsibility and as a part of marketing strategy. Attention given to wholesaling and retailing and their structural, dynamic interrelationships including distribution logistics.

MKT 316. MARKETING MODELS AND MARKETING SYSTEMS (3)
PR: ECN 331, MKT 315, and GBA 351. An investigation of the utility of formal, logical, mathematical, and other quantitative methods and models as these might be applied to marketing management.

MKT 403. PUBLIC RELATIONS AND THE MARKETING PROCESS (3)
PR: MKT 312 or CI. Principles, practices, and problems in public relations as an integrated part of and supplement to marketing management responsibilities and decisions.

MKT 405. INDUSTRIAL MARKETING (3)
PR: MKT 315. Problems of marketing industrial goods. Characteristics of markets, channels, industrial sales, promotional practices, research and marketing policies.

MKT 407. MANAGEMENT OF ADVERTISING AND SALES PROMOTION (3)
PR: MKT 312, MKT 315. Discussion and analysis of cases bearing on managerial aspects of advertising and sales promotion including research, budget determination, strategy, tactics, and evaluation of results.

MKT 409. INTERNATIONAL MARKETING (3)
PR: MKT 312, MKT 315, or CI. A study of the procedures and problems associated with establishing marketing operations in foreign countries. The institutions, principles and methods involved in the solution of these business problems will be treated as well as effects of national differences on business practices.

MKT 411. MARKETING RESEARCH (3)
PR: MKT 312, MKT 315, ECN 331 or MTH 345; or CI. A study of research methods applicable to problem-solving in the field of marketing.

MKT 413. CONSUMER BEHAVIOR (3)
PR: MKT 301 or CI. An investigation and application of the behavioral factors affecting consumer demand. Consideration given to industrial, governmental, and ultimate consumers.

MKT 414. SEMINAR IN MARKETING AND CONSUMER BEHAVIOR RESEARCH (3)
PR: MKT 312, MKT 315, MKT 411, MKT 413. In depth discussion, formulation, application, and evaluation of advanced research techniques and practices as currently applied to facilitate marketing decisions.

MKT 415. MARKETING MANAGEMENT (3)
PR: MKT 312, MKT 315, MKT 411, MKT 413, and 3 other MKT courses or CI. Management of the marketing function of firms: objectives, planning, organization, controlling of the total marketing effort, and co-ordination with other major functional areas.
MKT 419. MARKETING PROBLEMS (3)
PR: MKT 415 or CI. The integration of marketing knowledge in solving specific marketing problems. Selected readings and case analyses.

MKT 489. SPECIAL STUDIES IN MARKETING (3)
PR: MKT major and 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.

MASS COMMUNICATIONS

Faculty: Sanderson, chairman; Carr, Griscti, O'Hara, Stalnaker, Yates.

CBS 101. FRESHMAN ENGLISH (4)
One section each fall quarter is reserved for journalism-interest students.

COM 300. INTRODUCTION TO MASS COMMUNICATIONS (3)
The functions of agencies of mass communication and their impact upon society; critical analyses of press performance in relation to current events; evaluation of the press through a study of its history, with emphasis on the print media. (Formerly JNM 341).

COM 301. THE POPULAR ARTS IN AMERICA (4)
A survey of the growth of the popular arts (motion pictures, radio, television, art, best sellers, jazz and other forms of music, the comics, etc.) as mirrors, transmitters and transformers of American cultural values.

MKT 312. PRINCIPLES OF ADVERTISING AND SALES PROMOTION (3)
For course description, refer to Department of Marketing section.

COM 313. ADVERTISING COPYWRITING AND LAYOUT (4)
PR: MKT 312, or CI. Application of persuasive writing techniques and principles of design and graphic arts to mass media advertising, including copy, visualization, layout, typography, print production, TV storyboards, radio commercials, film, etc.

COM 321. MAGAZINE ARTICLE AND FEATURE WRITING (4)
PR: CBS 102. Planning, researching and writing articles and features for general
and special interest publications; analyses of sales possibilities and preparation of manuscripts for the professional market. (Formerly JNM 349).

**COM 330. BEGINNING REPORTING (4)**
PR: CBS 102. Basic instruction in news judgment, sources of news, newsgathering, and newswriting techniques. Typing ability is required. (Formerly JNM 342.)

**COM 331. ADVANCED REPORTING (4)**
PR: COM 330. Getting information and writing the more complex and specialized story; techniques of investigative and analytical reporting, including ethical and legal considerations. (Formerly JNM 343.)

**COM 341. PRINCIPLES OF PUBLIC RELATIONS (4)**
PR: COM 330 and junior standing, or CI. The role and functions of public relations within corporate and institutional structures; ethical practices, especially as influences in shaping or altering public opinion.

**COM 351. 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. (Formerly LLI 311.)

**COM 352. 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, and 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. (Formerly LLI 312.)

**COM 353. 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. (Formerly LLI 313.)

**COM 354. THE FILM AS MASS COMMUNICATION I: SYNTAX (4)**
PR: CI. The language, conventions, elements and patterns of the film medium as related to current models of effective mass communication and new theories of non-verbal communication.

**COM 355. THE FILM AS MASS COMMUNICATION II: RHETORIC AND STYLISTICS (4)**
PR: COM 354, or CI. A continuation of COM 354 to include the effective arrangements of scenes and sequences in movie and television films.

**COM 356. THE FILM AS MASS COMMUNICATION III: WORKSHOP (4)**
PR: COM 355, or CI. Practical exercises, demonstrations and experiences in applying material covered in COM 354 and 355.

**COM 403. HISTORY AND PRINCIPLES OF COMMUNICATIONS LAW (4)**
PR: Junior standing. Historic and Constitutional backgrounds of freedom and control of expression, statutory enactments, major Supreme Court cases, court decisions and administrative rulings which have shaped local control of communications.

**COM 433. NEWS EDITING I (4)**
PR: COM 330, and for majors in news-editorial sequence, COM 331. Evaluating news and its display; editing and rewriting copy for the mass media, with emphasis on the daily newspaper; typography, makeup and news judgment; ethical problems. (Formerly JNM 347.)

**COM 451. SOCIAL HISTORY OF THE FILM TO 1945 (4)**
PR: CI. The industrial, technological, philosophical and social factors bearing on the rise and development of the motion picture as a popular art. Intensive study of a series of films through screenings and readings.
COM 452. SOCIAL HISTORY OF THE FILM, 1945 TO THE PRESENT (4)
PR: COM 451 or CI. A continuation of COM 451, covering the development of the film from 1945 to the present.

COM 453. THE DOCUMENTARY FILM (4)
PR: CI. The development of the documentary movement: Kino-Pravda, Flaherty, Grierson and the GPO Unit, Reifenstahl, U.S. Government-sponsored films, the Canadian Film Board, Cinema Verite, Maysales, etc.

COM 454. FILM CRITICISM (4)
PR: CI. The film as a mass medium, comparing and contrasting its mass communication aspects with other important aspects. Critical analyses of selected films and intensive readings in the theory of film. Literary, social, dramatic, philosophic and historic approaches to film criticism.

EDT 463. TEACHING METHODS IN THE SECONDARY SCHOOL—JOURNALISM (4)
PR: EDC 401 or concurrent registration in EDC 401.

COM 481. INDIVIDUAL RESEARCH IN MASS COMMUNICATIONS (var.)
PR: CC and CI. The course provides means for a student to do independent study in an area not covered by a numbered course.

COM 483. SELECTED TOPICS IN MASS COMMUNICATIONS STUDIES (var.)
PR: CI and junior standing. Courses designed to meet current or specific topics of interest to the instructor and students.

COM 500. THEORY OF MASS COMMUNICATIONS (4)
PR: Senior standing. The nature of the mass communication process, its effects on individuals and groups; the moral, ethical, social and political implications in influencing and directing behavior. Analyses of theories of mass communication, primarily those of McLuhan, Schramm, Lazarsfeld, Selde, Reisman, and Katz.

COM 539. SEMINAR: PROBLEMS IN NEWS-EDITORIAL JOURNALISM (2)
PR: Senior standing and COM 433, or CI. A study of the role of the free press in a democracy and its efforts to fulfill its social and ethical obligations by analyses and discussions of the problems which face the reporter, editor, and publisher.

COM 541. PUBLIC INFORMATION (4)
PR: Senior standing and COM 341, or CI. The functions and obligations of information specialists as public employees in reporting news of increasing complex government to the people.

COM 583. SELECTED TOPICS IN MASS COMMUNICATIONS STUDIES (var.)
PR: CI and senior standing. Courses designed to meet current or specific topics of interest to the instructor and students.

MATHEMATICS

Faculty: Ratti, chairman; Chesley, Card, Ghosh, Goodman, Isaak, J. Kelley, Y-F Lin, Manougian, Michaelides, Mukherjea, J. H. Reed, E. Saff, Tserpes, Twomey, 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 211. ELEMENTARY CALCULUS I (4)
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 is primarily for students from Biological Sciences, Social Sciences and Business. (No credit for math majors or students with credit in MTH 101.)
MTH 212. ELEMENTARY CALCULUS II (4)
PR: MTH 211 or CC. Rules for differentiation, applications of the derivative, definite integral, fundamental theorem of calculus, integration. (No credit for students with credit in MTH 302.)

MTH 213. ELEMENTARY CALCULUS III (4)
PR: MTH 212. Functions of several variables, partial derivatives, introduction to infinite series. (No credit for students with credit in 302.)

MTH 302. CALCULUS I (5)
PR: MTH 101 with a grade of "C" or better or CC. Limits derivatives applications, definite integral.

MTH 303. CALCULUS II (4)
PR: MTH 302 with a grade of "C" or better or CC. Antiderivatives, the definite integral, applications, log, exponential, and trig functions.

MTH 304. CALCULUS III (4)
PR: MTH 303 with a grade of "C" or better or CC. Integration, polar coordinates, conic sections, vectors, indeterminate forms and improper integrals.

MTH 305. CALCULUS IV (4)
PR: MTH 304 with a grade of "C" or better or CC. Vectors in 3-space, partial derivatives, multiple integrals, infinite series.

MTH 309. SET THEORY (3)
PR: MTH 302 or CC. Relations, functions, order, cardinal numbers.

MTH 323. LINEAR ALGEBRA (4)
PR: MTH 302 or CC. Vectors, matrices, systems of linear equations, linear transformations.

MTH 345. INTRODUCTORY STATISTICS I (5)
Hypothesis testing, estimation; normal, Chi-square, t, F, binomial, multinomial, distributions; ANOV, CR, RCB designs; single df, regression, correlation, contingency tables. Students who successfully complete this course may not also receive credit for either ECN 331-431 Business and Economic Statistics or SSI 301 Social Science Statistics.

MTH 346. INTRODUCTORY STATISTICS II (5)
PR: MTH 345 or CC. Factorials, ANCOV; multiple curvilinear regression; response surfaces; Latin square, Split Plots, incomplete blocks designs; distribution free methods.

MTH 401. DIFFERENTIAL EQUATIONS (4)
PR: MTH 305. First order linear and nonlinear differential equations, higher order linear equations, applications.

MTH 405. ADVANCED CALCULUS I (4)
PR: MTH 305 with a grade of "C" or better. Functions of several variables, partial derivatives, implicit-function theorems, transformations.

MTH 406. ADVANCED CALCULUS II (4)
PR: MTH 405. Continuation of MTH 405.

MTH 420. ELEMENTARY ABSTRACT ALGEBRA (3)
PR: MTH 309 or CC. Groups, rings, integral domain, fields, integers, the rational, real and complex number systems.

MTH 423. GEOMETRY I (3)
PR: MTH 302. 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 309 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 (4)
PR: MTH 401. 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 302 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 (4)
PR: MTH 401 or CC. Series solutions of second order linear equations, boundary value problems, existence theorems and Fourier series.

MTH 511. ADVANCED LINEAR ALGEBRA (4)
PR: MTH 309, 323 or CC. Vector spaces, linear independence, dimension, matrices, linear transformations.

MTH 513. REAL ANALYSIS I (4)

MTH 514. REAL ANALYSIS II (4)
PR: MTH 513. Continuation of MTH 513.

MTH 515. CALCULUS ON MANIFOLDS (4)
PR: MTH 511 and 514. Calculus of several variables.

MTH 520. COMPLEX ANALYSIS I (4)
PR: MTH 405. Complex numbers, analytic functions and mappings, integrals.

MTH 521. COMPLEX ANALYSIS II (4)
PR: MTH 520. Power series, residues and poles, conformal mapping.

MTH 523. ALGEBRA I (4)
PR: MTH 305 and 309. Semi-groups and groups. Rings and ideals; homomorphisms.

MTH 524. ALGEBRA II (4)
PR: MTH 523. Polynomial rings, integral domains; factorization. Fields and field extensions; reducibility.

MTH 531. TOPOLOGY I (4)

MTH 532. TOPOLOGY II (4)
PR: MTH 531. Continuation of MTH 531.

MTH 541. APPLIED MATHEMATICS I (4)
PR: MTH 401 or CI. Elements of complex analysis, Laplace transforms, Fourier series, and Fourier transforms. Mathematical techniques for scientists and engineers. Equivalent to PHY 541.

MTH 542. APPLIED MATHEMATICS II (4)

MTH 545. STATISTICAL METHODS IN RESEARCH I (4)
Primarily for graduate students with research problems. Distribution of sample statistics estimation, tests of hypotheses.
MTH 546. STATISTICAL METHODS IN RESEARCH II (4)
PR: MTH 545 or CC. Randomized blocks, Latin squares, factorials, regression, correlation, split plots.

MTH 548. INTRODUCTORY THEORETICAL STATISTICS (5)
PR: MTH 305 and either MTH 345 or equivalent. Frequency, sampling, limiting distributions and their moments; theory of point and interval estimation, hypothesis testing, ANOV.

MTH 549. INTRODUCTORY THEORY OF LEAST SQUARES (5)
PR: MTH 305 and either MTH 548 or CC. The general linear hypothesis, least squares for experimental design models, components of variance. Applications.

MTH 571. GEOMETRY FROM AN ADVANCED STANDPOINT (3)
PR: A bachelor's degree or CC. Axiomatic development of geometries, with emphasis on Euclidean geometry, for teachers and others.

MTH 573. SET THEORY AND ALGEBRA FROM AN ADVANCED STAND-POINT (3)
PR: A bachelor's degree or CC. Basic concepts of the language of mathematics, including a study of relations, functions, algebraic structures, for teachers and others.

MTH 583. SELECTED TOPICS (1-6)
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 (4)

MTH 615. MODERN ANALYSIS II (4)
PR: MTH 614. Continuation of MTH 614.

MTH 617. BANACH SPACES AND ALGEBRAS I (4)

MTH 618. BANACH SPACES AND ALGEBRAS II (4)
PR: MTH 617. Continuation of MTH 617.

MTH 624. ABSTRACT ALGEBRA I (4)
PR: CC. Structure theory of fields; ideals and modules.

MTH 625. ABSTRACT ALGEBRA II (4)
PR: MTH 624. Noetherian rings; ideal theory.

MTH 627. HOMOLOGICAL ALGEBRA (3)

MTH 629. LIE GROUPS (3)
PR: MTH 615, 625 or 633 and CC. Topological groups, representation of compact Lie groups, algebraic groups.

MTH 632. ADVANCED TOPOLOGY I (4)
PR: MTH 532 and CC. Function spaces, compactifications, covering spaces, other topics.

MTH 633. ADVANCED TOPOLOGY II (4)
PR: MTH 632. Continuation of MTH 632.

MTH 635. ALGEBRAIC TOPOLOGY (3)
PR: MTH 633 or CC. Homotopy, homology groups, local homology groups.

MTH 636. TOPOLOGICAL ALGEBRA I (4)
PR: MTH 633 and CC. Topological semi-groups, topological groups, topological rings and fields, Haar measure.
MTH 637. TOPOLOGICAL ALGEBRA II (4)
PR: MTH 636. Continuation of MTH 636.

MTH 639. DIFFERENTIAL GEOMETRY (3)
PR: CC. Local differential geometry, curvature, evolutes and involutes, calculus of variations.

MTH 643. PARTIAL DIFFERENTIAL EQUATIONS I (4)
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 (4)
PR: MTH 643. Continuation of MTH 643.

MTH 651. LOGIC AND FOUNDATIONS I (4)
PR: CC. Propositional calculus, Post's theorem, first order and equality calculi, models, completeness and consistency theorems, Godel's theorem, recursive functions.

MTH 652. LOGIC AND FOUNDATIONS II (4)
PR: MTH 651. Continuation of MTH 651.

MTH 681. GRADUATE RESEARCH (1-15)
PR: CC.

MTH 683. SELECTED TOPICS (1-6)
PR: CC: 01-Topology, 02-Analysis, 03-Algebra, 04-Applied Mathematics, 05-Graph Theory, 06-Number Theory.

MTH 691. GRADUATE SEMINAR (1-6)
Direction of this seminar is by a faculty member. Students are required to present research papers from the literature.

MTH 699. THESIS (1-9)
May be taken more than once, but not more than a total of nine hours credit will be allowed.

MUSIC ARTS


MUS 112. RUDIMENTS OF MUSIC (3)
Preparatory course for music arts and music education majors who do not qualify for MUS 212. Develops skills in hearing and performing music and in basic notation.

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
(Courses marked with an asterisk * are applied music courses).

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 (this fee covers one or more applied music courses in any one term).

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 305-006 (Chamber Music Ensemble). May be repeated for credit.

MUS 215. *BEGINNING STRING INSTRUMENTS (1)
Sec 001 Cello; Sec 002 String Bass; Sec 003 Violin-Viola.

MUS 225. *BEGINNING PIANO (1)
Sections 001 and 002 are Level I; Sections 003 and 004 are Level II; Sections 005 and 006 are Proficiency Requirement Level; Sections 007 and 008 are Level IV.

MUS 235. *BEGINNING VOICE (1)

MUS 245. *BEGINNING WOODWIND INSTRUMENTS (1)
Sec 001 Clarinet-Saxophone; Sec 002 Flute; Sec 003 Oboe; Sec 004 Bassoon.

MUS 255. *BEGINNING BRASS INSTRUMENTS (1)
Sec 001 French Horn; Sec 002 Low Brass; Sec 003 Trumpet.

MUS 265. *BEGINNING PERCUSSION INSTRUMENTS (1)
Sec 001 music majors; Sec 002 non-music majors

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. Credit is awarded on a pass-fail basis.

MUS 303-304. THE ENJOYMENT OF MUSIC (3,3)
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. Sections 001 of MUS 303-304 are for non-music majors. Section 002 of MUS 303 is for students who are majoring in dance, theatre arts, and visual arts.

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, brass, or percussion instruments, voice, and piano. May be repeated for credit. Section 001 Chamber Singers; Section 002 Jazz Laboratory Band; Section 003 Brass Choir; Section 004 Brass Quintet; Section 005 Woodwind Quintet; Section 006 Piano Ensemble; Section 007 String Quartet; Section 008 French Horn Quartet; Section 009 Clarinet Choir; Section 010 Percussion Ensemble; Section 011 Marimba Ensemble; Section 012 Flute Choir.

MUS 311. PERFORMANCE (1-5)
PR: CC. and CI. Participation in large and small ensembles coordinated with private and class instruction in the student's major performing medium. 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)
Sec 001 Cello; Sec 002 String Bass; Sec 003 Violin-Viola.

MUS 325. *INTERMEDIATE PIANO (2)

MUS 335. *INTERMEDIATE VOICE (2)

MUS 345. *INTERMEDIATE WOODWIND INSTRUMENTS (2)
Sec 001 Clarinet-Saxophone; Sec 002 Flute; Sec 003 Oboe; Sec 004 Bassoon.
MUS 355. *INTERMEDIATE BRASS INSTRUMENTS (2)
Sec 001 French Horn; Sec 002 Low Brass; Sec 003 Trumpet.
MUS 365. *INTERMEDIATE PERCUSSION INSTRUMENTS (2)
MUS 375. *INTERMEDIATE ORGAN (2)
MUS 385. UNIVERSITY ORCHESTRAS (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. Section 001 is University Symphony Orchestra, Section 002 is Reading Orchestra.
MUS 387. UNIVERSITY BANDS (1)
PR: CI. Description under MUS 385. Section 001 is Concert Band Ensemble, Section 002 is Reading Band.
MUS 389. UNIVERSITY CHORUSES (1)
PR: CI. Description under MUS 385. Section 001 is Fine Arts Chorale, Section 002 is Reading Chorus, Section 901 is University-Community Chorus.
MUS 391. OPERA WORKSHOP (1)
PR: CI. Description under MUS 385.
MUS 412-413-414. MUSICAL STYLES (2,2,2)
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. May be repeated.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

MUS 503. COMPOSITION (3)
PR: 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 507-508. ORCHESTRATION (3,3)
PR: CI. Intensive study and practice in scoring music for the full symphony orchestra and various combinations of instruments including symphonic band and smaller ensembles of woodwind, brass and/or string instruments.
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)
Sec 001 Cello; Sec 002 String Bass; Sec 003 Violin-Viola.
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 concerts.
MUS 535. *ADVANCED VOICE (2)
MUS 545. *ADVANCED WOODWIND INSTRUMENTS (2)
   Sec 001 Clarinet-Saxophone; Sec 002 Flute; Sec 003 Oboe; Sec 004 Bassoon.
MUS 555. *ADVANCED BRASS INSTRUMENTS (2)
   Sec 001 French Horn; Sec 002 Low Brass; Sec 003 Trumpet.
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. Section 001 is piano, Section 002 is voice, Section 003 is winds, Section 004 is strings.
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 605. ENSEMBLE (1)
   PR: CI. Study and performance of music for various combinations of strings, woodwinds, brasses, and percussion instruments, voice, and piano. May be repeated four times for credit.
MUS 607-608. INSTRUMENTAL CONDUCTING (3,3)
   PR: CI. Intensive study of instrumental conducting techniques with emphasis on interpretation of musical scores and application in laboratory sessions.
MUS 609. COMPOSITION (4)
   PR: CI. 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: CI. 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 612-613-614. CHORAL LITERATURE AND CONDUCTING (6,6,6)
   Combination of seminar, classroom, and laboratory type of experiences designed to provide depth in stylistic study of choral music literature and performance.

GRADUATE APPLIED MUSIC
   (Courses marked with an asterisk (°) are applied music courses).

Vocal and instrumental instruction for graduate students only. Performance majors must qualify by audition to enroll at this level for four credits. Candi-
MUS 615. *STRING INSTRUMENTS (2-4)
PR: CC. Sec 002, 004 Cello; Sec 102, 104 Bass; Sec 202, 204 Violin-Viola.

MUS 618-619. GRADUATE REVIEW IN MUSICAL STYLES (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 musical styles.

MUS 622-623-624. TEACHING OF MUSIC THEORY (3,3,3)
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 639-640. OPERA LITERATURE (4,4)
A chronological study of the development and performance of opera from 1600 to the present time. Special emphasis will be placed on the technical, stylistic, and performance aspects of opera.

MUS 641. *WOODWIND INSTRUMENTS (2-4)
PR: CC. Sec 002, 004 Clarinet-Saxophone; Sec 102, 104 Flute; Sec 202, 204 Oboe; Sec 302, 304 Bassoon.

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. Sec 002, 004 French Horn; Sec 102, 104 Low Brass; Sec 202, 204 Trumpet.

MUS 665. *PERCUSSION INSTRUMENTS (2-4)
PR: CC.

MUS 671. STUDIO TEACHING SEMINAR (3)
PR: Graduate standing in applied music and CI. Emphasis on techniques used in teaching the individual student in applied music.

MUS 675. *ORGAN (2-4)
PR: CC.

MUS 681. DIRECTED STUDY (1-9)
PR: CC. Independent graduate studies in the various areas of music arts. Course of study and credits must be assigned prior to registration. May be repeated for credit.

MUS 691. GRADUATE SEMINAR (2)
PR: CC. May be repeated to a maximum of 6 credits.
MUS 698. GRADUATE RECITAL (3)
PR: CC.
MUS 699. GRADUATE THESIS (3)
PR: CC. May be repeated to a maximum of 9 credits.

OCEANOGRAPHY
(See MARINE SCIENCE)

PHILOSOPHY

Faculty: Gould, chairman; Carpenter, Carrier, Chen, Taylor, Truitt.

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, and discussion of philosophical issues.

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 337. 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. Approval slip from instructor required.

PHI 383. SELECTED TOPICS (1-5)
PR: CI. Selected topics according to the needs of the student. Approval slip from instructor required.

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 406. ANALYTICAL PHILOSOPHY (4)
PR: 12 hours, PHI 303. A study of the method devoted to clarifying philosophical problems through analysis of the language in which these problems are stated.
PHI 407. EXISTENTIALISM (4)
PR: 12 hours or CI. A study of the religious and atheistic existentialists and the bearing of their views on religion, ethics, metaphysics, and theory of knowledge.

PHI 408. CURRENT PHILOSOPHICAL MATERIALISM (4)
PR: CI. A critical study of historical, dialectical, and scientific materialism and its importance in physical science, social science, theory of history, theory of knowledge, and metaphysics.

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 453. EPISTEMOLOGY (4)
PR: PHI 301. An examination of human knowledge, its scope and limits, and an evaluation of evidence, criteria of truth, the nature of belief, conditions for meaningfulness, theories of perception and a study of memory and sense perception in the four major fields of nature, history, personal experience and the a priori.

PHI 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. Approval slip from instructor required.

PHI 483. SELECTED TOPICS (1-5)
PR: CI. Selected topics according to the needs of the senior students. Approval slip from instructor required.

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)
Consideration of the traditional problems of aesthetics from more contemporary perspectives including structural analysis, problems in historical analysis, the sociology of art and the psychology of art.

PHI 531. PHILOSOPHY OF LANGUAGE (4)
PR: 8 hours of philosophy, major in linguistics or CI. An examination of semantic, syntactical and functional theories of language with special attention given to the problems of meaning, linguistic reference, syntactical form and the relation between scientific languages and ordinary linguistic usage.

PHI 543. PHILOSOPHY OF HISTORY (4)
PR: 8 hours of philosophy, major in history or CI. A systematic study of historical theories and of the methods of historical explanation. An examination of classical theories from Vico through Herder, Hegel, Marx down to Spengler and Toynbee, etc.

PHI 571. SEMINAR IN EPISTEMOLOGY I (3)
PR: Major in philosophy or psychology and CI.

PHI 572. SEMINAR IN EPISTEMOLOGY II (3)
PR: Major in philosophy, or social science and CI.

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)
PR: CI. A study of the central figures and doctrines in Contemporary Ethics.

PHI 581. DIRECTED STUDY (1-5)
PR: CI. Individual study directed by a faculty member. Approval slip from instructor required.

PHI 583. SELECTED TOPICS (1-5)
PR: CI. Selected topics according to the needs of the student. Approval slip from instructor required.

PHI 585. RESEARCH (1-5)
PR: CI. Individual research supervised by a faculty member. Approval slip from instructor required.

PHI 591. SEMINAR IN THE HISTORY OF PHILOSOPHY (3)
PR: CI. A study of one or more of the central figures or movements in the History of Philosophy.

PHYSICAL EDUCATION—Basic

Abbreviations: (C) coeducational; (M) men; (W) women.

PEB 101-102. FUNCTIONAL PHYSICAL EDUCATION (1,1)
The first two required courses combine lecture and laboratory experiences which present the need and case for regular physical activity. Each course counts one (1) credit hour and is included in the student’s GPR.

PEB 111-254. ACTIVITY COURSES. (1 each course)
For those pursuing the Physical Education requirement; PEB 230 is a required course and can be satisfied by course work or credit by examination. The fourth required course is elective.
Courses taken past or outside the requirement are encouraged and count as elective hours.
Each course carries one (1) hour credit, is graded S or U and does not affect the GPR.

111 SOFTBALL AND VOLLEYBALL (M) (W)
131 WATER SAFETY INSTRUCTION (C)
133 CANOEING AND SAILING (C)
151 ARCHERY (C)
153 BADMINTON (C)
161 FOLK AND SQUARE DANCE (C)
163 SOCIAL DANCE (C)
171 FENCING (C)
173 GOLF (C)
175 GYMNASTICS (C)
179 TENNIS (C)
200 SPECIAL CONDITIONING (M) (W)
210 BASKETBALL AND VOLLEYBALL (M) (W)
212 FIELD HOCKEY AND TRACK & FIELD (W)
214 SOCCER AND SPEEDBALL (M) (W)
230 BEGINNING SWIMMING (C)
232 INTERMEDIATE SWIMMING (C)
234 ADVANCED SWIMMING (C)
236 LIFE SAVING (C)
238 SCUBA DIVING (C)
240 SYNCHRONIZED SWIMMING (C)
250 HANDBALL AND PADDLEBALL (C)
252 WEIGHT TRAINING (M) (W)
254 WRESTLING (M)

PHYSICS

Faculty: Oleson, chairman; Aubel, Bloch, Brooker, Clapp, Deans, Flynn, Forman, Kendall, R. Mitchell, Turbeville

PHY 211-212. GENERAL PHYSICS (3:1)
First quarter of general physics (mechanics) 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 (heat, electricity) 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 (wave motion, optics, atomic and nuclear physics) and lab for science students. Must be taken concurrently.
PHY 221-222. GENERAL PHYSICS (3:1)
PR: MTH 302. First quarter of general physics and lab for physics majors and engineering students. Must be taken concurrently. Vectors, kinematics, Newton's laws, energy, momentum, and rigid body motion.

PHY 223-224. GENERAL PHYSICS (3:1)

PHY 225-226. GENERAL PHYSICS (3:1)

PHY 307. MECHANICS I (3)

PHY 309. ELECTRICITY AND MAGNETISM I (4)

PHY 315. MATHEMATICAL ANALYSIS OF PROBLEMS IN MECHANICS AND ELECTRICITY (3)
PR: One year of non-calculus general physics. CR: MTH 305. Designed for students who have not had the general physics sequence using calculus. Review of mechanics and electricity emphasizing problems which involve the use of calculus.

PHY 323. MODERN PHYSICS (4)

PHY 331. OPTICS (4)

PHY 341. INTERMEDIATE LABORATORY (1)
CR: PHY 215 or 225 or equivalent. Experiments in modern physics, including the areas of atomic, nuclear, solid state and wave phenomena.

PHY 371. CONTEMPORARY PHYSICS (3)
PR: Junior standing. A qualitative investigation of physics, emphasizing its influence on life today. (No credit for physics majors.)

PHY 405. STATISTICAL PHYSICS I (3)

PHY 407. MECHANICS II (3)

PHY 409. ELECTRICITY AND MAGNETISM II (3)
PHY 415.  FUNDAMENTAL ACOUSTICS (4)

PHY 421.  SOLID STATE PHYSICS I (4)

PHY 437.  QUANTUM MECHANICS I (3)
PR: PHY 407, MTH 402 or CI. Wave-particle duality, uncertainty principle, Schrödinger's equation, postulates, angular momentum, and central forces. First quarter of sequence PHY 437-537.

PHY 441.  ADVANCED LABORATORY (1)
PR: PHY 341. Experimental work primarily related to nuclear physics. Emphasis on modern physical experimental techniques employing some of the new types of equipment.

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 (4)
PR: PHY 437 or CI. Systematics of stable nuclides, nuclear forces, nuclear models, reactions, radiation, and nuclear instrumentation.

PHY 505.  STATISTICAL PHYSICS II (3)
PR: PHY 405. Continuation of the sequence PHY 405-505.

PHY 507.  MECHANICS III (3)
PR: PHY 407. Continuation of PHY 407. Elastic media, the wave equation, transverse and longitudinal wave motion, the diffusion equation, boundary value problems and Fourier series, Fourier integral, fluid dynamics.

PHY 509.  ELECTRICITY AND MAGNETISM III (3)

PHY 517.  INTRODUCTION TO PLASMA PHYSICS (4)
PR: PHY 509 or CI. Introduction to Boltzmann, magnetohydrodynamic and orbit approaches to plasmas. Longitudinal and electromagnetic waves in plasmas. Collisions and radiation. Instabilities.

PHY 521.  SOLID STATE PHYSICS II (3)

PHY 523.  ELECTRONICS (4)
PR: PHY 409 and PHY 341. Vacuum and gas-discharge tubes, semiconductors, transistors, electronic circuit analysis and laboratory.

PHY 537.  QUANTUM MECHANICS II (3)
PR: PHY 437 or CI. Matrix mechanics, approximation methods, transformations, scattering and identical particles.

PHY 541.  METHODS OF THEORETICAL PHYSICS I (4)
PR: MTH 401 or CI. Elements of complex analysis, Laplace transforms, Fourier series, and Fourier transforms. Mathematical techniques for scientists and engineers. Equivalent to MTH 541.
PHY 542. METHODS OF THEORETICAL PHYSICS II (4)

PHY 583. SELECTED TOPICS IN PHYSICS (1-6)
PR: Senior or advanced standing and CC. Each topic is a course in directed study under the supervision of a faculty member. Among the courses contemplated are Physics of Waves, Space Physics, Elementary Particle Physics, Relativity, Nuclear Structure.

FOR GRADUATE STUDENTS ONLY

PHY 601. ATOMIC AND MOLECULAR SPECTRA (4)
PR: PHY 437 or CI. Quantitative study of atomic and molecular structure and spectra.

PHY 605. STATISTICAL MECHANICS (4)
PR: PHY 505 or CI. Kinetic theory, configuration and phase space, Boltzmann theorem, Liouville theorem, ensemble theory, quantum statistics.

PHY 607. CLASSICAL MECHANICS I (3)
PR: PHY 507 or CI. Dynamics of particles and systems of particles, variational techniques, Lagrange's equations, central forces. First quarter of sequence.

PHY 608. CLASSICAL MECHANICS II (3)
PR: PHY 607 or CI. Rigid body dynamics, tensors and dyadics, special relativity, Lorentz transformation, covariance, Hamilton's equations, least action principle. Second quarter of sequence.

PHY 609. CLASSICAL MECHANICS III (3)

PHY 631. ELECTROMAGNETIC THEORY I (3)
PR: PHY 509 or CI. Electrostatics, magnetostatics, potential and boundary value problems, Maxwell's equations. First quarter of sequence.

PHY 632. ELECTROMAGNETIC THEORY II (3)
PR: PHY 631 or CI. Electromagnetic waves, wave guides and resonant cavities, diffraction, relativistic-particle kinematics and dynamics, plasmas and magnetohydrodynamics.

PHY 633. ELECTROMAGNETIC THEORY III (3)
PR: PHY 632 or CI. Scattering, radiation, multipole fields, radiation damping, and self-fields.

PHY 637. QUANTUM MECHANICS III (3)
PR: PHY 537 or CI. Dirac equation, quantized fields, collision theory, symmetry and invariance.

PHY 641. EXPERIMENTAL PHYSICS (1)
PR: Graduate standing. Laboratory techniques frequently required in experimental research. Includes manipulation of glass, production and measurement of vacua, production and measurement of thin films, and use of various machine tools.

PHY 681. GRADUATE RESEARCH (1-15)
PR: CC.

PHY 683. SELECTED TOPICS IN PHYSICS (1-15)
PR: CC. Each topic is a course in directed study under the supervision of a faculty member.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisite(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 691</td>
<td>GRADUATE SEMINAR (1)</td>
<td></td>
</tr>
<tr>
<td>PHY 699</td>
<td>MASTER'S THESIS (1-9)</td>
<td>PR: PHY 641</td>
</tr>
</tbody>
</table>

**POLITICAL SCIENCE**

Faculty: M. O'Donnell, Chairman; S. Barber; E. Black; F. Horrigan; J. Jreisat; A. Kelley; T. Laughlin; J. Rosner; J. Sidor; J. Snook; S. Stoudinger.

**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, guerilla 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)

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: Upper level standing and SSI 301 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 and completion of all preceding core requirements in Political Science. Designed to give the student an opportunity to examine and apply various concepts and methods in the field of political science to some integrated problem area.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

POL 520. ADMINISTRATION OF URBAN AffAIRS (4)
An analysis of the role of the administrator at the municipal level stressing the division of functions, policy formation, alternative governmental structures and their effect on administrative processes.
POL 525. PROBLEMS OF PUBLIC PERSONNEL ADMINISTRATION (4)
An analysis of recruitment, testing, training, employee and human relations in the
current service.

POL 527. COMPARATIVE PUBLIC ADMINISTRATION (4)
Comparison of certain aspects of public administrative systems of various govern-
ments, emphasizing such writers as Siffin, Hadari, Appleby, Hu, Simon and Riggs.

POL 530. LEGAL AND REGULATORY PROCESSES (4)
Systematic study of the political-judicial factors in the regulatory process of
administrative agencies.

POL 540. THE CHANGING SOUTH (4)
The study of various phases of political systems in the southern states.

POL 550. METHODOLOGICAL AND CONCEPTUAL PROBLEMS IN COM-
PARATIVE POLITICS (4)
Examination of problems and concepts in the study of comparative politics, em-
phasizing theoretical and empirical relations, and relative advantages of different
levels and units of comparative analysis.

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 and CI. Application of research models now
employed in governmental agencies; including developing a structured research
proposal, preparing a network program comprising the elements making up the
proposal and a research paper. Designed to give the student practical experience
in the administrative and political processes.

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.

FOR GRADUATE STUDENTS ONLY

POL 600. SCOPE AND METHODS OF POLITICAL SCIENCE (4)
Advanced study of the scope and methodologies of political science, including
their applications to different research areas.

POL 620. URBAN POLICY ANALYSIS (4)
Systematic examination of the organizational and administrative characteristics of
planning, program development and reporting activities conducted at local levels
by various state, regional, and federal agencies.

POL 623. URBAN FINANCIAL ADMINISTRATION (4)
Examination of organizational structure and administrative processes of urban
fiscal agencies, sources of revenue, expenditures and indebtedness, and current
problems in budgeting.

POL 625. PROBLEMS IN URBAN POLITICS (4)
Analysis in depth of pressure group behavior and its role in municipal policy
formulation, including the study of community power approaches advanced by
Rossi, Sofen, Kammarer, Martin and others.

POL 627. ADMINISTRATIVE BEHAVIOR AND PUBLIC POLICY FORMA-
TION (4)
Analysis of the formal, informal and societal characteristics of public bureaucracies
and their impact on public policy.

POL 640. POLITICAL SOCIALIZATION (4)
Seminar in selected phases of the political socialization process.

POL 643. CONTEMPORARY POLITICAL IDEAS AND BEHAVIOR (4)
Study of certain phases of political philosophy and theories of modern political
analysis.
POL 650. SEMINAR IN POLITICAL REVOLUTION AND CHANGE (4)
Analysis of selected contemporary problems relating to political revolution and change.

POL 660. SEMINAR IN DEMOCRATIC GOVERNMENTS AND POLITICS (4)
Research into various phases of democratic governments and their political systems.

POL 661. SEMINAR IN TOTALITARIAN OR DICTATORIAL GOVERNMENTS AND POLITICS (4)
Research into various phases of totalitarian or dictatorial governments and their political systems.

POL 665. SEMINAR IN INTERNATIONAL ORGANIZATIONS AND ADMINISTRATION (4)
Analysis of various phases of international organizations and their administrative systems.

POL 667. SEMINAR IN INTERNATIONAL RELATIONS (4)
Investigation of selected phases of international relations in world politics.

POL 670. SEMINAR IN AMERICAN GOVERNMENT AND POLITICS (4)
Analysis of selected current problems in American government and politics.

POL 675. SEMINAR IN URBAN PROBLEMS (4)
Systematic analysis and evaluation of various problem areas of contemporary urban governments.

POL 677. SEMINAR IN ADMINISTRATIVE PROCESS (4)
Analysis of various administrative processes emphasizing policy formulation/implementation, programming, new concepts of management in a public service environment.

POL 680. INDIVIDUAL RESEARCH (4)
Study in depth of a special problem in political science approved by a thesis committee.

POL 690. MASTER'S THESIS (1-9)

PSYCHOLOGY

Faculty: Kimmel, chairman; Achenbach, Ball, Bitterman, Clement, Dertke, Fowler, Hawkins, LaBarba, Mourer, Nelson, Penner, Sandler, Sidowski, Sistrunk, Strong, Toth, Woodard.

PSY 201. INTRODUCTION TO PSYCHOLOGY (5)
A survey of major topics in psychology (learning, perception, thinking, intelligence, etc.), and an introduction to methods used in psychological investigation. Lecture plus discussion.

PSY 311-312. RESEARCH METHODS IN PSYCHOLOGY (4:1)
PR: PSY 201 and SSI 301. Scientific research methods and their applications for psychology. Topics include experimental planning, control procedures, and interpretative principles. Lecture plus lab. Must be taken concurrently.

PSY 313. APPLIED PSYCHOLOGY (4)
PR: PSY 201 or CI. The application of psychological principles and the functions of psychologists in education, government, industry, and clinical practice. NOT FOR MAJOR CREDIT.

PSY 335. PSYCHOLOGY OF ADJUSTMENT (4)
PR: PSY 201 or CI. Genetic, organic and learned factors involved in the processes of personal adjustment; applications of mental health principles to everyday living. NOT FOR MAJOR CREDIT.

PSY 341. CHILD PSYCHOLOGY (4)
PR: PSY 201 or CI. Developmental and psychosocial aspects of childhood, including hereditary, maturational, psychological, and social determinants of child behavior. NOT FOR MAJOR CREDIT.
PSY 401. GENERAL PSYCHOLOGY (4)
PR: Upper-division standing. Designed to give the advanced undergraduate non-major an opportunity to acquire concepts within the field of psychology and relate these to other areas of study. NOT FOR MAJOR CREDIT.

PSY 402. PSYCHOLOGY OF LEARNING (4)
PR: PSY 201, SSI 301, PSY 311-312. Survey of methods, empirical findings and theoretical interpretations in conditioning, instrumental learning, and verbal learning. Lec-lab.

PSY 403. DEVELOPMENTAL PSYCHOLOGY (4)
PR: PSY 201, SSI 301, PSY 311-312. Survey of methods, empirical findings and theoretical interpretations in the study of human and animal development. Lec-lab.

PSY 404. SOCIAL PSYCHOLOGY (4)
PR: PSY 201, SSI 301, PSY 311-312. Behavior of the individual human being as affected by the social and cultural influences of society. Lec-lab.

PSY 405. NEUROPSYCHOLOGY (4)

PSY 411. EXPERIMENTAL DESIGN AND ANALYSIS (4)
PR: PSY 201, SSI 301, PSY 311-312. Detailed coverage of those research designs and statistical techniques having the greatest utility for research problems in psychology. Emphasis on topics from analysis of variance.

PSY 415. SYSTEMATIC PSYCHOLOGY (4)
PR: PSY 201, SSI 301, PSY 311-312. The historical roots of modern psychological theories, investigation of the various schools of psychology such as behaviorism, Gestalt psychology, psychoanalysis, and phenomenological psychology.

PSY 421. MOTIVATION (4)
PR: PSY 201, SSI 301, PSY 311-312, 402, 405. An examination of human and animal motivation for both the physiological and psychological viewpoints. Emphasis will be given to current research.

PSY 425. COMPARATIVE PSYCHOLOGY (4)
PR: PSY 201, SSI 301, PSY 311-312, 402, 405. 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.

PSY 432. INDUSTRIAL PSYCHOLOGY (4)
PSY 201, SSI 301, PSY 311-312, 404. 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 436. PSYCHOLOGICAL ASSESSMENT (4)
PR: PSY 201, SSI 301, PSY 311-312, 403. A consideration of the instruments for intellectual, achievement, and personality assessment including their applications, development, and potential abuses. Students may not receive credit for both PSY 436 and EDF 303, Introduction to Measurement and Evaluation.

PSY 441. VERBAL BEHAVIOR (4)
PR: PSY 201, SSI 301, PSY 311-312, 402. Survey methods, empirical findings and theoretical interpretations of verbal learning and retention, concept learning and information processing.

PSY 445. PERCEPTION (4)
PR: PSY 201, SSI 301, PSY 311-312, 405. 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 452. PERSONALITY (4)
PR: PSY 201, SSI 301, PSY 311-312, 402, 403. Methods and findings of personality theories and an evaluation of constitutional, biosocial, and psychological determinants of personality. Lec-lab.

PSY 455. PSYCHOPATHOLOGY (4)
PR: PSY 201, SSI 301, PSY 311-312, 402, 403. A study of the classifications of variant behavior and some of the hypotheses used to explain such behavior.

PSY 481. SELECTED TOPICS: RESEARCH (1-4)
PR: Upper division standing and CI. The student plans and conducts an individual research project under the supervision of a psychology faculty member. May be repeated with a maximum of eight hours credit.

PSY 485. SELECTED TOPICS: READING (1-4)
PR: Upper division standing and CI. A reading program of topics in psychology is conducted with the supervision of a psychology faculty member. May be repeated with a maximum of eight hours credit.

PSY 491. SELECTED TOPICS: SEMINAR (4-8)
PR: Upper division standing and CI. Graduate-type seminar designed to provide the advanced undergraduate student with the opportunity to interact with faculty and other students for the purpose of developing an in-depth understanding of a selected sub-area within psychology. May be repeated with a maximum of eight hours credit.

FOR GRADUATE STUDENTS ONLY

PSY 608. EXPERIMENTAL SOCIAL PSYCHOLOGY (5)
PR: CI. Analysis and laboratory experience in research methods of social psychology, with particular consideration of attitude measurement, systematic observational methods, sociometrics, stimulation of social behavior, interviewing, and content analysis. Lec-lab.

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. Students may not receive credit for both PSY 613 and EDS 531, Behavior Disorders in the Schools.

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. Students may not receive credit for both PSY 617 and EDF 617, Measurement of Individual Intelligence.
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)
PR: CI. May be repeated for credit. The student works in close collaboration with a faculty member in designing, conducting and interpreting experiments.

PSY 621. APPLICATIONS OF LEARNING PRINCIPLES & PROCEDURES (5)
PR: Prior course in Learning, or CI. Application of various learning principles and procedures to problems in specialized settings. Co-listed with the Rehabilitation Institute (REH 621).

PSY 631, 632, 633. RESEARCH METHODS AND MEASUREMENT I, II, & III. (5,5,5)
PR: Admission to M.A. program in psychology or CI. Three-quarter sequence designed to cover research methods and strategies and their application to psychology. Topics include logic and purpose of experimentation in psychology, measurement theory, design and analysis of experiments, probability, statistical inference, analysis of variance, correlational methods, interpretation of experimental findings. Required for M.A. degree.

PSY 634. PHYSIOLOGICAL PSYCHOLOGY (5)
PR: Admission to M.A. program in psychology or CI. Neural and physiological foundations of behavior. Structure and function of the central nervous system and autonomic nervous system. Physiological basis of learning, motivation in subhumans and humans. Required for M.A. degree unless waived by examination. First quarter.

PSY 635. DEVELOPMENTAL PSYCHOLOGY (5)
PR: Admission to M.A. program in psychology or CI. Detailed study of the development of human and animal behavior aimed toward an understanding of ontogenetic contributions to later behaviors. Effects of early experience on later behavior. Required for M.A. degree unless waived by examination. First quarter.

PSY 636. LEARNING AND MOTIVATION (5)
PR: Admission to M.A. program in psychology or CI. Habituation, sensitization, classical and instrumental conditioning, generalization, discrimination, trial and error learning, problem solving. Required for M.A. degree unless waived by examination. Second quarter.

PSY 637. PERSONALITY AND PSYCHOPATHOLOGY (5)
PR: Admission to M.A. program in psychology or CI. Analysis of traditional and current theories of personality and psychopathology with applications to etiology and treatment of behavior disorders. Required for M.A. degree unless waived by examination. Second quarter.

PSY 638. COGNITION AND PERCEPTION (5)
PR: Admission to M.A. program in psychology or CI. Current data and theory of perceptual and thought processes. Consideration of physiological and psychological variables in perception and cognition and applications of information and signal detection theory. Required for M.A. degree unless waived by examination. Third quarter.

PSY 639. SOCIAL PSYCHOLOGY (5)
PR: Admission to M.A. program in psychology or CI. Overview of theory and research in social psychology. Attitudes, values, group processes, leadership, conformity, social learning and motivation. Required for M.A. degree unless waived by examination. Third quarter.

PSY 640. APPRENTICESHIP IN PSYCHOLOGY (2)
PR: Admission to M.A. program in psychology. By arrangement with faculty in psychology. Tutorial interaction in scientific or clinical work of faculty mem-
ber. To be taken each of first three quarters of first year of M.A. work. Required for M.A. degree. May be repeated for a maximum of 6 hours credit.

PSY 650. ELECTROPHYSIOLOGICAL METHODS (5)
PR: PSY 634 or CI. 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 DEVELOPMENTAL 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.

---

REHABILITATION

Faculty: Pinkard, director; Landsman, Hilliard

FOR SENIOR LEVEL AND GRADUATE STUDENTS

REH 501. REHABILITATION: CONCEPTS AND THEORETICAL ISSUES (5)
A look at the historical origin, development and current understanding of the philosophy of rehabilitation. The rehabilitation process is viewed as an integration of concepts and procedures from the medical, social-psychological, and legal disciplines. The clinical, legal, societal, and self definitions of disability are studied together with their implications for the orientation and dimensions of service programs for the handicapped.

REH 502. ISSUES AND PROBLEMS IN REHABILITATION COUNSELING (5)
PR: CI. Focuses on techniques for the effective utilization of one's self in the various coordinating relationships of the rehabilitation process.
REH 503. MEDICAL ASPECTS OF DISABILITY (4)
Study of medical information needed by the counselor in integrating medical services into the total rehabilitation process from referral to placement. Examines the effect of a client's physical condition on various areas of adjustment. Includes appraisal of physical capacities in terms of functional limitations and individual differences.

REH 504. PSYCHIATRIC ASPECTS OF DISABILITY (4)
A survey of modern treatment and diagnostic procedures used by the mental health professions to assist the handicapped and disadvantaged to deal with various disabilities. Patterns and participation of rehabilitation professionals in this helping process and analyzed and evaluated.

REH 505. SPECIAL PROBLEMS IN REHABILITATION COUNSELING (5)
PR: PSY 619 or CI. The course will focus on specific counseling problems relating to special disabilities that are unique to the rehabilitation process.

REH 506. EVALUATION IN THE REHABILITATION PROCESS (5)
PR: REH 501 or CI. Methods and techniques employed to assess the mental, social, and vocational problems of handicapped persons. Particular attention will be given to the contribution of diagnosis of vocational potential in programs aimed at helping disabled individuals reach their highest possible capacity.

REH 507. PRINCIPLES AND PRACTICES OF REHABILITATION SERVICES: PRACTICUM I (5)
PR: Minimum of 15 hours of REH courses. Procedures appropriate to meeting the full range of needs of the handicapped individual as he completes the sequence of rehabilitation services. Supervised experience in observation and participation in counseling services in various rehabilitation agencies.

FOR GRADUATE STUDENTS ONLY

REH 604. RESEARCH AND METHODOLOGY IN REHABILITATION (5)
PR: Statistics, or CI. The aim of this course is to help students evaluate and utilize available research studies as well as to develop their own research skills. An individual research project is required.

REH 605. SOCIAL FACTORS IN REHABILITATION (5)
Application of a sociological frame of reference to physical and mental impairment. Discussion of societal values and norms relative to the partially and totally disabled. Analysis of the role of the disabled in the basic institutionalized subsystems of society, with implications for the rehabilitation process.

REH 606. VOCATIONAL PLACEMENT AND ADJUSTMENT OF THE DISABLED (5)
A study of occupations, vocational theories, pre-placement counseling, vocational placement techniques, follow-up procedures, and the psycho-social aspects of work as they pertain to rehabilitating disabled and disadvantaged persons.

REH 607. SELECTED TOPICS IN REHABILITATION (2-5)
PR: 15 hours of REH graduate courses or equivalent. Designed to give the graduate student an opportunity to study in depth some concept, procedure, or body of data in the rehabilitation field. Course work will consist of directed individual study and a relevant research project or paper. Course may be repeated once for credit.

REH 610. PRINCIPLES AND PRACTICES OF REHABILITATION SERVICES: PRACTICUM II (5)
PR: REH 507 and completion of a minimum of 30 hours of REH courses. Supervised practice in the application of knowledge and skills acquired in previous courses and in REH 507. Experience in rendering rehabilitation services to the moderately and severely disabled in at least two appropriate community facilities.
REH 620. INTERNSHIP IN REHABILITATION (15)
PR: REH 507, REH 610. Student placement in an approved intern setting for a minimum of 400 hours supervised experience.

REH 621. APPLICATIONS OF LEARNING PRINCIPLES AND PROCEDURES (5)
PR: Prior course in Learning or CI. Application of various learning principles and procedures to problems in specialized settings. SEE PSY 621.

RELIGIOUS STUDIES

Faculty: Tremmel, chairman; Gessman, Gould, Smith, Taylor.

REL 300 INTRODUCTION TO RELIGION (4)
An examination of the phenomenon of religion, which will include (1) an examination of why people do religion; (2) an examination of the character of theology, with special attention to certain basic theological concepts such as God, sin, salvation, liberation, reincarnation, immortality, theism, atheism; (3) an analysis of the character of religious ritual in its metatechnological, sacramental and experiential form; and (4) an examination of the place and character of moral systems in religion.

REL 310. OLD TESTAMENT STUDIES (4)
An introduction to the critical study of the Hebrew Scriptures against the background of the ancient Near East, with attention to the history and religion of the Hebrew people.

REL 315. NEW TESTAMENT STUDIES (4)
An introduction to the critical study of the New Testament in context of Christian beginnings in the first century A.D.

REL 325. HISTORY OF JUDAISM (4)
The historical development of Judaism and Jewish concepts from biblical times to the modern era with emphasis on the formative years from the 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 modern era.

REL 350. WORLD RELIGIONS (5)
An introduction to the ideas and institutions of some of the major religions of the world, especially Hinduism, Buddhism (Theravada, Mahayana, Zen), Taoism and Confucianism, Judaism, Christianity and Islam.

REL 360. DIALOGUES IN RELIGION (4)
A course designed to place in dialogic encounter various aspects of contemporary religious beliefs and practices for the purpose of enabling students to hear and participate in discussions concerning the claims and procedures of existing religions.

REL 383. SELECTED TOPICS (credits vary)
PR: CI. Course contents depend on students’ needs.

REL 385. DIRECTED READINGS (credits vary)
PR: CI. Individual guidance in concentrated reading on a selected topic.

REL 481. UNDERGRADUATE RESEARCH (credits vary)
PR: Junior standing and CI. Individual investigations with faculty supervision.

REL 483. SELECTED TOPICS (credits vary)
PR: Junior standing and CI. Course contents depend on students’ needs.

REL 491. SEMINAR IN RELIGION (4)
A course designed for persons, especially Religious Studies majors, whose prior religious studies have prepared them for a cooperative creative and/or research effort in the area of religion.
REL 583. SELECTED TOPICS (credits vary)
PR: Senior standing and CI. Course contents depend on students’ needs.

The following courses are part of the Religious Studies Program. For complete course descriptions refer to the appropriate departmental listings elsewhere in this catalogue:

**ANT 471. SPECIAL TOPICS IN ANTHROPOLOGY (PRIMITIVE RELIGION)** (4)
**ART 472. MEDIEVAL ART** (3)
**CLS 321. ANCIENT CIVILIZATION** (5)
**CLS 341, 342, 343. BASIC HEBREW** (3)
**ENG 319. THE BIBLE AS LITERATURE** (4)
**ENG 507. MILTON** (4)
**ENG 511. RELIGIOUS AND EXISTENTIAL THEMES IN MODERN LITERATURE** (4)
**ENG 583. SELECTED TOPICS IN ENGLISH STUDIES (RELIGIOUS LITERATURE)** (1-4)
**HTY 425, 426. A HISTORY OF THE RENAISSANCE AND REFORMATION** (4)
**HTY 431, 432. EUROPEAN SOCIAL AND INTELLECTUAL HISTORY** (4)
**HTY 591. PRO-SEMINAR IN HISTORY (RELIGIOUS HISTORY)** (4)
**HUM 427, 428. MEDIEVAL ARTS AND LETTERS** (4)
**HUM 541. HUMANITIES IN THE ORIENT: INDIA** (4)
**HUM 542. HUMANITIES IN THE ORIENT: JAPAN** (4)
**HUM 543. HUMANITIES IN THE ORIENT: JAPAN** (4)
**LLI 301, 302. MAIN CURRENTS OF WESTERN THOUGHT** (3)
**PHI 411. PHILOSOPHY OF RELIGION** (4)
**PHI 321. ETHICS** (4)
**PHI 333. ANCIENT AND MEDIEVAL PHILOSOPHY** (4)
**PHI 521. CONTEMPORARY CONTROVERSIES IN PHILOSOPHY OF RELIGION** (4)
**SOC 373. SOCIOLOGY OF RELIGION** (4)

**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.

**ROM 583. SELECTED TOPICS** (2-5)
PR: Senior standing and CI. Course contents depend on students’ need and instructor’s interest.

**RUSSIAN**

Faculty: Artzybushev, Sokolsky, Liaugminas

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 310. HIGHLIGHTS OF RUSSIAN LITERATURE IN TRANSLATION (4)
A study in English of selections from the works of Tolstoy, Turgenev, Dostoyevsky and Chekhov.

RUS 383. SELECTED TOPICS (varied)
Course content depends upon student demand and instructor's interest.

RUS 453. SELECTED TOPICS (varied)
PR: CI. Junior standing. Course content depends upon student demand and instructor's interest.

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)
Griboyedov, 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 NINETEENTH CENTURY (4)
Study of the major works of Gogol, Turgenev and Goncharov.

RUS 552. RUSSIAN NOVEL OF THE NINETEENTH CENTURY: TOLSTOY (4)
Life and major works of Leo N. Tolstoy.

RUS 553. RUSSIAN NOVEL OF THE NINETEENTH CENTURY: DOSTOYEVSKY (4)
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. May-

**RUS 564. RUSSIAN SOVIET LITERATURE (3)**

Literary works of M. M. Zoschenko, M. A. Sholokhov, B. L. Pasternak, A. Solzhenitsyn and others.

**RUS 558. 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, Arnade, Bosserman, Clement, Dilkes, Fuson, Hawkins, Jreisat, Kaplan, Kutcher, Nesman, Rothwell, Seligsohn, Strong, Swanson, Wheeler, Winthrop.

**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. Students who successfully complete this course may not also receive credit for either ECN 331 Business and Economic Statistics or MTH 345 Introductory Statistics.

**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 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.

SOCILOGY


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 315. FOUNDATIONS OF THEORY (4)
PR: SOC 201 or CI. Consideration of selected theories of sociology and procedures of systematic theory construction.

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 531. SOCIAL INTERACTION (4)
PR: SOC 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 553. SOCIOLOGY OF THE ARTS (4)  
PR: SOC 201 or CI; upper division standing. The creation, distribution and use of arts from a sociological perspective; the social roles involved.

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.

SOC 583. TOPICS IN SOCIOLOGY (4)  
PR: 16 quarter hours in Sociology AND prior consent of instructor. May be repeated for credit. Examination and analysis of a significant issue in social theory, methodology or a substantive area of sociology.

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 623. SOCIOLOGICAL STATISTICS (5)  
PR: SSI 301 or CI. Logic and application of parametric and nonparametric statistical analysis for sociological data.

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: Equivalent of 16 quarter hours in the student's graduate program, SOC 611, 623, 621.

SOC 692. THESIS AND THESIS SEMINAR (5)
PR: Equivalent of 16 quarter hours in the student's graduate program, SOC 611, 623, 621. May be taken concurrently with SOC 691.

SPANISH

Faculty: Hunter, Hampton, McLean, Milani, Neugaard, Seminario, Sparks, Tatum.

Basic course 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 310. HIGHLIGHTS OF HISPANIC LITERATURE IN TRANSLATION (4)
A study in English of the most outstanding literary works of Spain and Spanish America. Elective for students in all departments (except Spanish majors).

SPA 383. SELECTED TOPICS (1-6)
Course content depends upon student demand and instructor's interest.

SPA 403. SPANISH PHONETICS & DICTION (3)
Spanish phonology with emphasis on phonic groupings; correction of the individual student's errors in diction.

FOR SENIOR LEVEL AND GRADUATE STUDENTS

Prerequisite: SPA 305, 306, 307

SPA 516. STYLISTICS (3)
A study of syntax, grammar and stylistic devices of the Spanish language based on analysis of literary style.

SPA 523. GOLDEN AGE LITERATURE (3)
Lope de Vega and his contemporaries.
SPA 524. **GOLDEN AGE LITERATURE** (3)
Dramatists of the latter part of the Golden Age.

SPA 525. **GOLDEN AGE LITERATURE** (4)
Lyric poetry, the mystics, the picaresque and idealistic novel of the Golden Age.

SPA 526. **CERVANTES** (4)
A study of the life and works of Cervantes, with special emphasis on the Quijote.

SPA 540. **SPANISH ROMANTICISM** (3)
A study of Spanish drama and poetry of the first part of the Nineteenth Century.

SPA 541. **REALISTIC DRAMA AND POETRY OF THE NINETEENTH CENTURY** (3)
A study of the drama and poetry of the latter part of the Nineteenth Century.

SPA 542. **NINETEENTH CENTURY REALISM** (4)
A study of the Nineteenth Century realistic novel.

SPA 544. **GALDOS** (3)
The prose of Benito Pérez Galdós.

SPA 546. **GENERATION OF 1898** (3)
Novel of Generation of 1898.

SPA 551. **MODERN SPANISH POETRY** (3)
A study of Spanish verse of the Twentieth Century from the Generation of 1898 to the present.

SPA 552. **TWENTIETH CENTURY SPANISH LITERATURE** (3)
Prose since the Generation of 1898.

SPA 561. **SURVEY OF SPANISH AMERICAN LITERATURE** (4)
The Poetry and Drama of Spanish America.

SPA 562. **SURVEY OF SPANISH AMERICAN LITERATURE** (4)
The Novel and Short Story of Spanish America.

SPA 583. **SELECTED TOPICS IN HISPANIC STUDIES** (1-6)
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.

SPA 591. **SENIOR SEMINAR** (4)
Study in depth of a specific writer or literary movement as chosen by the instructor. Individual research required of students.

**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)
PR: SPA 601.
A study of Spanish literature of the Middle Ages, with special emphasis on the Poema de Mío Cid, Berceo, Juan Ruiz, Alfonso el Sabio and the ballads.

SPA 603. **RENAISSANCE** (3)
A study of Spanish literature of the late Fifteenth and the Sixteenth Centuries; from the Celestina through the immediate precursors of Lope de Vega.

SPA 624. **CALDERON** (3)
A seminar on representative plays by Calderon. Critical, analytical and research papers required.

SPA 645. **GENERATION OF 1898** (4)
A study of the philosophical writings of Ganivet, Unamuno, Ortega y Gasset, Azorín, and some of the minor writers.

SPA 647. **NATURALISMO** (3)
SPA 651. GARCIA LORCA AND HIS CONTEMPORARIES (3)
A study of the Vanguard movement and the new schools of thought: *ultrai smo* and *creacionismo*.

SPA 652. TREMENDISMO (3)
A study of the post war novelists with special emphasis on José Cela.

SPA 661. MODERNISMO (3)
A study of the writing of Rubén Darío and other writers of Modernismo.

SPA 662. PROBLEMS IN THE SPANISH-AMERICAN NOVEL (3)
In-depth studies of selected themes, techniques, or historical periods in the Spanish-American novel.

SPA 663. MEXICAN LITERATURE (3)
A study of the literature of Mexico from the colonial period to the present.

SPA 689. SPANISH BIBLIOGRAPHY (O)
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 M.A. 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: J. Popovich, chairman; Brady, Galati, Heck, Jones, Kelly, Lucoff, Natter, Perez, Sarett, Schneider, Sisco, Steck, Weinfield

SPE 103. SPEECH FOR FOREIGN STUDENTS (5)
A special course for students learning English as a second language. Intensive study and drill in American English pronunciation and listening comprehension. May be taken in conjunction with 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 320. ISSUES AND INTERPRETATION (2)
The study of literature through analyses of printed textual materials and of the visual-aural textual performance of them. May be repeated.

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. BROADCASTING AND SOCIETY (5)
The communication process and influence of broadcasting upon society.
SPE 347. RADIO PRODUCTION AND DIRECTION (5)
PR: SPE 241. Radio production and direction, laboratory and broadcasting experience.

SPE 348. RADIO PRACTICUM (2)
PR: SPE 347 or CI. The study, rehearsal, and production of radio programs. May be repeated once.

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 360. CURRENT ISSUES AND RHETORIC (2)
An analysis of significant current speakers and issues. May be repeated.

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 362. TECHNICAL COMMUNICATION (5)
Investigation and application of methodology and effective technical communication for effective oral presentation of technical reports.

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. ARGUMENTATION AND DEBATE (5)

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 381. UNDERGRADUATE RESEARCH (credits vary)
PR: Junior standing and CI. Individual investigations and faculty supervision.

SPE 383. SELECTED TOPICS (credits vary)
PR: Junior standing and CI.

SPE 385. DIRECTED READINGS (credits vary)
PR: Junior standing and CI.

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 443. TELEVISION PRACTICUM (2)
PR: SPE 442 or CI. The study, rehearsal, and production of television programs. May be repeated once.
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 501. SPEECH BEHAVIOR AND PROCESSES (5)
PR: Upperclass standing. Study of the theories of the simple and complex acoustical phenomenon of speech; intensive analysis of the stimulus-feed back variables of speech.

SPE 503. APPLIED PHONETIC TRANSCRIPTION (5)

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 DRAMATIC LITERATURE (5)
PR: SPE 321 or CI. Critical appreciation and Oral Interpretation of special textual materials which are inherently dramatic in nature and poetry, narrative prose, drama, biography, and history.

SPE 522. ORAL INTERPRETATION OF POETRY (5)
PR: SPE 321 or CI. Critical appreciation of lyric and narrative poetry and communication of that appreciation to an audience. Study of poetic theory and prosodic techniques.

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 524. ORAL INTERPRETATION OF DRAMATIC LITERATURE, II (5)
PR: SPE 521. A study of selected pre-modern dramas with special emphasis on problems of interpretation for oral performance.

SPE 525. ORAL INTERPRETATION OF CHILDREN’S LITERATURE (5)
PR: SPE 321 or CI. A study of the theories and practice in the oral interpretation of poetry and narrative fiction for children with special emphasis on classical and modern literature for children.

SPE 561. THEORY AND RESEARCH IN SMALL-GROUP COMMUNICATION (5)
PR: SPE 361. Advanced study of theories and research in communicative interaction in group discussion and conference.

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 567. PERSUASION (5)

SPE 581. RESEARCH (credits vary)
PR: Senior or graduate standing and CI.

SPE 583. SELECTED TOPICS (credits vary)
PR: Senior or graduate standing and CI.

SPE 585. DIRECTED READINGS (credits vary)
PR: Senior or graduate standing and CI.

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 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 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 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 683. 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 685. DIRECTED READINGS (1-5)

SPE 689. GRADUATE RESEARCH (1-5)
Directed study in special projects. Recommended only when material cannot be studied in scheduled courses.

SPE 691. GRADUATE SEMINAR IN ORAL COMMUNICATION (5)

SPE 694. SUPERVISED COLLEGE SPEECH INSTRUCTION (5)
PR: Graduate standing and CI. Instruction and experience in teaching the University’s basic Speech courses. Credit not applicable toward the graduate degree in Speech. May be repeated.

SPEECH PATHOLOGY AND AUDIOLOGY

Faculty: Webb, director; Beedle, Carlson, Edwards, Glover, Holloway, Kasan, Kinde, Knight, Jackson, Ritterman, Seaman.
SAI 201. SURVEY OF COMMUNICATION DISORDERS (3)
The nature and prevention of disorders of communication.
SAI 301. SPEECH PATHOLOGY (6)
PR: SAI 201 or CI. An introduction to speech and language disorders: major treatment approaches, etiologies and research findings.
SAI 302. AUDIOLOGY (6)
PR: SAI 201 or CI. An introduction to disorders of hearing: major treatment approaches, etiologies and research findings.
SAI 311. THE SCIENCE OF COMMUNICATION DISORDERS I (6)
PR: SAI 201 or CI. Structural bases of communication disorders.
SAI 312. THE SCIENCE OF COMMUNICATION DISORDERS II (6)
PR: SAI 201 or CI. Research approaches to the study of communication disorders.
SAI 313. THE SCIENCE OF COMMUNICATION DISORDERS III (6)
PR: SAI 201 or CI. Systems of analysis of communication disorders.
SAI 483. SELECTED READINGS (Topic) (4), (4), (4)
PR: CI.
SAI 498. INTRODUCTION TO SPEECH PATHOLOGY & AUDIOLOGY PRACTICUM (1-12)
PR: SAI 301 or 302. Observation and participation in speech pathology and audiology practicum in the University clinical laboratory.
SAI 511. INSTRUMENTATION I (6)
PR: SAI 301. Calibration and instrumentation in speech pathology.
SAI 512. INSTRUMENTATION II (6)
PR: SAI 302. Calibration and instrumentation in audiology.
SAI 513. THE SCIENCE OF COMMUNICATION DISORDERS (6)
PR: SAI 301 and 302 or CI. Learning approaches useful in the management of speech and hearing impairments.
SAI 571. EVALUATION OF ORAL COMMUNICATION DISORDERS (6)
PR: SAI 301 or CI. Articulation, voice, language and stuttering disorders. Reporting, case management, referral and professional relationships.
SAI 572. AUDIOLOGY I (6)
PR: SAI 302 or CI. Evaluation of auditory and visual communication skills of the hearing impaired.
SAI 573. AUDIOLOGY II (6)
SAI 574. METHODS FOR ORAL COMMUNICATION DISORDERS (6)
PR: SAI 571 or CI. Classic and experimental approaches to and systems of evaluation of therapy in the management of speech impaired individuals.
SAI 575. MANAGEMENT OF COMMUNICATION DISORDERS (4)
PR: SAI 573, SAI 574 or CI. Coordination, planning, and structuring of programs for individuals with communication disorders.
SAI 576. COMMUNICATION DISORDERS: VOICE (4)
PR: SAI 574 or CI. Research and clinical literature on voice and voice disorders.
SAI 577. COMMUNICATION DISORDERS: ARTICULATION (4)
PR: SAI 574 or CI. Research and clinical literature on articulation and articulation disorders.
SAI 578. COMMUNICATION DISORDERS: STUTTERING (4)
PR: SAI 574 or CI. Research and clinical literature on stuttering and related disorders.
SAI 579. TECHNIQUES OF AUDITORY TRAINING (4)
PR: SAI 574 or CI. Auditory training of the hearing impaired.
SAI 580. COMMUNICATION DISORDERS: LANGUAGE (4)
PR: SAI 574 or CI. Research and clinical literature on language disorders.
SAI 581. SUPERVISED RESEARCH (1-12)
PR: CI.
SAI 583. SELECTED READINGS (Topic) (4), (4), (4)
PR: CI.
SAI 598. SPEECH PATHOLOGY & AUDIOLOGY PRACTICUM (1-12)
PR: CI. Practicum for clinical speech pathology and audiology.

FOR GRADUATE STUDENTS ONLY

SAI 620. CLEFT PALATE (4)
PR: CI. Research and clinical literature on cleft palate as related to speech pathology and audiology.

SAI 621. APHASIA (4)
PR: CI. Research and clinical literature on aphasia as related to speech pathology and audiology.

SAI 622. CEREBRAL PALSY (4)
PR: CI. Research and clinical literature on cerebral palsy as related to speech pathology and audiology.

SAI 623. DIALECT AS A COMMUNICATION DISORDER (4)
PR: CI. Research and clinical literature on dialect as a communication disorder.

SAI 673. CHILD AUDIOLOGY (4)
PR: CI. Survey of available procedures for the early identification of hearing loss with a pediatric population.

SAI 674. SPECIAL AUDITORY TESTS (4)
PR: CI. Knowledge and skills regarding speech reception, malingering, GSR and EEG systems of hearing testing.

SAI 675. TECHNIQUES OF SPEECH READING (4)
PR: CI. Knowledge and skill regarding methods of teaching lip reading to hard-of-hearing and deaf individuals.

SAI 676. HEARING DISORDERS (4)
PR: CI. The use, coordination and interpretation of hearing test data as regards diagnosis of hearing problems.

SAI 677. HEARING CONSERVATION (4)
PR: CI. Information regarding prevention of hearing loss in children and adults in industry, schools and other settings.

SAI 680. RESEARCH PROCEDURES IN SPEECH PATHOLOGY AND AUDIOLOGY (4)
PR: CI.

SAI 681. GRADUATE RESEARCH (1-12)
PR: CI. May be repeated for credit.

SAI 683. SELECTED READINGS (Topic) (4), (4), (4).
PR: CI.

SAI 698. PRACTICUM IN SPEECH PATHOLOGY (1-12)
PR: CI. Field experience in Speech Pathology and Audiology practicum. Conducted in community facilities for speech, hearing and language impaired individuals.

SAI 699. THESIS (1-9)

THEATRE ARTS

Faculty: Whaley, chairman; Belt, A. Golding, Kase, Lorenzen, Mecham, O'Sullivan, Phillips, Williams, Zachary.

TAR 203. 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 211. FUNDAMENTALS OF STAGE PERFORMANCE (3)
Elementary principles and methods of stage performance with emphasis on inner creativity and physical expression.

TAR 212. STAGE MOVEMENT AND SPEECH (3)
PR: TAR 211 or CI. An exercise investigation of the nature and possibilities of human movement and sound in the theatre.

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 252. STAGE MAKE-UP (1)
History, theory, and practice of make-up for the stage.

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 211, 212, 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 321. 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 322. 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 339. HISTORY OF THE THEATRE (5)
A survey of the chronological development of world theatre.

TAR 352. 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 361. INTRODUCTION TO PUPPETRY (3)
Principles and methods of puppetry with an historical survey of major forms and practical problems with laboratory production.

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 421. SCENE DESIGN I (3)
PR: TAR 321 or CI. Aesthetics and theories of stage design with an 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.
THEATRE ARTS

TAR 425. STAGE LIGHTING I (3)
PR: TAR 321. 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 lighting design.

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)
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 443. 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 444. PLAYWRITING II (3)
PR: TAR 443. Continuation of Playwriting. May be repeated.

TAR 454. EXPERIMENTAL THEATRE PERFORMANCE (2)
PR: TAR 211, 212, 352, 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 471. 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 473. ADVANCED THEATRE MANAGEMENT (3)
PR: TAR 471 or CI. A study of production company organization and operation and of program selection and schedule.

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 501. Continuation of Dramatic Criticism.
TAR 511. STYLES OF ACTING (3)
PR: TAR 411 or CI. Exercises in the performance problems of the actor in pre-modern plays. May be repeated for a total of 9 hours.

TAR 515. PERFORMANCE PRODUCTION (3)
PR: TAR 413, majors only, CI. Actual production work in which members of the class prepare a play for project performance, teamed with designers from TAR 529.

TAR 529. TECHNICAL PRODUCTION (3)
PR: TAR 421-422, 423-424, 425-436, majors only, CI. Actual production work in which students design and execute scenery, costumes, properties, and lighting for project performance, teamed with playwrights and/or directors from TAR 515.

TAR 543. ADVANCED PLAYWRITING (3)
PR: TAR 443, 444, and CI. Concentration on the writing of the full length play form, with selected readings and analysis of dramatic structure. May be repeated.

TAR 544. WRITING FOR THE SCREEN (3)
PR: TAR 443, 444, 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 552. ADVANCED PERFORMANCE (1)
PR: TAR 352 or CI. The study, rehearsal, and performance of major theatrical works. Admission by audition. May be repeated.

TAR 554. ADVANCED EXPERIMENTAL THEATRE PERFORMANCE (2)
PR: TAR 454 or CI. The study, rehearsal, and laboratory performance of new and experimental works for the theatre. Admission by audition. May be repeated for a total of 6 hours.

TAR 565. THEATRE FOR CHILDREN (4)

TAR 581. DIRECTED STUDIES (1-9)
PR: CC. Independent studies in the various areas of Theatre Arts. Course of study and credits must be assigned prior to registration.

VISUAL ARTS

Faculty: D. Saff, chairman; Bailey, Covington, Cox, L. Dietrich, Eaker, C. Fager, Gelinas, Houk, Kronsnoble, Manley, Marsh, McCracken, Pappas, Rampolla, Stoeveken, Strawn.

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 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 421. SCULPTURE TECHNIQUES (3)
PR: ART 401 and ART 402.

ART 431. CERAMIC TECHNIQUES (3)
PR: ART 401 and ART 402.

ART 441. GRAPHIC TECHNIQUES (3)
PR: ART 401 and ART 402. Sec 001 Intaglio; Sec 002 Lithography; Sec 003 Silkscreen.

ART 451. SPECIAL STUDIES IN MATERIALS AND CRAFTS (3)

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 461. 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 silent motion pictures as a vehicle for visual, artistic expression.

ART 470. PREHISTORIC AND ANCIENT ART (3)
A comprehensive study of Paleolithic, Neolithic, Egyptian, Assyrian and Mesopotamian painting, sculpture and architecture.

ART 471. GREEK AND ROMAN ART (3)
A comprehensive study of Aegean, Mycenaean, Etruscan, Greek and Roman painting, sculpture and architecture.

ART 472. MEDIEVAL ART (3)
A comprehensive study of early Christian, Byzantine and Medieval painting, sculpture, architecture and manuscript illumination.

ART 473. RENAISSANCE ART (3)
A comprehensive study of Renaissance and Mannerist painting, sculpture and architecture in Italy and Northern Europe.

ART 474. BAROQUE AND ROCOCO ART (3)
A comprehensive study of the painting, sculpture and architecture in France, Italy, Spain and the Netherlands in the seventeenth and early eighteenth centuries.

ART 475. NINETEENTH CENTURY ART (3)
A comprehensive study of nineteenth century painting, sculpture and architecture in France and England.

ART 476. TWENTIETH CENTURY ART (3)
A comprehensive study of painting, sculpture and architecture from Cezanne to the present in Europe and the United States.

ART 477. ORIENTAL ART (3)
An introduction to the history of the arts of China, Japan and other non-Western countries.

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 501. DRAWING (3)
PR: ART 401 and ART 402. May be repeated. Advanced problems in various drawing techniques. Emphasis on individual creative expression.
ART 511. PAINTING (3)
PR: ART 411. May be repeated. Advanced problems in the various painting techniques. Emphasis on individual creative expression.

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. Sec 001 Intaglio; Sec 002 Lithography; Sec 003 Silkscreen.

ART 561. PHOTOGRAPHY III (3)
PR: ART 462. May be repeated. 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. May be repeated. 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 570. CRITICAL STUDIES IN ART HISTORY (3)
PR: CI. May be repeated. Specialized intensive studies in art history. Specific subject matter varies. To be announced at each course offering.

ART 581. RESEARCH (1-6)
PR: CC. May be repeated.

FOR GRADUATE STUDENTS ONLY

ART 611. PAINTING (3)
PR: CI. 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. Sec 001 Intaglio; Sec 002 Lithography; Sec 003 Silkscreen.

ART 661. PHOTOGRAPHY (3)
PR: CI. May be repeated. Advanced work in black and white and color photography, emphasis upon personal/expressive use of the medium.

ART 665. CINEMATOGRAPHY (3)
PR: CI. May be repeated. Advanced development of technical and aesthetic factors in the visual, artistic production of films.

ART 670. ART HISTORY (3)
PR: CI. May be repeated. Special intensive studies in assigned areas.

ART 681. RESEARCH (1-6)
PR: CI. May be repeated.

ART 699. THESIS (1-6)
PR: CI. May be repeated.
ZOOLOGY
See also Inter-disciplinary Biology.

Faculty: Briggs, chairman; Bachmann, Baird, Brown, Cowell, Friedl, Hopkins, Krivanek, Lawrence, Linton, McDiarmid, Meyerriecks, Simon, Snyder, Woolfenden, Young.

ZOO 311. COMPARATIVE VERTEBRATE ANATOMY (6)
PR: BIO 201-203. Anatomy of selected vertebrate types emphasizing evolutionary trends. lec-lab.

ZOO 313. INTRODUCTORY INVERTEBRATE ZOOLOGY (5)
PR: BIO 201-203. 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 422. Comparative approach to the study of tissues and the relation of their structure and function. lec-lab.

ZOO 415. INTRODUCTION TO ENTOMOLOGY (4)
PR: BIO 201-203. An introduction to general aspects of insect morphology, development and classification. The identification of local forms will be emphasized. lec-lab.

ZOO 421. CELL BIOLOGY (5)
PR: BIO 331 and CHM 351 or 335. Physico-chemical properties of cells, environmental effects on cellular activities, intermediary metabolism, photosynthesis, function of nerves and muscles. lec-lab.

ZOO 422. DEVELOPMENTAL BIOLOGY (5)
PR: ZOO 421 or BOT 510. Structural and functional events involved in differentiation and morphogenesis. lec-lab.

ZOO 461. ANIMAL SOCIAL BEHAVIOR (5)
PR: CI. An introduction to comparative ethology, with emphasis on social behavior and the evolution of behavior. 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 514. AQUATIC ENTOMOLOGY (4)
PR: ZOO 415. Taxonomy, development, and ecology of aquatic insects with emphasis on local forms. 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 201-203. The biology of amphibians and reptiles with emphasis on taxonomy. lec-lab.

* The purchase of a coupon book to cover breakage is required for these courses.
ZOO 517. ORNITHOLOGY (4)  
PR: BIO 445, ZOO 311, and CI. The biology of birds. Field trips emphasize the local avifauna. lec-lab.

ZOO 518. MAMMALOLOGY (4)  
PR: ZOO 311 or 422. The biology of mammals, including systematics, ecology, natural history, and geographical distribution. lec-lab.

ZOO 519. ICHTHYLOGY (5)  
PR: ZOO 311. Systematics of fishes, including major classification, comparative anatomy, embryology, and general distribution. lec-lab.

ZOO 520. BIOLOGY OF ECHINODERMS (5)  
PR: ZOO 313, ZOO 421. A study of the anatomy, physiology, and ecology of echinoderms. lec-lab.

ZOO 521. COMPARATIVE PHYSIOLOGY (5)  
PR: CI. The evolution of physiological mechanisms. lec-lab.

ZOO 545. ZOOGEOGRAPHY (3)  

ZOO 546. MARINE INVERTEBRATE ZOOLOGY I (5)  
PR: BIO 201 and CI. The lower invertebrate phyla. Field trips to local intertidal and subtidal habitats required. lec-lab.

ZOO 547. MARINE INVERTEBRATE ZOOLOGY II (5)  
PR: BIO 201 and CI. The higher invertebrate phyla. Field trips to local intertidal and subtidal habitats required. lec-lab.

ZOO 556. TERRESTRIAL ANIMAL ECOLOGY (4)  
PR: BIO 445. Field and laboratory investigations of the basic principles of ecology as applied to terrestrial animals. lec-lab.

ZOO 557. MARINE ANIMAL ECOLOGY (5)  
PR: BIO 445 and ZOO 313. Investigations of community structure in local marine habitats. Field work is required. lec-lab.

FOR GRADUATE STUDENTS ONLY

ZOO 609. BIOCHEMICAL SYSTEMATICS (4)  
PR: CI. A research oriented course on the acquisition and use of biochemical information in animal systematics. lec-lab.

ZOO 611. EXPERIMENTAL EMBRYOLOGY (5)  
PR: ZOO 421-422 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. PLANKTON ECOLOGY (4)  
PR: ZOO 313 or ZOO 546 and ZOO 547. The relationships and distribution of planktonic organisms as affected by their physical, chemical, and biological environments. lec-lab.

ZOO 615. PLANKTON SYSTEMATICS (4)  
PR: ZOO 313 or ZOO 546 and ZOO 547. The identification of plankton from different depth zones in the sea and from various oceanic regions. lec-lab.

ZOO 616. BIOMETRY (4)  
PR: MTH 101 or CI. An introduction to statistical procedures for research in the
biological sciences. Experimental design, analysis of data, and presentation of results are emphasized.

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 MAMMALOGY (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 and 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. lec-lab.

ZOO 623. PHYSIOLOGY OF MARINE ANIMALS (5)

ZOO 624. 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.

ZOO 626. POPULATION ECOLOGY (3)
PR: ZOO 616 or CI. Application of new methods of applied mathematics, computer simulation, and formulation of models to describe biological populations. lec-lab.

ZOO 631. ADVANCED GENETICS (5)
PR: BIO 331 and CI. A course in contemporary genetics with special reference to molecular genetics, genetic fine structure analysis, and control of protein. lec-lab.

ZOO 633. 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 661. ADVANCED ANIMAL BEHAVIOR (4)
PR: ZOO 461 and CI. Recent advances in comparative animal behavior (ethology). lec-lab.

ZOO 681. GRADUATE RESEARCH (1-9)
PR: CI. Directed research on selected 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
2. Sophomore
3. Junior
4. Senior
5. Baccalaureate degree holder
6. Students in a Graduate Program
7. Graduate degree holder
8. Students in a Doctoral Program
9. Doctoral degree holder

College: Unit within the University responsible for providing instruction in a given area of knowledge

Continuing Education Program: Courses taken off-campus not applicable toward graduation unless approved by the degree certifying area.

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.

Former Student Returning: A student who applied and enrolled for USF (not Continuing Education) courses and has been absent for two years since his last enrollment.

Full-Time Fee Student: A student taking seven quarter hours of credit, graduate or undergraduate, or enrolled in a “work period” under the Cooperative Education Program.

Full-Time Student: A student taking twelve quarter hours of credit as an undergraduate; nine hours of credit as a graduate or enrolled on a “work period” under the Cooperative Education program.

Grade Point Ratio (GPR): Ratio of grade points to quarter hours attempted.

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 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.
ADMINISTRATION OF STATE UNIVERSITIES

THE BOARD OF EDUCATION
STATE OF FLORIDA

Claude R. Kirk, Jr.
Governor

Tom Adams
Secretary of State

Earl Faircloth
Attorney General

Broward Williams
State Treasurer

Floyd T. Christian, Secretary
Commissioner of Education

THE BOARD OF REGENTS
STATE OF FLORIDA

D. Burke Kibler, III, Chairman (1976)*
Lakeland

Chester H. Ferguson (1974)
Tampa

E. W. Hopkins, Jr. (1978)
Pensacola

Miss Elizabeth A. Kovachevich (1972)
St. Petersburg

Henry D. Kramer (1971)
Jacksonville

Louis C. Murray (1973)
Orlando

Julius F. Parker, Jr. (1977)
Tallahassee

Mrs. E. D. Pearce (1975)
Miami

Milton N. Weir, Jr. (1979)
Pompano Beach

Robert B. Mautz, Chancellor
Tallahassee

* Term Expires
UNIVERSITY OF SOUTH FLORIDA
PRESIDENT
JOHN S. ALLEN

ACADEMIC AFFAIRS

Vice President and Dean .......................................................... HARRIS W. DEAN
Associate Dean ........................................................................ ALFRED H. LAWTON
Assistant Dean .......................................................................... FRANK H. SPAIN
Assistant Dean .......................................................................... WILLIAM H. TAFT
Assistant Dean, St. Petersburg Campus ..................................... LESTER W. TUTTLE, JR.

COLLEGE OF BASIC STUDIES

Dean ............................................................................................ EDWIN P. MARTIN
Chairmen
The American Idea ................................................................. ROBERT A. WARNER
Behavioral Science ................................................................. THOMAS A. RICH
Biological Science ................................................................. JAMES D. RAY
Freshman English .................................................................... JAMES A. PARRISH
Functional Foreign Languages .............................................. WILLIAM A. HUNTER
Functional Mathematics ......................................................... DONALD C. ROSE
The Humanities ....................................................................... H. CHRISTIAN KIEFER
Physical Science ...................................................................... JACK H. ROBINSON
Coordinator of Advising ......................................................... HARRIET C. SELIGSOHN
Evaluation Services
Director .................................................................................. EDWARD CALDWELL

COLLEGE OF BUSINESS ADMINISTRATION

Dean ............................................................................................ ROBERT S. CLINE
Chairmen
Accounting and Business Law .............................................. LOUIS C. JURGENSEN
Economics ............................................................................... RICHARD E. PASTERNAK
Finance ..................................................................................... JAMES R. LONGSTREET
Management ........................................................................... ALTON C. BARTLETT
Marketing .................................................................................. DAVID C. SLEEPER
Director of Graduate Studies .................................................. RICHARD L. KOZELKA
Coordinators of Advising
Lower Level ............................................................................... FRED B. POWER
Upper Level ............................................................................... KENNETH W. DAVEY

COLLEGE OF EDUCATION

Dean ............................................................................................ JEAN A. BATTLE
Assistant Dean, Graduate Study and Research ............. CHARLES C. MANKER, JR.
Assistant Dean, Undergraduate Instruction
and the St. Petersburg Campus ........................................ ROBERT L. SHANNON
ADMINISTRATION

Assistant Dean, Student Personnel ........................................... RAYMOND A. URBANEX
Student Activities ..................................................................... LOREN G. ROBERTS
Elementary Education Advising ................................................... ZOE ANN CARLSON
Secondary Education Advising .................................................... CHARLES A. GORDON
Graduate Studies Advising .......................................................... LEE T. KARNS

Administrative Coordinators

Interdisciplinary Teams ............................................................... LEADORE D. DUBOIS
Intern Experiences ...................................................................... CALVERT J. CRAIG
Research ..................................................................................... JOHN C. FOLLMAN
Coordinator, St. Petersburg Campus Programs .............................. ROBERT L. SHANNON
Coordinator, Honduras Project .................................................... E. CHRISTIAN ANDERSON
Coordinator, Doctoral Programs .................................................. CLARENCE W. HUNNICUTT

Coordinators, Teaching Specialization Areas

Administration and Supervision (Acting) ................................. REDGE W. RANYARD
Adult and Vocational Education ................................................... DONALD P. JAESCHKE
Art Education ............................................................................ GEORGE PAPPAS
Curriculum and Instruction ......................................................... JOSEPH C. BONDI, JR.
Elementary Education—General ................................................... JAMES A. CHAMBERS
Foreign Languages ..................................................................... VERNON W. WHITNEY
Guidance ..................................................................................... WILLIAM K. BOTT
Higher Education ....................................................................... JEAN A. BATTLE
Instructional Resources ............................................................... ALICE G. SMITH
Language Arts and Reading ......................................................... PHILIP H. PFOST
Language—Literature .................................................................. WILLIAM W. WEST
Mathematics .............................................................................. DONOVAN R. LICHTENBERG
Music ......................................................................................... VIRGINIA A. BRIDGES
Physical Education ..................................................................... LOUIS E. BOWERS
Pre-School ............................................................................... MICHAEL S. AULETA
Psychological Foundations ......................................................... DONALD L. LANTZ
Research ....................................................................................... DOUGLAS E. STONE
School Psychology ..................................................................... WALTER J. MUSCROVE
Science ......................................................................................... LAURENCE E. MONLEY
Speech ......................................................................................... JOHN I. SISCO
Social Science ............................................................................ ROGER M. NICHOLS
Special Education ...................................................................... ROBERT C. DWYER
Social Foundations ..................................................................... BOZIDAR MUNTYAN

Program Committee Chairmen

Pre-School ................................................................................. MICHAEL S. AULETA
Elementary School ..................................................................... JAMES A. CHAMBERS
Secondary School ..................................................................... WILLIAM F. BENJAMIN
Higher Education ...................................................................... SIDNEY J. FRENCH

COLLEGE OF ENGINEERING

Dean .......................................................................................... EDGAR W. KOPP
Assistant Dean .......................................................................... ROBERT W. ELLIS, JR.
Chairmen

Electrical and Electronics Systems ............................................ MERLE R. DONALDSON
Industrial Systems .......................................................... ROBERT J. WIMMERT
Energy Conversion and Mechanical Design .......................... LINUS A. SCOTT
Pre-Engineering .............................................................. JOHN F. TWIGG
Structures, Materials, and Fluid Systems ......................... JOHN E. GRIFFITH

COLLEGE OF LIBERAL ARTS

Dean ....................................................................................... RUSSELL M. COOPER

Special Programs

Bachelor of Independent Studies
Director ................................................................................. KEVIN E. KEARNEY

Afro-American Studies
Director ................................................................................. BENJAMIN D. BERRY

Program for the Study of Leisure
Director ................................................................................. MAX KAPLAN

Division of Fine Arts

Associate Dean ........................................................................ HARRISON W. COVINGTON

Chairmen

Dance ...................................................................................... WILLIAM G. HUG
Visual Arts .............................................................................. DONALD J. SAFF
Music Arts ............................................................................... GALE L. SPERRY
Theatre Arts ............................................................................. RUSSELL G. WHALEY

Chairman, Florida Center for the Arts ..................................... JAMES R. CAMP

Division of Languages and Literature

Associate Dean ........................................................................ IRVING DEER

Chairmen

American Studies ................................................................. HENRY M. ROBERTSON
Classics and Ancient Studies ................................................. ALBERT M. GESSMAN
English .................................................................................... JAMES A. PARRISH
Foreign Languages .................................................................. WILLIAM A. HUNTER
Interdisciplinary Languages and Literature ......................... IRVING DEER
Linguistics ............................................................................... ROGER W. COLE
Mass Communications .......................................................... ARTHUR M. SANDERSON
Philosophy ............................................................................... JAMES A. GOULD
Religious Studies .................................................................... WILLIAM C. TREMMEL
Speech ..................................................................................... JAMES E. POPOVICH

Division of Natural Sciences and Mathematics

Associate Dean ........................................................................ THEODORE A. ASHFORD

Chairmen

Astronomy ................................................................................ HEINRICH K. EICHHORN-VON WURMB
Botany and Bacteriology ........................................... ROBERT W. LONG
Chemistry .......................................................... P. CALVIN MAYBURY
Geology .................................................................. WENDELL J. RAGAN
Mathematics ............................................................ JOGINDAR S. RATTI
Physics .................................................................. NORMAN L. OLESON
Zoology ........................................................................ JOHN C. BRIGGS

Chairmen, Advising Committees

Oceanography .......................................................... JOHN C. BRIGGS
Pre-Dental and Pre-Medical ....................................... JEROME O. KRIVANEK

Division of Social Sciences

Associate Dean .......................................................... WM. BRUCE CAMERON

Chairmen

Anthropology ............................................................ ROGER T. GRANGE
Geography .................................................................. ROBERT H. FUSON
History ....................................................................... ROBERT J. BURKE
Interdisciplinary Social Sciences ............................... MARK T. ORR
Political Science ....................................................... MAURICE E. O‘DONNELL
Psychology .................................................................. HERBERT D. KIMMEL
Sociology ...................................................................... RAYMOND H. WHEELER

Chairman, Pre-Law Advising Committee ...................... ANNE E. KELLEY
Coordinator, International Studies and Programs .......... MARK T. ORR

COLLEGE OF MEDICINE

Dean ........................................................................... DONN L. SMITH

Medical Center

Director ........................................................................ DONN L. SMITH
Assistant Business Manager ....................................... JOHN C. MELENDI

COLLEGE OF NURSING

Dean ........................................................................... ALICE E. KEEFE

INTERINSTITUTIONAL ARTICULATION

Assistant Dean ............................................................. FRANK H. SPAIN

Director, Admissions .................................................. EUGENE L. ROBERTS
Director, Computer Planning ...................................... JOHN J. BUSHELL
Director, Articulation Services .................................... CECIL C. BROOKS
Director, Summer Sessions ........................................ DAVID C. JORDAN
Registrar ...................................................................... JAMES E. LUCAS

CENTER FOR CONTINUING EDUCATION

Director ................................................................. J. RICHARD BRIGHTWELL
COOPERATIVE EDUCATION PROGRAM

Director

Coordinator—Business Areas
Coordinator—Education Areas
Coordinator—Engineering Areas
Coordinator—Liberal Arts Areas

GEORGE H. MILLER
D. KEITH LUPTON
GLENDA F. LENTZ
C. JACK WESTBERRY
MARILYN K. FAGER

GRADUATE PROGRAM

Chairman, Graduate Council

ALFRED H. LAWTON

DIVISION OF SPONSORED RESEARCH

Director

To Be Appointed

CENTER FOR RESEARCH AND DEVELOPMENT

Director

WILLIAM H. TAFT

Directors of Institutes

Aging
Exceptional Children and Adults
Marine Science
Rehabilitation
Speech Pathology and Audiology

THOMAS A. RICH
JAMES W. BARNARD
HAROLD J. HUMM
CALVIN M. PINKARD
CLARENCE E. WEBB

ADMINISTRATIVE AFFAIRS

Vice President and Dean

ELLIOTT HARDAWAY

Director, Internal Control
Center Administrator, St. Petersburg Campus

RAYMOND ZUREICH
HERMAN J. BRAMES

ADMINISTRATIVE SERVICES

Assistant Dean

JACK A. CHAMBERS

Director, Office of University Planning
Director, (Acting), Computer Research Center
Director, Personnel Services
Director, Career Planning and Placement Center

JACK A. CHAMBERS
WILLIAM G. MILLER
JOHN P. WEICHERDING
DONALD S. COLBY

OFFICE OF THE BUSINESS MANAGER

Business Manager

ANDREW C. RODGERS

Assistant Business Manager, Medical Center
Budget Officer
Comptroller

JOHN C. MELENDI
GLENNDON E. CLAYTON
ROBERT E. RICHMOND
ADMINISTRATION

Director, Auxiliary Services .................................................. WILLIAM J. McARTHUR
Director, Housing and Food Service ........................................ RAYMOND C. KING
Director, Procurement ....................................................... C. JOSEPH FORNES

INSTRUCTIONAL SERVICES

Dean .......................................................................................... To Be Appointed

Educational Resources

Director, Instructional Media .................................................. GERHARD C. EICHHOLZ

Libraries

Director .................................................................................... MARY LOU HARKNESS
Assistant Director ..................................................................... GERARD B. McCABE
Acquisition Librarian ............................................................... WILLIAM L. STEWART, JR.
Catalog Librarian ....................................................................... ROBERT V. BRADLEY
Documents Librarian ................................................................. DONNA Y. REECE
Reference Librarian ................................................................... DENNIS E. ROBISON
Serials Librarian ......................................................................... CLAUDIA J. CARTER
Special Collections Librarian ...................................................... MARGARET L. CHAPMAN

FACILITIES PLANNING AND OPERATION

Assistant Dean ........................................................................... CLYDE B. HILL
Director, Physical Plant ............................................................. CHARLES W. BUTLER

STUDENT AFFAIRS

Vice President and Dean ............................................................ HERBERT J. WUNDERLICH
Assistant to Vice President and Dean ......................................... DANIEL R. WALBOLT

Directors of Divisions

Campus Publications ................................................................. ARTHUR M. SANDERSON
Dean of Men ............................................................................... CHARLES H. WILDY
Dean of Women .......................................................................... MARGARET B. FISHER
Counseling Center for Human Development ........................... EDMUND E. ALLEN
Financial Aids ........................................................................... KERMIT J. SILVERWOOD
Housing (Personnel) ................................................................. RAYMOND C. KING
Physical Education, Recreational Sports, and Athletics ............... RICHARD T. BOWERS
Student Health Service .............................................................. ROBERT L. EGOLF
Student Organizations ............................................................... PHYLLIS P. MARSHALL
University Center ....................................................................... DUANE E. LAKE

UNIVERSITY RELATIONS

Dean .......................................................................................... WILLIAM S. CHAMBERS, JR.

Director, Alumni Services ....................................................... CHARLES F. SCHRAMM
Director, Development Services ................................................. ROBERT L. BLACK, III
Director, Information Services .......................... DENNIS E. McCLENDON
Director, Publications ...................................... FRANK E. SPEAR

UNIVERSITY OF SOUTH FLORIDA—
ST. PETERSBURG CAMPUS

Academic Affairs
Assistant Dean ............................................... LESTER W. TUTTLE, JR.

Center Administration
Center Administrator ........................................ HERMAN J. BRAMES

Library, Campus
Assistant Reference Librarian ............................... DORIS A. COOK

Library, Extension
Director ...................................................... OSBORNE L. GOMEZ
Assistant Librarian ........................................ MARGUERITE S. WURSTER

Marine Science Institute
Director ....................................................... HAROLD J. HUMM
# ACADEMIC STAFF

All members of the University of South Florida’s academic staff, including teaching, research, administrative and professional personnel, are listed below in alphabetical order. The listing includes name, highest degree, institution conferring the degree, and current rank and field as of December, 1969.

<table>
<thead>
<tr>
<th>Name</th>
<th>Degree</th>
<th>Institution</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABBEY, Walter R.</td>
<td>B.S.M.E.</td>
<td>Tri-State College, Indiana</td>
<td>Lecturer, Engineering</td>
</tr>
<tr>
<td>ABRAM, Jacques</td>
<td>Diploma with Distinction</td>
<td>Juilliard School of Music</td>
<td>Professor, Music</td>
</tr>
<tr>
<td>ACHENBACH, Karl E.</td>
<td>Ph.D.</td>
<td>Florida</td>
<td>Assistant Professor, Psychology</td>
</tr>
<tr>
<td>ACKERMAN, Doris J.</td>
<td>M.L.S.</td>
<td>Rutgers</td>
<td>Assistant Librarian, Libraries</td>
</tr>
<tr>
<td>ADAMS, Patricia W.</td>
<td>M.Ed.</td>
<td>Mississippi</td>
<td>Assistant Professor, American Idea</td>
</tr>
<tr>
<td>AGENS, Frederic F.</td>
<td>M.S.</td>
<td>California, Berkeley</td>
<td>Lecturer, Physical Science</td>
</tr>
<tr>
<td>AGENS, Jeanette F.</td>
<td>M.A.</td>
<td>George Washington</td>
<td>Assistant Professor, Education</td>
</tr>
<tr>
<td>ALLEN, Edmund E.</td>
<td>Ed.D.</td>
<td>Florida</td>
<td>Director, Counseling Center for Human Development; Associate Professor</td>
</tr>
<tr>
<td>ALLEN, Francis P.</td>
<td>M.A.</td>
<td>Michigan</td>
<td>Lecturer, Education</td>
</tr>
<tr>
<td>ALLEN, Harold C.</td>
<td>Ph.D.</td>
<td>Florida</td>
<td>Assistant Professor, Management</td>
</tr>
<tr>
<td>ALLEN, James L.</td>
<td>Ph.D.</td>
<td>Georgia Tech.</td>
<td>Associate Professor, Electrical Engineering</td>
</tr>
<tr>
<td>ALLEN, John S.</td>
<td>Ph.D.</td>
<td>New York</td>
<td>LL.D., Sc.D. (Hon.), President</td>
</tr>
<tr>
<td>ALVAREZ, Marvin R.</td>
<td>Ph.D.</td>
<td>Florida</td>
<td>Associate Professor, Botany and Bacteriology</td>
</tr>
<tr>
<td>ANDERSON, Celia L.</td>
<td>M.S.</td>
<td>Florida State</td>
<td>Assistant Professor, Education</td>
</tr>
<tr>
<td>ANDERSON, Donald J.</td>
<td>B.S.</td>
<td>Marquette</td>
<td>Systems Coordinator, University Planning</td>
</tr>
<tr>
<td>ANDERSON, E. Christian</td>
<td>Ph.D.</td>
<td>Michigan</td>
<td>Associate Professor, Education</td>
</tr>
<tr>
<td>ANDERSON, Everett S.</td>
<td>M.M.</td>
<td>Illinois Wesleyan</td>
<td>Professor, Music</td>
</tr>
<tr>
<td>ANDERSON, John A.</td>
<td>M.A.</td>
<td>Florida</td>
<td>Instructor, Economics</td>
</tr>
<tr>
<td>ANDERSON, Louis V.</td>
<td>Ph.D.</td>
<td>George Peabody</td>
<td>Associate Professor, Education</td>
</tr>
<tr>
<td>ANDERSON, Melvin W.</td>
<td>Ph.D.</td>
<td>Carnegie-Mellon Inst.</td>
<td>Associate Professor, Engineering</td>
</tr>
<tr>
<td>ANTONELLI, Barbara L.</td>
<td>M.A.</td>
<td>Washington Univ., St. Louis</td>
<td>Assistant Professor, English</td>
</tr>
<tr>
<td>APPLE, Bonnie Jo</td>
<td>M.M.</td>
<td>Texas Tech.</td>
<td>Assistant Professor, Music</td>
</tr>
<tr>
<td>ARNADE, Charles W.</td>
<td>Ph.D.</td>
<td>Florida</td>
<td>Professor, American Idea</td>
</tr>
<tr>
<td>ARTZYBUSHEV, Militza</td>
<td>M.A.-equiv.</td>
<td>Univ. Bocconi, Italy</td>
<td>Assistant Professor, Functional Foreign Languages</td>
</tr>
<tr>
<td>ASHFORD, Theodore A.</td>
<td>Ph.D.</td>
<td>Chicago</td>
<td>Associate Dean, Liberal Arts; Professor, Natural Sciences</td>
</tr>
<tr>
<td>AUBEL, Joseph L.</td>
<td>Ph.D.</td>
<td>Michigan State</td>
<td>Associate Professor, Physics</td>
</tr>
<tr>
<td>AULETA, Michael S.</td>
<td>Ed.D.</td>
<td>New York</td>
<td>Professor, Education</td>
</tr>
<tr>
<td>AUSTIN, Martha L.</td>
<td>Ph.D.</td>
<td>Chicago</td>
<td>Associate Professor, Education</td>
</tr>
<tr>
<td>BACHMAN, Konrad</td>
<td>Ph.D.</td>
<td>Princeton</td>
<td>Associate Professor, Zoology</td>
</tr>
<tr>
<td>BAILEY, Oscar W.</td>
<td>M.F.A.</td>
<td>Ohio Univ.</td>
<td>Professor, Visual Arts</td>
</tr>
<tr>
<td>Baird, Ronald C.</td>
<td>Ph.D.</td>
<td>Harvard</td>
<td>Assistant Professor, Marine Science Institute, St. Petersburg Campus</td>
</tr>
<tr>
<td>BAIL, Espy D.</td>
<td>Ph.D.</td>
<td>Pennsylvania State</td>
<td>Assistant Professor, Psychology</td>
</tr>
<tr>
<td>BARRER, Sotirios A.</td>
<td>M.A.</td>
<td>Chicago</td>
<td>Instructor, Political Science</td>
</tr>
<tr>
<td>BARRFIELD, Arthur D.</td>
<td>Jr. Ed.D.</td>
<td>Virginia</td>
<td>Associate Professor, Education</td>
</tr>
<tr>
<td>BARKHOLZ, Gerald R.</td>
<td>M.Ed.</td>
<td>Wayne State</td>
<td>Instructor, Education</td>
</tr>
<tr>
<td>BARNARD, James W.</td>
<td>Ph.D.</td>
<td>Yale</td>
<td>Director and Research Associate Professor, Exceptional Children and Adults Institute</td>
</tr>
</tbody>
</table>
BARTLETT, ALTON C., Ph.D. (Wisconsin), Chairman and Associate Professor, Management.

BATTLE, JEAN A., Ed.D. (Florida), Dean and Professor, Education.

BAYNE, EDNA F., M.A. (Columbia), Assistant Professor, Behavioral Science.

BAYNE, RONALD A., Ph.D. (North Carolina State), Visiting Assistant Professor, Chemistry.

BEAN, CHARLES F., M.E., (South Florida), Assistant Professor, Engineering.

BEASLEY, W. WAYNE, Ed.D. (Indiana), Associate Professor, Education.

BEAUCHAMP, GEORGE E., Ph.D. (Northwestern), Associate Professor, English (Part Time).

BEEDLE, RANDALL K., Ph.D. (Northwestern), Assistant Professor, Speech Pathology & Audiology Institute.

BELL, JOHN O., J.D. (George Washington), Assistant Professor, American Idea.

BELLO, ROSEANNE, B.A. (South Florida), Instructor, Functional Mathematics.

BELSITO, ROBOT, S.T.B. (Harvard), Director and Lecturer, Afro-American Studies.

BEST, GAIL G., M.S. (Illinois State), Residence Counselor, Student Affairs; Instructor, Basic Studies.

BERT, JEROME L., Ph.D. (St. Bonaventure Univ.), Associate Professor, Botany and Bacteriology.

BILLINGSLEY, EDWARD B., Ph.D. (North Carolina), Assistant Professor, History.

BINFORD, JESSE S. Jr., Ph.D. (Utah), Associate Professor, Chemistry.

BIRKE, RONALD L., Ph.D. (Massachusetts Inst. of Tech.), Assistant Professor, Chemistry.

BIRKIN, STANLEY J., Ph.D. (Alabama), Assistant Professor, Management.

BLACK, R. EARL, Ph.D. (Harvard), Assistant Professor, Political Science.

BLACK, ROBERT L. III, B.S. (Florida), Director, Development Services.


BLAU, THEODORE H., Ph.D. (Pennsylvania State), Adjunct Professor, Behavioral Science (Part time).

BLOCH, SYLVAN C., Ph.D. (Florida State), Associate Professor, Physics.

BLOUNT, WILLIAM R., Ph.D. (George Peabody), Assistant Professor, Exceptional Children and Adults Institute.


BONNI, JOSEPH C. Jr., Ed.D. (Florida), Assistant Professor, Education.

BONNEY, RACHEL A., M.A. (Minnesota), Instructor, Anthropology.

BORCHERS, MARC B., M.A. (Kentucky), Assistant Professor, Marketing.

BOSSEY, GREG, Ph.D. (Boston), Associate Professor, American Idea.

BOTT, WILLIAM K., Ed.D. (Duke), Professor, Education.

BOYD, JAMES C., Sc.D. (Washington Univ.), Associate Professor, Electrical Engineering.
BOWERS, LOUIS E., Ph.D. (Louisiana State), Associate Professor, Education.

BOWERS, RICHARD T., Ed.D. (George Peabody), Director and Professor, Physical Education, Recreational Sports and Athletics.

BOYD, HERBERT F., Ph.D. (Illinois), Professor, Education.

BRADLEY, ROBERT V., M.A. (Florida State), Catalog Librarian, Libraries.

BRAHDA, HENRY G., Ph.D. (Florida State), Assistant Professor, Education.

BRADE, WILLIAM M., M.S. (Illinois), Lecturer, Speech (Part time).

BRAMAN, ROBERT S., Ph.D. (Northwestern), Associate Professor, Chemistry.

BRAMES, HERMAN J., M.S. (Indiana State), Continuing Education Center Administrator, St. Petersburg Campus.

BRANDMEYER, GERARD A., Ph.D. (California, Los Angeles), Associate Professor, Sociology.

BRANTLEY, BETTY C., M.Ed. (Florida), Assistant Professor, Education.

BREIT, FRANK D., Ph.D. (Texas), Assistant Professor, Education.

BRIGGS, JOHN C., Ph.D. (Stanford), Chairman and Professor, Zoology.

BRITTON, JACK R., Ph.D. (Colorado), Professor, Functional Mathematics.

BROER, CARMEN M., M.A. (Florida State), Instructor, English (Part time).

BROER, LAWRENCE R., Ph.D. (Bowling Green), Assistant Professor, English.

BROOKER, H. RALPH, Ph.D. (Florida), Assistant Professor, Physics.

BROOKS, CECIL C., M.S. (North Carolina State), Research Assistant Professor, Academic Affairs; Director, Articulation Services.

BROWN, JAMES R., M.S. (Tennessee), Instructor, Finance.

BROWN, LARRY N., Ph.D. (Missouri), Associate Professor, Zoology.

BROWN, ROBERTA S., Ed.D. (Indiana), Assistant Professor, Behavioral Science.

BRUNHILD, GORDON, Ph.D. (Southern California), Professor, Finance.

BRUSCA, DONALD D., M.D. (Medical College of Virginia), Physician, Student Health Service.

BRYANT, HAYDEN C. JR., M.A. (George Peabody), Assistant Professor, Education.

BURLOCK, JOHN T., M.Ed. (Florida), Assistant Professor, Education.

Burch, DEREK G., Ph.D. (Florida), Assistant Professor, Botany and Bacteriology.

BURDICK, GLENN A., Ph.D. (Massachusetts Inst. of Tech.), Professor, Electrical Engineering.

BURGESS, AUGUST L., Ph.D. (Michigan), Assistant Professor, Energy Conversion, Engineering.

BURKE, ROBERT J., M.A. (Loyola), Instructor, History.

BURLING, WILLIAM W., M.Ed. (North Carolina), Associate Professor, Education.

BURNS, THOMAS J., M.A. (Florida State), Assistant Professor, Humanities.

BURTON, ROBERT H., Ph.D. (Louisiana State), Associate Professor, Economics.

BUSHHELL, JOHN J., Director, Computer Planning, Interinstitutional Articulation.

BUTLER, CHARLES W., B.A. (Lincoln Memorial), Director, Physical Plant.

BUTLER, K. NELSON, Ed.D. (Tennessee), Assistant Professor, Physical Education.

CALDWELL, EDWARD, Ed.D. (Florida State), Director, Evaluation Services; Assistant Professor, Social Sciences.

CAMERON, WM. BRUCE, Ph.D. (Wisconsin), Associate Dean, Liberal Arts; Professor, Social Sciences.

CAMP, JAMES R., B.A., (Georgia), Assistant Professor, Fine Arts.

CAMP, JOHN B., Ph.D. (Florida State), Associate Professor, Humanities.

CARRER, KENDALL L., Ph.D. (Oregon State), Assistant Professor, Marine Science Institute. St. Petersburg Campus.
CARLILE, Dwight B., B.A. (Missouri), Assistant Director and Lecturer, Sponsored Research.
CARLSON, Zoe A., M.S. (South Florida), Assistant Professor, Education.
CARMICHAEL, John D., M.B.A. (Georgia State), Assistant Professor, Marketing.
CARPENTER, Peter A., Ph.D. (McGill, Canada), Assistant Professor, Philosophy, St. Petersburg Campus.
CARR, Joseph A., Associate Curator, Planetarium.
CARR, Robert S., Lecturer, Language-Literature.
CARRIER, Leonard S., Ph.D. (Stanford), Visiting Assistant Professor, Philosophy.
CARR, Delos L. Jr., Ed.D. (Florida), Assistant Professor, Education.
Cecil, David L., M.A. (South Florida), Coordinator, Non-Credit Activities, Continuing Education.
CECONE, Isabelle F., B.A. (Wells), Instructor, English.
Chambers, Jack A., Ph.D. (Michigan State), Assistant Dean, Administrative Services; Director and Research Professor, University Planning.
Chambers, James A., Ed.D. (Tennessee), Associate Professor, Education.
Chambers, William S. Jr., B.A. (Florida), Dean, University Relations.
CHAPMAN, Margaret L., M.A. (North Carolina), Special Collections Librarian, Libraries.
CHAPPLE, Frances R., M.Ed. (Florida), Instructor, Office Administration.
CHEATHAM, Mary J., M.S. (Florida State), Assistant Professor, Physical Education.
CHEN, Chung Hwan, Ph.D. (Berlin), Professor, Philosophy.
CHEERY, R. Adrian, Ph.D. (Kentucky), Associate Professor, Foreign Languages.
CHESLEY, Sanborn W., M.S. (Florida), Assistant Professor, Mathematics.
CHISNELL, Robert E., M.S. (Stetson), Assistant Professor, English.
CLAPP, Roger W. Jr., Ph.D. (Virginia), Associate Professor, Physics.
Clayton, Glenndon E., B.S. (Indiana), Budget Officer.
CLEAVER, Frank L., Ph.D. (Tulane), Professor, Functional Mathematics.
Clement, David E., Ph.D. (Johns Hopkins), Associate Professor, Psychology.
CLINE, Robert S., Ph.D. (Pennsylvania), Dean and Professor, Business Administration.
CLONINGER, Dale O., M.B.A. (Emory), Assistant Professor, Economics.
Coker, Dan C., M.A. (Abilene Christian College), Assistant Professor, Honduras Project, Education.
Coker, John W., M.M. (College-Conservatory of Music, Cincinnati), Lecturer, Fine Arts.
Colby, Donald S., M.S. (Michigan), Director, Student Placement, Career Planning and Placement Center.
Colby, Joan W., B.S. (Eastern Michigan), Teaching Assistant, Education (Part Time).
COLE, Roger W., Ph.D. (Auburn), Chairman and Assistant Professor, Linguistics.
COLLIER, Clarence H., M. E., (Georgia), Assistant Professor, Education (Part time).
COOK, DORIS C., M.S. (Florida State), Assistant Reference Librarian, Libraries, St. Petersburg Campus.
COOKE, John P., Ph.D. (Colorado), Assistant Professor, Economics.
COOPER, Clara B., Ph.D. (Florida State), Assistant Professor, Humanities.
COOPER, Russell M., Ph.D. (Columbia), LL.D. (Hon.), Dean and Professor, Liberal Arts.
CORY, JOSEPH G., Ph.D. (Florida State), Associate Professor, Chemistry.
COWELL, BRUCE C., Ph.D. (Cornell), Assistant Professor, Zoology.
COWELL, GEORGE J., Ph.D. (Western Reserve), Associate Professor, Pre-Engineering.
COX, ERNEST L. III, M.F.A. (Cranbrook Academy), Associate Professor, Art.
CRAIG, CALVERT J., M.S. (Illinois), Associate Professor, Education.
CREWS, ALFRED, B.A. (South Florida), Coordinator, Non-Credit Activities, Continuing Education.
CRIKENBERGER, MARGARET E., M.S., (Louisiana State), Associate Professor, Education.
CURREY, CECIL B., Ph.D. (Kansas), Associate Professor, History.
CURTIS, SHIRLEY A., M.A. (South Florida), Residence Counselor, Student Affairs; Instructor, Basic Studies.
DANENBURG, WILLIAM P., M.Ed. (North Carolina), Assistant Dean for Administration and Associate Professor, Education.
DAVEY, KENNETH W., M.A. (St. Mary's), Assistant Professor, Economics; Coordinator of Advising, Upper Level, Business Administration.
DAVIDSON, GARY A., M.Ed. (State Univ. of New York, Buffalo), Instructor, Sociology.
DAVIES, MARION N., M.S.W. (Tulane), Clinical Psychologist, Counseling Center for Human Development (Part Time).
DAVIS, JEFFERSON C. JR., Ph.D. (California, Berkeley), Associate Professor, Chemistry.
DAVIS, WESLEY F., M.A. (Arkansas), Associate Professor, English.
DAWES, CLINTON R., Ph.D. (Virginia), Associate Professor, Botany and Bacteriology.
DEAN, HARRIS W., Ed.D. (Illinois), Vice President and Dean, Academic Affairs.
DEANS, STANLEY R., Ph.D. (Vanderbilt), Assistant Professor, Physics.
DEAUX, CLYDE E. JR., M.B.A. (Tulane Univ.), Assistant Professor, Finance.
DEBORD, WARREN A., Ph.D. (Illinois), Associate Professor, Marketing.
DEE, HARRETT H., B.A. (Wooster), Lecturer, Academic Affairs, St. Petersburg Campus.
DEER, IRVING, Ph.D. (Minneapolis), Associate Dean, Liberal Arts; Professor, Languages-Literature.
DEITZER, JOHN C., Ph.D. (Western Reserve), Associate Professor, Finance.
DEJONGH, WILLIAM F. J., Ph.D. (Harvard), Visiting Lecturer, French.
DELLA Grotte, JOSEPH A., Ph.D. (Syracuse), Assistant Professor, History.
DERTKE, MAX C., Ph.D. (Miami, Florida), Assistant Professor, Psychology.
DEVINE, JAMES F., M.S. (Illinois), Assistant Professor, Pre-Engineering.
DEVINNEY, EDWARD J. JR., Ph.D. (Pennsylvania), Assistant Professor, Astronomy.
DEYO, WILLIAM J. JR., M.B.A. (Harvard), Assistant Professor, Accounting.
DICKER, ANNAMARY L., M.A. (Columbia), Assistant Professor, Music Arts.
DICKIE, EAHLENE, M.Ed. (Florida), Assistant Professor, Behavioral Science.
DICKINSON, JAMES C., Ph.D. (Minnesota), Associate Professor, Education.
DITRICH, LINNEA S., M.A. (Delaware), Lecturer, Art.
DITRICH, RICHARD F., Ph.D. (Florida State), Assistant Professor, English.
DILKES, THOMAS P., Ph.D. (Iowa), Associate Professor, History.
DONALDSON, MERLE R., Ph.D. (Georgia Inst. of Tech.), Chairman and Professor, Electrical and Electronic Systems.
DONOVAN, PAUL T., M.S. (Florida State), Assistant Reference Librarian, Libraries; Systems Coordinator, Computer Research Center.
DOWNEY, PAUL M., Ph.D. (Florida), Professor, Engineering.
DRAPELA, Victor J., Ph.D. (North Dakota), Assistant Professor, Education.
DuBois, Leadore D., M.S. (Northwestern), Associate Professor, Education.
Dudley, Frank M., Ph.D. (Ohio State), Associate Professor, Physical Science.
Durso, Mary W. M.A. (South Florida), Instructor, Education.
Dutton, Richard E., Ph.D. (Louisiana State), Professor, Management.
Dwyer, Robert C., Ed.D. (George Peabody), Associate Professor, Education.
Dwyer, Roy E., Ed.D. (Florida), Associate Professor, Education.
Eagar, Donna L., M.S. (Utah), Residence Counselor, Student Affairs; Instructor, Basic Studies.
Eaker, Alan B. Jr., M.A. (California, Berkeley), Instructor, Visual Arts.
Eckolf, Robert L., M.D. (Temple), Director, Student Health Service.
Eichholz, Gerhard C., Ph.D. (Ohio State), Director, Instructional Media, Educational Resources.
Eichhorn-von Wurmb, Heinrich K., Ph.D. (Vienna), Chairman and Professor, Physics.
Eilers, Frederick I., Ph.D. (Michigan), Assistant Professor, Botany and Bacteriology.
Ellis, Robert W., Ph.D. (Virginia Poly. Inst.), Assistant Dean, Engineering; Associate Professor, Structures, Materials and Fluids.
Engel, Charles W., Ed.D. (Wayne State), Associate Professor, Education.
English, Jon, M.B.A. (Florida), Assistant Professor, Management.
Enix, Margery A., M.M. (Indiana), Associate Professor, Music.
Epstein, Rheda, M.L.S. (Drexel Inst. of Tech.), Assistant Catalog Librarian, Libraries.
Erickson, Linda E., M.A. (Syracuse), Assistant Dean of Women, Student Affairs; Adjunct Assistant Professor, Basic Studies.
Eubank, Lee E., M.M. (Indiana), Assistant Professor, Music.
Everett, Clark H., M.A. (Atlanta), Instructor, Language-Literature (Part Time).
Fabry, Francis J., Ph.D. (Texas), Associate Professor, English.
Fager, Charles J., M.F.A. (Kansas), Associate Professor, Art.
Fager, Marilyn K., B.S. (Kansas State), Coordinator and Instructor, Cooperative Education.
Fearn, Ward O., Performance Certificate (Curtis Institute of Music), Associate Professor, Music.
Feinberg, Gary, M.A. (Brooklyn), Instructor, Sociology.
Fernandez, Jack E., Ph.D. (Florida), Associate Professor, Chemistry.
Figg, Robert M. III, Ph.D. (North Carolina), Assistant Professor, English.
Fiore, Silvia R., M.A. (Duquesne), Assistant Professor, English.
Fisher, Margaret B., Ph.D. (Columbia), Dean of Women, Student Affairs; Professor, Basic Studies.
Flynn, Robert W., Sc.D. (Massachusetts Inst. of Tech.), Assistant Professor, Physics.
Follman, John C., Ph.D. (Indiana), Associate Professor, Education.
Forbes, Stuart C., M.A. (Florida), Instructor, Economics.
Forman, Guy, Ph.D. (Kentucky), Professor, Physics.
Fornes, C. Joseph, B.A. (South Florida), Director, Procurement.
Foutz, Lucille C., Ph.D. (Iowa), Counseling Psychologist, Counseling Center for Human Development.
Fowler, Robert L. Jr., Ph.D. (Tennessee), Assistant Professor, Psychology.
Frantz, Donald H. Jr., Ph.D. (Southern California), Associate Professor, Humanities.
Frazier, Edgar G., Ph.D. (Ohio State), Assistant Professor, Anthropology.
Freijo, Tom D., M.Ed. (Florida), Assistant Professor, Education.
French, Florence F., M.A. (Wisconsin), Lecturer, English (Part Time).
FRENCH, SIDNEY J., Ph.D. (Wisconsin), D.Hum. (Hon.), Dean Emeritus and Professor, Education (Part time).
FRESHOUR, FRANK W., M.Ed. (Florida Atlantic), Instructor, Art Education.
FRIEDL, FRANK E., Ph.D. (Minnesota), Associate Professor, Zoology.
FUSON, ROBERT H., Ph.D. (Louisiana State), Chairman and Professor, Geography.
FUTHEY, DALE E., Ph.D. (Ohio State), Associate Professor, Marketing.
GAGAN, RICHARD J., M.S. (Wisconsin), Assistant Professor, Sociology.
GARCIA, JORGE, M.Ed. (Florida), Counseling Psychologist, Counseling Center for Human Development.
GARCIA, JUANITA L., M.A. (Ohio State), Assistant Professor, Institute on Aging.
GARDNER, MELVYN J., M.D. (Temple), Psychiatrist, Student Health Service (Part Time).
GARRETT, SAMUEL J., Sc.D. (Pittsburgh), Associate Professor, Electrical Engineering.
GARRETT, WILLIAM, Ph.D. (Florida), Associate Professor, English, St. Petersburg Campus.
GAUSE, NORMA N., B.A. (South Florida), Instructor, English, (Part Time).
GEEGER, O. GLENN, Ph.D. (South Carolina), Assistant Professor, Education.
GELINAS, ROBERT W., M.A. (Alabama), Associate Professor, Art.
GESSNER, ALAN, Ph.D. (Pennsylvania State), Associate Professor, Behavioral Science (Part time).
GHOSE, BASUEDEV, Ph.D. (Calcutta, India), Assistant Professor, Mathematics.
GILMORE, ALDEN S., M.A. (Florida State), Assistant Professor, Behavioral Science.
GURGENTI, ANTHONY J., M.S. (South Florida), Research Associate, Chemistry.
GLASS, HARVEY, Sc.D. (Washington), Associate Professor, Engineering, St. Petersburg Campus.
GLENISSON, EMILE G., Ph.D. (Illinois), Associate Professor, French.
GLOVER, JEAN P., B.S. (Eastern Illinois), Assistant Professor, Education (Part Time).
GOFORTH, FRANCES S., Ed.D. (Indiana), Assistant Professor, Education.
GOLDING, ALFRED S., Ph.D. (Columbia), Associate Professor, Theatre Arts.
GOLDING, LOIS A., L.M. (McGill Univ., Canada), Associate Professor, Music.
GOMEZ, OSBORNE L., M.A. (Florida), Librarian, Libraries, St. Petersburg Campus.
GONZALEZ, JUAN O., M.S. (Virginia Poly. Inst.), Associate Professor, Energy Conversion Systems.
GOODMAN, ADOLPH W., Ph.D. (Columbia), Distinguished Professor, Mathematics.
GOODSON, BETTY JO, B.A. (Florida), Teaching Assistant, English, (Part Time).
GORDON, CHARLES A., M.S. (Kansas State), Assistant Professor, Education.
GOULD, JAMES A., Ph.D. (Michigan), Chairman and Professor, Philosophy.
GOWEN, HOWARD B., Ph.D. (Florida State), Associate Professor, Humanities.
GRAFF, BARRY D., Ph.D. (Michigan), Clinical Psychologist, Counseling Center for Human Development; Assistant Professor, Liberal Arts.
GRANGE, ROGER T. JR., Ph.D. (Arizona), Chairman and Professor, Anthropology.
GREER, JACK F., M.A. (South Florida), Research Associate, Special Education.
GRIFFIN, GEORGE M., Ph.D. (Rice), Associate Professor, Geology.
GRIFFITH, JOHN E., Ph.D. (Pennsylvania State), Chairman and Professor, Structures, Materials and Fluids Systems.
GRINDEY, ROBERT J., M.S. (New Mexico), Assistant Professor, Physical Education.
GRISCTI, WALTER E., M.A. (Florida), Assistant Professor, Mass Communications.
GROSSMAN, MARVIN J., Ed.D. (Georgia), Assistant Professor, Education.
GROTHMANN, WILHELM H., Ph.D. (Kansas), Assistant Professor, German.
GUEST, LESTER P., Ph.D. (Maryland), Lecturer, Behavioral Science (Part time).
GUETZLOE, ELEANOR C., M.A. (South Florida), Instructor, Education.
GUNTER, BILLY G., Ph.D. (Tennessee), Assistant Professor, Sociology.
HADAWAY, FARRAND J., M.B.A. (Memphis State), Instructor, Marketing.
HALL, BRUCE W., Ed.D. (Florida State), Assistant Professor, Education.
HALL, SALLIE J., M.A. (Pennsylvania State), Assistant Professor, English.
HAMPTON, WARREN R., M.A. (Mississippi), Instructor, Spanish.
HANSEN, ROY A., Ph.D. (California, Los Angeles), Associate Professor, Sociology.
HARDWAY, ELLIOTT, M.S. (Illinois), Vice President and Dean, Administrative Affairs.
HARDWAY, MARY E., B.A. (Mary Baldwin), Teaching Assistant, English (Part Time).
HARDY, MILES W., Ph.D. (Florida State), Associate Professor, Behavioral Science.
HARKNESS, DONALD R., Ph.D. (Minnesota), Associate Professor, American Idea.
HARKNESS, MARY LOU, M.S. (Columbia), Director, Libraries.
HARLOW, DOROTHY N., M.S. (Wichita State), Assistant Professor, Management.
HARRON, MARYHELEN C., M.A.T. (Florida), Assistant Professor, English.
HARRISON, WILLIAM F., M.A.L.S. (George Peabody), Associate Catalog Librarian, Libraries.
HART, CARLTON N., M.S. (Miami, Florida), Instructor, Functional Mathematics.
HARTLEY, JACQUETTA W., M.A. (Florida), Instructor, English.
HATCHER, JOHN S., Ph.D (Georgia), Assistant Professor, English.
HAVE, JULIA M., Ph.D. (Northwestern), Professor, Education.
HAWKINS, HAROLD L., Ph.D. (Oregon), Assistant Professor, Psychology.
HEARN, THOMAS K., Ed.D. (Alabama), Assistant Professor, Education.
HECK, SHARLA J., M.A. (South Florida), Instructor, Speech.
HEESCHEN, RICHARD E., M.S. (Florida State), Assistant Director and Associate Professor, Physical Education.
HENLEY, ELTON F., Ph.D. (Florida State), Associate Professor, English.
HERMAN, WALTER J., Ph.D. (Florida), Associate Professor, Economics.
HERTZ, GILMAN W., P.E.D. (Indiana), Professor, Physical Education.
HEY, KENNETH R., M.A. (Florida State), Instructor, Basic Studies (Part time).
HIGGINS, JOHN M., Ed.D. (Toronto, Canada), Associate Professor, Education.
HILL, CLYDE B., B.S.C.E. (Kentucky), Assistant Dean for Facilities Planning and Operations.
HILLEY, MICHAEL E., M.S.M.E. (Clemson College), Assistant Professor, Engineering.
HIRSHBERG, EDWARD W., Ph.D. (Yale), Professor, English.
HIRSHORN, RAYMOND D., B.A. (Florida), Instructor, Honduras Project, Education.
HOFMAN, HUBERT A., P.E.D. (Indiana), Assistant Professor, Education.
HOFMAN, THEODORE B., Ph.D. (Univ. of the Pacific), Professor, Humanities.
HOLCOMB, DAN L., M.S. (Florida State), Assistant Professor, Physical Education.
HOLLAND, MARGARET S., M.A.T. (Duke), Assistant Professor, Education.
HOLLOWAY, CONSTANCE K., M.A. (South Florida), Instructor, Education.
HOLT, CHIFRA H., B.A. (City College, New York), Assistant Professor, Dance.
HONKER, H. ANDREW, M.S. (Illinois), Residence Counselor, Student Affairs; Instructor, Basic Studies.
HOPKINS, JOHN C., M.S. (East Texas State), Residence Counselor, Student Affairs, Instructor, Basic Studies.
HOPKINS, THOMAS L., Ph.D. (Florida State), Assistant Professor, Marine Science Institute, St. Petersburg Campus.
HORRIGAN, FREDERICK J., Ph.D. (Indiana), Associate Professor, Political Science.
HOSTETTER, JOHN D., M.S.L.S. (Florida State), Assistant Serials Librarian, Libraries.
HOTSON, JOHN H., Ph.D. (Pennsylvania), Associate Professor, Economics.
HOUK, C. WESLEY, M.F.A. (Iowa) Associate Professor, Art.
ACADEMIC STAFF

Howell, Paul N., Ph.D. (Oklahoma State), Assistant Professor, Engineering.
*Hubbard, Conrad E., M.B.A. (Kentucky), Assistant Professor, Accounting.
Hug, William G., M.A. (Illinois), Chairman and Associate Professor, Dance.
Hum, Harold J., Ph.D. (Duke), Director and Professor, Marine Science Institute, St. Petersburg Campus.

Hunnicutt, Clarence W., Ed.D. (Stanford), Professor, Education.
Hunter, William A., Ph.D. (Tulane), Chairman and Professor, Modern Foreign Languages.
Hurd, Robert L., M.B.A. (South Florida), Instructor, Accounting.
Hutchinson, Harold E., M.S.L.S. (Syracuse), Assistant Librarian, Libraries.
Iorio, John J., M.A. (Columbia), Associate Professor, English.
Isaaq, Samuel M., Ph.D. (Indiana), Associate Professor, Mathematics.
Jackson, Bernard R., Ph.D. (Ohio State), Associate Professor, Education.
Jaeschke, Donald P., M.A. (Florida State), Associate Professor, Education.
James, Rosella, M.B.A. (Temple), Assistant Professor, Economics.
Jenkins, George L., M.S. (Florida State), Residence Counselor, Student Affairs; Instructor, Basic Studies.

Jennings, Vance S., M.Ed. (Mississippi), Assistant Professor, Music.
Johanningmeier, Erwin G., Ph.D. (Illinois), Assistant Professor, Education.
Johnson, Doyle P., Ph.D. (Illinois), Assistant Professor, Sociology.
Johnson, Gordon A., Ph.D. (Michigan State), Professor, Music.
Johnson, Roger E., Ph.D. (Minnesota), Assistant Professor, Education.
Johnson, Russell M., Ed.D. (Denver), Associate Professor, Education.
Jonaitis, Anthony J. Jr., M.S. (Springfield College), Assistant Professor, Physical Education.

Jones, Hilton K., M.M. (Eastman School of Music), Assistant Professor, Music.
Jones, Merritt B., Ph.D. (Southern California), Associate Professor, Speech.
Jordan, David C., M.A. (South Florida), Director, Summer School Program; Assistant Professor, Academic Affairs.

Jreisat, Jamil E., Ph.D. (Pittsburgh), Assistant Professor, Political Science.
Juergensen, Hans, Ph.D. (Johns Hopkins), Professor, Humanities.
Jurch, George R. Jr., Ph.D. (California, San Diego), Assistant Professor, Chemistry.
Juergensen, Louis C., Ph.D. (Iowa), Chairman and Professor, Accounting and Business Law.

Justice, Marcus T., Ph.D. (Florida), Clinical Psychologist, Counseling Center for Human Development.

Kahn, Stephen C., J.D. (Florida), Assistant Professor, Business Law.
Kaplan, Max, Ph.D. (Illinois), Director and Professor, Leisure Program.
Kares, Peter, Ph.D. (Purdue), Associate Professor, Finance.
Karns, Lee T., Ed.D. (Oklahoma), Associate Professor, Education.
Kasan, E. Lee, M.A. (Florida), Speech and Hearing Clinician, Counseling Center for Human Development; Assistant Professor, Basic Studies.
Kase, Judith B., M.A. (Case Western Reserve), Assistant Professor, Theatre Arts.
Kashdin, Gladys S., Ph.D. (Florida State), Assistant Professor, Humanities.
Kauder, Emil, Ph.D. (Berlin), Distinguished Lecturer, Economics.
Kaufmann, Donald L., Ph.D. (Iowa), Assistant Professor, English.
Kay, Kenneth E., B.A. (Denver), Lecturer, English (Part Time).
Kayser, Thomas A., M.B.A. (Kent State), Instructor, Management.
Kearney, Kevin E., Ph.D. (Florida), Director and Associate Professor, Bachelor of Independent Studies.

Keefe, Alice E., Ph.D. (New York), R.N., Dean, College of Nursing.
Keeler, Harold J., Ed.D. (Cornell), Professor, Education.
Keene, T. Wayne, Ed.D. (Florida), Associate Professor, Education.
Keeth, John E., M.S. (Louisiana State), Assistant Acquisition Librarian, Libraries.
KEIT ER, FRONSI E B., Ph.D. (Iowa), Associate Professor, Education.
KEITH, ROBERT M., Ph.D. (Alabama), Assistant Professor, Accounting.
KELLEY, ANNE E., Ph.D. (Florida State), Associate Professor, Political Science.
KELLEY, JOHN E., Ph. D. (Michigan), Associate Professor, Mathematics.
KELLY, KAY M., M.A.T. (Notre Dame), Assistant Professor, Speech.
KENDALL, HARRY W., Ph.D. (Florida), Professor, Physics.
KENN ERSO N, DAVID R., M.C.S. (Dartmouth), Assistant Professor, Management.
KENNEDY, JAY B., Ph.D. (Indiana), Associate Professor, Economics.
KESLER, EVELYN S., M.A. (Columbia), Assistant Professor, Anthropology.
KIMMEL, ELLEN B., Ph.D. (Florida), Research Associate, Education.
KIMMEL, HERBERT D., Ph.D. (Southern California), Chairman and Professor, Psychology.
KINCAID, GEORGE H., Ed.D. (Florida), Associate Professor, Education.
KINDE, STEWART W., M.A. (Central Michigan), Assistant Professor, Speech Pathology and Audiology Institute.
KING, RAYMOND C., M.A. (Columbia), Director, Housing and Food Service; Assistant Professor, Academic Affairs.
KLEINE, GEORG-HELMUT, Ph.D. (Univ. Erlangen-Nurnberg), Assistant Professor, History.
KNEEBURG, DON W., M.M. (Indiana), Assistant Professor, Music.
KNIGHT, ROBERT E., Ed.D. (Georgia), Assistant Professor, Speech Pathology and Audiology Institute.
KOBASKY, MICHAEL G., M.S. (Florida State), Coordinator, Non-Credit Activities, Continuing Education.
KOEN IC, DAISY R., M.F.A. (South Florida), Instructor, English (Part Time).
KOPP, EDGAR W., M.S. (Georgia Inst. of Tech.), Dean and Professor, Engineering.
KOSELKA, RICHARD L., Ph.D. (Minnesota), Director of Graduate Studies and Professor of Economics.
KRIVANEK, JEROME O., Ph.D. (Florida), Professor, Zoology.
KRON SNOBLE, JEFFREY M., M.F.A. (Michigan), Associate Professor, Art.
KRUSCHWITZ, WALTER H., Ph.D. (Michigan), Associate Professor, Physical Science.
KUEHN, GEORGE I., Ed.D. (Colorado State), Assistant Professor, Education.
KUHL, MARY JANE, M.S.L.S. (North Carolina), Assistant Special Collections Librarian, Libraries.
KUTCHER, LOUIS W. JR., M.A. (Rhode Island), Assistant Professor, Sociology.
LA BAREA, RICHARD C., Ph.D. (Tennessee), Associate Professor, Psychology.
LAKE, DUANE E., B.A. (Minnesota), Director, University Center.
LAKELA, OLGA, Ph.D. (Minnesota), Research Associate, Botany and Bacteriology (Part time).
LANDRY, CHARLES W., M.S. (Southern Mississippi), Assistant Professor, Finance.
LANE, JAMES H., Ph.D. (North Carolina State), Associate Professor, Engineering.
LANTZ, DONALD L., Ph.D. (Minnesota), Professor, Education.
LASSETER, JAMES JR., M.B.A. (Chicago), C.P.A., Assistant Professor, Accounting.
LATINA, ALBERT A., M.S. (Florida State), Assistant Professor, Biological Science.
LAUGHLIN, THOMAS C., Ph.D. (Florida State), Assistant Professor, Political Science.
*LAWRENCE, JOHN M., Ph.D. (Stanford), Assistant Professor, Zoology.
LAWTON, ALFRED H., M.D., Ph.D. (Northwestern), Sc.D. (Hon.), Associate Dean, Academic Affairs; Professor, Bio-Medical Engineering.
LAX, BERNARD, M.A. (Texas), Assistant Professor, Education.
LENKER, LACRET TA T., M.S. (Florida State), Resident Counselor, Student Affairs; Instructor, Basic Studies.
LENTZ, GLENDA F., B.A. (South Florida), Coordinator-Instructor, Cooperative Education.
LEVY, IRWIN S., Ph.D. (North Carolina), Assistant Professor, Education.

LICHTENBERG, DONOVAN R., Ph.D. (Wisconsin), Professor, Education.

LIMOGES, LANCE D., M.A. (Miami, Ohio), Instructor, Geography.

LIN, SHWU-YENG T., Ph.D. (Florida), Adjunct Assistant Professor, Functional Mathematics.

LIN, YOUG-FENG, Ph.D. (Florida), Professor, Mathematics.

LINDER, RONALD, Ed.D. (Florida), Assistant Professor, Education.

LINDGREN, THEODORE D., Ph.D. (Georgia Inst. of Tech.), Associate Professor, Electrical Engineering.

LINTON, JOE R., Ph.D. (Missouri), Associate Professor, Zoology.

LOCKWOOD, PHILIP S., M.M. (Colorado), Assistant Professor, Music.

LONG, JO ANN, Ph.D. (Florida State), Assistant Professor, Education.

LONG, ROBERT W., Ph.D. (Indiana), Chairman and Professor, Botany and Bacteriology.

LONGSTREET, JAMES R., Ph.D. (Northwestern), Chairman and Professor, Finance.

LORENZEN, WILLIAM A. III, M.F.A. (Tulane), Assistant Professor, Theatre Arts.

LOVELESS, RICHARD L., M.Ed. (Pennsylvania State), Associate Professor, Education.

LOWE, ALVIN J., Ed.D. (Virginia), Associate Professor, Education.

LUCAS, JAMES E., B.A. (South Florida), Registrar.

LUCKENBACH, LEON R., Ed.D. (Florida), Associate Professor, Functional Mathematics.

LUPTON, D. KEITH, M.A. (Dartmouth), Assistant Professor, Cooperative Education Program.

MACCAMBRIDGE, SHEILA Y., M.Ed. (Illinois), Assistant Professor, Education.

MACHT, JOEL E., Ph.D. (Arizona State), Assistant Professor, Education.

MACKay, E. MAXINE, Ph.D. (Emory), Associate Professor, Humanities.

MANGOLD, WILLIAM D., M.A. (South Florida), Lecturer, Behavioral Science.

MANKER, CHARLES C. JR., Ph.D. (Kentucky), Assistant Dean and Professor, Education.

MANLEY, BRYN J., Associate (Royal College of Art, London), Assistant Professor, Art.

MANOUGIAN, MANOUG N., Ph.D. (Texas), Assistant Professor, Mathematics.

MANSSELL, RICHARD L., Ph.D. (Indiana), Assistant Professor, Botany and Bacteriology.

MARSH, BRUCE L., M.A. (California State), Assistant Professor, Visual Arts.

MARSHALL, PHYLLIS P., M.A. (Marshall College), Director, Student Organizations.

MARTIN, DEAN F., Ph.D. (Pennsylvania State), Professor, Chemistry.

MARTIN, EDWIN P., Ph.D. (Kansas), Dean and Professor, Basic Studies.

MASON, FRANK T., M.A. (Michigan State), Assistant Professor, English.

MAW, ARTHUR J. G., Ph.D. (Wisconsin), Assistant Professor, Biological Science.

MAYBURY, P. CALVIN, Ph.D. (Johns Hopkins), Chairman and Professor, Chemistry.

MAYER, GEORGE H., Ph.D. (Minnesota), Professor, History.

MCCABE, GERARD B., M.A. (Michigan State), Assistant Director, Libraries.

MCCLELLAN, LESLIE, Ed.D. (Missouri), Associate Professor, Education.

MCCLENDON, DENNIS E., B.S. (Houston), Director, Information Services.

MCCLENDON, PAUL E., Ed.D. (Florida State), Associate Professor, Education.

MCCLOUGH, GENE E., M.S. (Hardin-Simmons), C.P.A., Associate Professor, Accounting.

MCCLOUGH, NORVEL M., Ph.D. (Michigan), Professor, Botany and Bacteriology.

MCCORMICK, EUGENE, M.S. (Florida State), Assistant Professor, Accounting.

MCCORMICK, MARIO K., M.Ed. (Florida), Assistant Professor, Behavioral Science.

MCCRACKEN, WILLARD E. JR., M.A. (Columbia), Associate Professor, Art.

MCCREA, MIRIAM L., M.A. (Columbia), R.N., Associate Professor, Nursing.

MCCRAY, JAMES E., M.M. (Southern Illinois), Assistant Professor, Education.

MCCULLOUGH, ROBERT M., Ph.D. (Florida), Assistant Professor, Sociology.
MCDIARMID, ROY W., Ph.D. (Southern California), Assistant Professor, Zoology.
MCELHATTAN, THOMAS P., M.A. (Florida), Assistant Professor, Economics.
MCEWAN, SUSAN, M.L.S. (Emory), Assistant Catalog Librarian, Libraries.
MCKITRICK, KEITH G., Ph.D. (Cincinnati), Clinical Psychologist, Counseling Center for Human Development; Associate Professor, Social Science (Part Time).
MCLEAN, EDWARD F., Ph.D. (Duke), Professor, Foreign Languages.
MCWATERS, MARCUS M. JR., Ph.D. (Florida), Assistant Professor, Functional Mathematics.
MECHAM, ELDON J., M.F.A. (Texas), Assistant Professor, Theatre Arts.
MELENDI, JOHN C., B.S. (Florida Southern), Assistant Business Manager, Medical Center.
MELLISH, G. HARTLEY, Ph.D. (Virginia), Associate Professor, Functional Foreign Languages.
MERRIAM, HARRY C., Ed.D. (Harvard), Professor, Education.
MERRIAM, KEMPER W., Ph.D. (Texas), Professor, Accounting.
MERRIT, WYLIE C. JR., M.A. (Oklahoma), C.P.A., Assistant Professor, Accounting.
MORRIS, JOHN C., B.S. (Florida Southern), Assistant Business Manager, Medical Center.
MORRIS, WILLIAM E., Ph.D. (North Carolina), Professor, English.
MOURER, STEPHEN A., Ph.D. (Southern Illinois), Assistant Professor, Psychology.
MUKHERJEA, ARUNAVA, Ph.D. (Wayne State), Assistant Professor, Mathematics.
MUMME, ROY I., M.Ed. (North Carolina), Assistant Professor, Education.
MUNTZ, BOZIDAR, M.A. (Illinois), Associate Professor, Education.
MURPHY, ROBERT J., Ph.D. (Fordham), Associate Professor, Economics.
MURRELL, RICHARD D. JR., M.A. (South Florida), Lecturer, Speech (Part Time).
MUSGROVE, WALTER J., Ed.D. (Maryland), Associate Professor, Education.
NAGOSKY, JOSEPH M., Ph.D. (Indiana), Associate Professor, Music.
NAGOSKY, ROXANA B., M.A. (Indiana), Lecturer, French.
NATTER, FRANK L., M.S. (Florida State), Instructor, Speech.
NEEL, JOHN H., M.A. (Florida), Assistant Professor, Education.
NELSON, CHARLES E., M.B.A. (Harvard), Assistant Professor, Accounting.
NELSON, DOUGLAS L., Ph.D. (Wisconsin), Assistant Professor, Psychology.
NELSON, GID E. JR., Ph.D. (Florida), Professor, Biological Science.
NESMAN, EDGAR C., Ph.D. (Florida), Assistant Professor, Sociology.
NESMAN, MARJORIE P., B.S. (Michigan State), Teaching Assistant, Education.
NEUGAARD, Edward J., Ph.D. (North Carolina), Associate Professor, Spanish.
NEWCOMB, Joan I., M.A. (Ohio State), Assistant Professor, Behavioral Science.
NEWCOMB, Ruth B., Ph.D. (Florida State), Assistant Professor, Education.
NEWTON, Virgil M., B.D. (Princeton Theol. Sem.), Associate Professor, Education.
NICHOLAS, Nicholas L., M.B.A. (California, Berkeley), Instructor, Marketing.
NICHOLS, Roger M., Ph.D. (Florida State), Associate Professor, Political Science.
NIENHAUS, Harry A., M.S. (St. Louis), Assistant Professor, Electrical Engineering.
OATS, Betty M., M.A. (South Florida), Research Assistant, Education.
OBER, Richard L., Ph.D. (Ohio State), Associate Professor, Education.
OCHSCHORN, Judith, M.A. (New York), Lecturer, American Idea.
OCHSCHORN, Myron G., Ph.D. (New Mexico), Associate Professor, English.
O'DONNELL, Edward, Ph.D. (Cincinnati), Assistant Professor, Geology.
O'DONNELL, Maurice E., Ph.D. (Wisconsin), Chairman and Associate Professor, Political Science.
OESCHER, Jack W., M.A. (South Florida), Instructor, Marketing.
OHARA, Robert C., M.A. (Louisville), Associate Professor, English.
OLESON, Norman L., Ph.D. (Michigan), Chairman and Professor, Physics.
OLINE, Larry W., Ph.D. (Georgia Inst. of Tech.), Assistant Professor, Engineering.
OLSEN, Eugene D., Ph.D. (Wisconsin), Associate Professor, Chemistry.
ORLOSKY, Donald E., Ed. D. (Indiana), Professor, Education.
ORB, Mark T., Ph.D. (North Carolina), Chairman and Associate Professor, Interdisciplinary Social Sciences.
ORTWEIN, Phillip G., M.S. (Indiana), Assistant Professor, Physical Education.
O'SULLIVAN, Peter B., M.A. (North Carolina), Assistant Professor, Theatre Arts.
OWEN, Terence C., Ph.D. (Univ. of Manchester, England), Associate Professor, Chemistry.
OWEN, William D., M.M. (North Texas State), Associate Professor, Music.
PALMER, Cecil E., M.A. (Georgia), Assistant Professor, Geography.
PALMER, James N., M.A. (North Carolina), Assistant Professor, English.
PANTIER, Edward E., Ed.D. (State Univ. of New York, Buffalo), Assistant Professor, Education.
PAPPAS, George, Ed.D. (Pennsylvania), Associate Professor, Art.
PARKER, John W. Jr., Ed.D. (Kentucky), Associate Professor, English.
PARKER, Keith A., Ph.D. (Maryland), Assistant Professor, History.
PARRISH, James A., Ph.D. (Florida State), Chairman and Professor, English.
PARRADO, Adrian A., M.A. (South Florida), Assistant Professor, Counseling Center for Human Development.
PASTERNAAK, Richard E., Ph.D. (Alabama), Chairman and Associate Professor, Economics.
PATOUILLET, Raymond A., Ed.D. (Columbia), Professor, Education.
PAULUS, Margaret L., M.S.L.S. (Wisconsin), Instructor, Education.
PAYNE, Charles E., M.S. (Florida), Assistant Professor, Industrial Engineering.
PENNER, Louis A., Ph.D. (Michigan State), Assistant Professor, Psychology.
Perez, Emilio, M.A. (Ohio State), Assistant Professor, Speech.
*PETERTSON, DONOVAN D., M.A. (Los Angeles State), Associate Professor, Honduras Project, Education.
PFOST, Howard P., Ed.D. (George Peabody), Associate Professor, Education.
PHILLIPS, I. Van Keith, M.F.A. (Texas), Instructor, Theatre Arts.
PINKARD, Calvin M., Ph.D. (Florida), Director and Associate Professor, Rehabilitation Institute.
POPE, James S., M.A. (South Florida), Assistant Professor, Education.
POPOVICH, James E., Ph.D. (Northwestern), Chairman and Professor, Speech.
POWELL, Robert W., Ph.D. (Florida State), Associate Professor, Behavioral Science.
POWER, Fred B., M.Ed. (Florida), Assistant Professor, Finance.
PRATHER, Sam W., M.S. (Florida State), Associate Professor, Physical Education.
PREEDOR, Edward M.M. (Eastman School of Music), Professor, Music.
PRESCOTT, Gerald R., M.A. (Iowa), Associate Professor, Education.
PRICE, William O., M.A. (Rutgers), Assistant Professor, German.
PRIDE, Eva L., M.A. (Columbia), Reading Clinician, Counseling Center for Human Development; Assistant Professor, Basic Studies.
PUGLISI, Dick J., M.A. (South Florida), Instructor, Education.
PULIN, Alfred B., B.A. (Western Reserve), Curator, Natural Sciences.
PURDOM, Daniel M., Ed.D. (California, Los Angeles), Associate Professor, Education.
PYLE, Thomas E., Ph.D. (Texas A & M), Assistant Professor, Marine Science Institute, St. Petersburg Campus.
RADTKE, William L., Ph.D. (Duquesne), Assistant Professor, Aging Institute.
RADLOFF, John E., B.A. (South Florida), Instructor, Education.
RAGAN, Wendell J., Ph.D. (Missouri), Chairman and Professor, Geology.
RAMPOLLA, Frank A., B.F.A. (Boston), Assistant Professor, Art.
RANYARD, Redge W., Ph.D. (Claremont), Associate Professor, Education.
RASHAD, Abdel Razzaq M., Ph.D. (Cairo Univ., Egypt), Associate Professor, Electrical Engineering.
RATLIFF, John L., Ph.D. (Ohio State), Assistant Professor, Engineering.
RATTI, Jocindar S., Ph.D. (Wayne State), Chairman and Professor, Mathematics.
RAY, James D. Jr., Ph.D. (Illinois), Chairman and Professor, Biological Science.
READER, Willie D., Ph.D. (Florida), Assistant Professor, English.
REARICK, Martha N., M.M. (Michigan), Assistant Professor, Music.
REBHUN, Herbert F., M.L. (Pittsburgh), Research Assistant Professor, Computer Research Center.
REECE, Donna Y., M.S.L.S. (Florida State), Documents Librarian, Libraries.
REED, Cozbie A., M.S. (East Texas State), Instructor, Basic Studies (Part time).
REED, James H., M.A. (Maryland), Assistant Professor, Mathematics.
REED, Jane C., M.A. (Maryland), Lecturer, Functional Mathematics.
REGISTER, Martha N., B.A. (Jacksonville), Instructor, Education.
REILLY, J. Tim, J.D. (Stetson), Assistant Professor, American Idea.
REISING, Robert W., Ed.D. (Duke), Assistant Professor, Education.
REYNOLDS, Hayward D., J.D. (Indiana), Associate Professor, Business Law.
REYNOLDS, Jerald M., M.M. (Oregon), Assistant Professor, Music.
REYNOLDS, Richard C., M.S.L.S. (Syracuse), Assistant Professor, Education.
RICHARDSON, Gary L., M.S. (Alaska) Assistant Professor, Management
RICH, Thomas A., Ph.D. (Florida), Chairman and Professor, Behavioral Science; Director, Aging Institute.
RICHIE, Joyce A., B.S. (Kentucky), Research Associate, Computer Research Center.
RICHMOND, Robert E., B.S. (Mississippi Southern), Comptroller.
RICKER, Lawrence H., Ph.D. (Florida), Associate Professor, Behavioral Science.
RIESE, Narda J., M.A. (Michigan State), Residence Counselor, Student Affairs; Instructor, Basic Studies.
RIMBEY, Donald H., Ph.D. (Illinois), Associate Professor, Engineering.
RITTERMAN, Stuart R., Ph.D. (Case Western Reserve), Assistant Professor, Speech Pathology and Audiology Institute.
ROBERSON, Bruce W., M.B.A. (Texas), C.P.A., Assistant Professor, Accounting.
ROBERTS, Eugene L., M.Ed. (Mississippi), Director of Admissions.
ROBERTS, Loren G., M.S. (Emporia State), Assistant Professor, Education.
ROBERTSON, Henry M., Ph.D. (Minnesota), Associate Professor, American Studies.
ROBINSON, Gerald G., Ph.D. (Minnesota), Associate Professor, Biological Science.
ACADEMIC STAFF 313

ROBISON, DENNIS E., M.S.L.S. (Florida State), Reference Librarian, Libraries.

RODGERS, ANDREW C., B.A. (Florida), Business Manager, Administrative Affairs.

RODRIGUEZ, CHARLES F., B.S. (Florida State), Coordinator, Non-Credit Activities, Continuing Education.

ROLLINS, JOHN W., M.S. (Wisconsin), Assistant Professor, History.

ROMIG, LARRY C., B.S. (Susquehanna), Assistant Professor and Program Advisor, Educational and Professional Service.

ROSE, DALE A. J., M.A. (Michigan State), Lecturer, Fine Arts.

ROSE, DONALD C., Ph.D. (Kentucky), Chairman and Professor, Functional Mathematics.

ROSNER, JEFFREY R., Ph.D. (Johns Hopkins), Assistant Professor, Political Science.

ROSS, BERNARD E., Ph.D. (Florida), Professor, Structures, Materials and Fluids.

ROTHWELL, STUART C., Ph.D. (Syracuse), Associate Professor, Geography.

RUBIN, STEVEN J., Ph.D. (Michigan), Assistant Professor, English.

RUTENBERG, DANIEL, Ph.D. (Florida), Assistant Professor, Humanities.

SAFF, DONALD J., Ed.D. (Columbia), Chairman and Professor, Art.

SAFF, EDWARD B., Ph.D. (Maryland), Assistant Professor, Mathematics.

SANDERS, THOMAS E., M.A. (Denver), Assistant Professor, English.

SANDERSON, ARTHUR M., Ph.D. (Iowa), Chairman and Professor, Mass Communications; Director, Campus Publications.

SANDLER, JACK, Ph.D. (Florida State), Associate Professor, Psychology.

SARETT, ALMA J., Ph.D. (Northwestern), Professor, Speech.

SAXON, SUE V., Ph.D. (Florida State), Associate Professor, Behavioral Science.

SCHALEMAN, HARRY J. JR., M.A. (Cincinnati), Assistant Professor, Geography, St. Petersburg Campus.

SCHNEIDER, RAYMOND J., Ph.D. (Michigan), Associate Professor, Speech.

SCHWARTZ, JULIA L., M.S.L.S. (Western Reserve), Associate Catalog Librarian, Libraries.

SCOTT, LINUS A., Ph.D. (Case Inst. of Tech.), Chairman and Professor, Energy Conversion Systems.

SELIGSOHN, HARRIET C., M.A. (South Florida), Instructor, Evaluation Services.

SELLERS, E. GUY JR., M.Ed. (Florida), Associate Professor, Education.

SEMINARIO, LEE A., M.A. (South Florida), Instructor, Foreign Languages.

SEPIK, MARY A., M.A.L.S. (Rosary College), Assistant Reference Librarian, Libraries.

SHACKSON, L. LEE, Ph.D. (Ohio State), Associate Professor, Humanities.

SHANNON, ROBERT F., Ph.D. (Illinois), Associate Professor, Economics.

SHANNON, ROBERT L., Ed.D. (Florida State), Professor, Education.

SHERMAN, JAMES J., Ph.D. (State Univ. of New York, Buffalo), Associate Professor, Management.

SHERMAN, RODNEY C., M.B.A. (Georgia State), Assistant Professor, Management.

SHERSHIN, ANTHONY C., Ph.D. (Florida), Assistant Professor, Functional Mathematics.

SHIVER, ROBERT H., B.S. (Florida), Assistant Professor, Physical Education; Assistant Coach, Intercollegiate Basketball.

SHOWS, E. WARREN, Ph.D. (Georgia State), Assistant Professor, Economics.

SIDOR, JOHN M. JR., Ph.D. (Pittsburgh), Assistant Professor, Political Science.

SIDOWSKI, JOSEPH B., Ph.D. (Wisconsin), Professor, Psychology.
SILBERT, EDWARD M., Ph.D. (Florida), Assistant Professor, History.
SILVER, JAMES W., Ph.D. (Vanderbilt), Professor, History.
SILVERMAN, MITCHELL, Ph.D. (Ohio State), Research Assistant Professor, Institute for Exceptional Children and Adults.
SILVERWOOD, KERMIT J., M.S. (Oregon), Director, Student Financial Aid.
SIMON, JOSEPH L., Ph.D. (New Hampshire), Assistant Professor, Zoology.
SINGH, SURENDRA P., Ed.D. (California, Los Angeles), Assistant Professor, Education (Part Time).
SISCO, JOHN I., Ph.D. (Minnesota), Associate Professor, Education.
SISK, DOROTHY D., Ed.D. (California, Los Angeles), Associate Professor, Education.
SISTRUNK, FRANCIS, Ph.D. (Miami, Florida), Associate Professor, Psychology.
SLEEPER, DAVID C., Ph.D. (Ohio State), Chairman and Associate Professor, Marketing.
SMALL, LESLIE W., M.A. (Indiana), Assistant Professor, Finance.
SMALL, NORMAN C., Ph.D. (Brown), Professor, Engineering.
SMITH, ALICE G., Ed.D. (Wayne State), Associate Professor, Education.
SMITH, BUNNIE O., Ph.D. (Columbia), Professor, Education.
SMITH, CHARLES D., Ed.D. (Temple), Assistant Professor, Education.
SMITH, CHARLES T., M.B.A. (State Univ. of New York, Buffalo), Assistant Professor, Finance.
SMITH, DONN L., M.D., Ph.D. (Colorado), Dean, College of Medicine; Director, Medical Center; Professor, Physiology.
SMITH, ELTON E., Ph.D. (Syracuse), D.D. (Hon.), Professor, English.
SMITH, JACK L., Ph.D. (Mississippi), Associate Professor, Accounting.
SMITH, JAMES M., M.M.E. (Rensselaer Poly. Inst.), Lecturer, Engineering.
SMITH, MICHAEL A., M.A. (Eastman School of Music), Coordinator of Events, Florida Center for the Arts; Lecturer, Fine Arts.
SMITH, NORMAN V., M.S.E. (Michigan), Lecturer, Engineering.
SMITH, RICHARD A., Ph.D. (Vanderbilt), Assistant Professor, Sociology.
SMITH, WILLIAM A., M.A. (South Dakota), Assistant Professor, American Idea.
SMITH, WILLIAM A., Ph.D. (Florida), Assistant Professor, Engineering.
SMITH, WILMA A., B.I.E. (Florida), Lecturer, Engineering.
SMITZES, MELPOMENE, M.A. (Florida), Assistant Professor, Education.
SMYTHE, GEORGE A., Ph.D. (New South Wales), Research Associate, Chemistry.
SNIZEK, WILLIAM E., Ph.D. (Pennsylvania State), Assistant Professor, Sociology.
SNOOK, JANICE B., Ph.D. (Maryland), Assistant Professor, Political Science.
SNYDER, NOEL F.R., Ph.D. (Cornell), Assistant Professor, Zoology.
SOFIA, SABATINO, Ph.D. (Yale), Associate Professor, Astronomy.
SOKOLSKY, ANATOLE A., LL.D. (Univ. Vitautis the Great, Lithuania), Associate Professor, Foreign Languages.
SOLOMONS, T. W. GRAHAM, Ph.D. (Duke), Associate Professor, Chemistry.
SONIAT, LEONARD E., Ph.D. (Duke), Associate Professor, Functional Mathematics.
SORENSON, HERBERT F., Ph.D. (Minnesota), Professor, Education.
SORTOR, MARVIN E., M.S. (Florida), Assistant Professor, Engineering.
SPAIN, FRANK H., Ed.D. (Florida), Assistant Dean and Associate Professor, Academic Affairs for Interinstitutional Articulation.
SPANGLER, DANIEL P., Ph.D. (Arizona), Assistant Professor, Geology.
SPARKS, AMY J., Ph.D. (Louisiana State), Associate Professor, Spanish.
SPARKS, EDITHEGENE B., M.Ed. (Emory), Assistant Professor, Education.
SPEAR, FRANK E., M.A. (Iowa), Director of Publications, University Relations.
SPERRY, GALE L., Ph.D. (Minnesota), Chairman and Professor, Music.
SPILLANE, JAMES R., M.A. (Iowa), Assistant Professor, Humanities.
SPOTO, PETER J., M.D. (Tulane), Psychiatrist, Student Health Service (Part time).
Sprehe, DeLores M., M.S.W. (Tulane), Assistant Professor, Counseling Center for Human Development.

Stafford, John W., M.A. (Kent State), Assistant Professor, Geography.

Stahl, Edgar E., Ed.D. (Indiana), Professor, Education.

Stalnaker, Leo Jr., B.S. (South Florida), Lecturer, Mass Communications.

Stanton, Edgar E. Jr., Ph.D. (Florida State), Professor, Humanities.

Stanton, Kenneth D., M.A. (South Florida), Lecturer, Instruction and Research Center (Part Time).

Steck, Richard C., B.S. (Davidson College), Instructor, Speech (Part Time).

Steiner, H. Edwin Jr., Ph.D. (Texas), Assistant Professor, Education.

Stelzmann, Rainulf A., Ph.D. (Univ. of Freiburg, Germany), Associate Professor, Foreign Languages.

Stenberg, Patricia J., M.M. (Michigan), Assistant Professor, Music.

Stevens, Brian, Ph.D. (Oxford Univ., England), Professor, Chemistry.

Stevens, William D., Ph.D. (Harvard), Associate Professor, Marketing.

Stevenson, Ralph G. Jr., Ph.D. (Indiana), Assistant Professor, Geology.

Stevenson, Robert M., LL.B. (Harvard), Assistant Professor, American Idea.


Stoeveken, Anthony C., M.S. (Wisconsin), Assistant Professor, Art.

Stone, Douglas E., Ph.D. (Chicago), Associate Professor, Education.

Stone, Robert D., M.A. (Michigan State), Residence Counselor, Student Affairs; Instructor, Basic Studies.

Story, Coleen M., M.S. (Florida State), Assistant Professor, Education.

Stoudinger, Susan M., M.A. (Maryland), Assistant Professor, Political Science.

Stout, Samuel D., M.S. (Florida State), Instructor, Anthropology.

Stovall, Jack C., M.A. (Michigan), Associate Professor, Education.

Stovall, Jean Y., M.A. (South Florida), Lecturer, Education.

Stowers, Dewey M., Jr., Ed.D. (Duke), Associate Professor, Geography.

Strawn, Mernet L., M.F.A. (Indiana), Assistant Professor, Art.

Strong, Paschal N., Ph.D. (Tennessee), Professor, Psychology.

Swann, Maria T., M.S. (Florida State), Instructor, Counseling Center for Human Development.

Swanson, James M., Ph.D. (Columbia), Assistant Professor, History.

Taft, William H., Ph.D. (Stanford), Assistant Dean, Academic Affairs; Director, Center for Research and Development.

Tanner, Patricia W., Ph.D. (Ohio State), Associate Professor, Education.

Tatum, Jim C., Ph.D. (Tulane), Assistant Professor, Functional Foreign Languages.

Taylor, Merrily E., M.S.L.S. (Florida State), Assistant Reference Librarian, Libraries.

Taylor, Richard N., M.A. (Yale), Assistant Professor, Philosophy.

Taylor, Spafford C., M.A. (Peabody), Assistant Professor, Physical Education.

Thomas, Delbert C., M.B.A. (Rollins), Computer Research Specialist, Computer Research Center.

Thompson, Sherman, B.A. (South Florida), Assistant Professor, Education.

Tipp, George K., M.A. (Cornell), Assistant Professor, History.

Tipton, Henry C., Ph.D. (Mississippi State), Assistant Professor, Biological Science.

Toth, John C., Ph.D. (Michigan State), Associate Professor, Psychology.

Tremmel, William C., Th.D. (Iliff School of Theology), Chairman and Professor, Religious Studies.

Truitt, Willis H., Ph.D. (Boston), Assistant Professor, Philosophy.

Tsangadas, Byron C. P., M.A. (Michigan), Assistant Professor, History.

Tserpes, Nicholas A., Ph.D. (Wayne State), Assistant Professor, Mathematics.

Tucker, Robert D., Ph.D. (California, Los Angeles), Associate Professor, Finance.
Tuttle, Lester W., Jr., Ed.D. (Florida), Assistant Dean and Professor, Academic Affairs, St. Petersburg Campus.

Twigg, John F., M.A. (Boston), Chairman and Associate Professor, Pre-Engineering.

Unruh, Anita, M.A. (Illinois), Assistant Professor, Education.

Upchurch, Lynda S., M.Ed. (Missouri), Instructor, Education.

Uprichard, Albert E., Ph.D. (Syracuse), Assistant Professor, Education.

Urban, Wayne J., Ph.D. (Ohio State), Assistant Professor, Education.

Urbanek, Raymond A., Ed.D. (Kansas), Assistant Dean, Student Advising and Professor, Education.

Valentine, Virginia W., M.A. (Southern Methodist), Lecturer, English.

Vanover, Carolyn M., M.S. (Indiana), Lecturer, Office Administration.

Vanover, George W., M.S. (Indiana), Assistant Professor, Education.

Vega, Manuel, Ph.D. (Florida State), Assistant Professor, Behavioral Science.

Wagner, Diane T., Ph.D. (Duke), Assistant Professor, Biological Science.

Walbolt, Daniel R., LL.B., (New York), Assistant to Vice President and Dean, Student Affairs.

Walker, Charles G., M.D. (Florida), Psychiatrist, Student Health Service (Part Time).

Wall, Edmond L., M.A. (Louisiana State), Assistant Professor, Functional Foreign Languages.

Wallace, Andrew C., M.A. (Kentucky), Assistant Professor, Marketing.

Walsh, Ruth M., M.A. (State Univ. of New York, Buffalo), Assistant Professor, Management.

Walter, John D., M.A. (South Carolina), Assistant Professor, English.

Warner, Robert A., Ph.D. (Yale), Chairman and Professor, American Idea.

Waterman, Patricia P., M.A. (California, Berkeley), Assistant Professor, Behavioral Science.

Waterman, Richard A., Ph.D. (Northwestern), Professor, Anthropology.

Watkins, Armin J., Mus.D. (Indiana), Professor, Humanities.


Weatherford, Robert R., Ph.D. (Ohio State), Associate Professor, Education.

Weaver, Lee A., M.S. (Florida), Assistant Professor, Engineering.

Webb, Clarence E., Ph.D. (Pennsylvania State), Director and Associate Professor, Speech Pathology and Audiology Institute.

Weicherding, John P., B.S. (Creighton), Director, Personnel Services.

Weinfeld, Samuel L., M.A. (Indiana), Instructor, Speech.

Welker, Robert F., J.D. (Indiana), Assistant Professor, Business Law.

Wenzinger, George R., Ph.D. (Rochester), Assistant Professor, Chemistry.

West, Robert J., M.S. (Florida State), C.P.A., Associate Professor, Accounting.

West, William W., Ph.D. (Syracuse), Associate Professor, Education.

Westberry, C. Jack, M.S. (Georgia Inst. of Tech.), Assistant Professor and Coordinator, Cooperative Education.

Whaley, Russell G., B.A. (Emerson), Chairman and Professor, Theatre Arts.

Whartenby, Franklee G., Ph.D. (North Carolina), Lecturer, Economics.

Whartenby, H. Allen, Ph.D. (North Carolina), Associate Professor, Foreign Languages.

Wheeler, Raymond H., Ph.D. (Michigan), Chairman and Professor, Sociology.

Whisnant, Robert A. Jr., B.A. (South Florida), Instructor, Humanities (Part Time).

Whitaker, Robert D., Ph.D. (Florida), Associate Professor, Chemistry.

White, Michael J., M.B.A. (Michigan State), Instructor, Management.

Whitney, Richard R., M.S. (Indiana State), Assistant Dean of Men, Student Affairs.
WHITNEY, VERNON W., Ed.D. (Columbia), Associate Professor, Education.

WILDEY, CHARLES H., Ed.D. (Indiana), Dean of Men, Student Affairs; Associate Professor, Basic Studies.

WILEY, BILL M., Ph.D. (Oklahoma), Associate Professor, Marketing.

WILLIAMS, CARL H., B.A. (North Carolina), Assistant Professor, Theatre Arts.

WILLIAMS, CAROL A., Ph.D. (Yale), Assistant Professor, Astronomy.

WILLIAMS, DONALD E., M.A. (Columbia), Associate Professor, Physical Education.

WILLY, R. DONALD JR., Ph.D. (Ohio State), Assistant Professor, English.

WILSON, ALBERT J. III, Ph.D. (Florida), Assistant Professor, Behavioral Science.

WILSON, JOHN W., Ph.D. (Syracuse), Associate Professor, Education.


WILSON, ROBERT E., Ph.D. (Pennsylvania), Associate Professor, Astronomy.

WILSON, THOMAS C., M.A. (Wayne State), Assistant Professor, Education.

WIMMERT, ROBERT J., Ph.D. (Purdue), Chairman and Professor, Industrial Systems.

WINTHROP, HENRY, Ph.D. (New School for Social Research, New York), Professor, Interdisciplinary Social Science.

WITHERS, HARRIET H., M.A. (Western Carolina), Associate Professor, Education.

WOLF, J. GARY, D.M.A. (Eastman School of Music), Associate Professor, Music.

WONG, MARTIN R., Ph.D. (Michigan State), Assistant Professor, Education.

WOOHAMS, THOMAS D., Artist's Diploma (Curtis Inst. of Music), Assistant Professor, Music.

WOLFENDEN, GLEN E., Ph.D. (Florida), Associate Professor, Zoology.

WORRELL, JAY H., Ph.D. (Ohio State), Assistant Professor, Chemistry.

WRANCHER, ELIZABETH A., B.M. (Indiana), Assistant Professor, Music.

WRIGHT, HUBERT G., M.S. (North Carolina), Assistant Professor, Physical Education.

YATES, EDWIN S., M.A. (Alabama), Assistant Professor, Mass Communications.

YOUNG, DAVID K., Ph.D. (Hawaii), Assistant Professor, Zoology.

*YOUNG, JOANNE E., M.Ed. (North Carolina), Associate Professor, Physical Education.

ZACHARY, SAUL, M.A. (Smith College), Assistant Professor, Theatre Arts.

ZACHERL, ALICE M., M.S. (Pittsburgh), Associate Librarian, Educational Resources.

ZBAR, FLORA J., M.A. (Florida State), Assistant Professor, English.

ZERLA, FREDERIC J., Ph.D. (Florida State), Assistant Professor, Mathematics.

ZETLER, ROBERT L., Ph.D. (Pittsburgh), Professor, Languages and Literature.

ZOBROST, GEORGE W., Ph.D. (Missouri), Associate Professor, Engineering.

ZUREICH, RAYMOND, B.S.B.A. (Tampa), Director, Internal Control.

ZYLSTRA, SAPE A., Ph.D. (Emory), Assistant Professor, Humanities.

INDEX

Major curricula and programs are listed in italics.

Academic
  advising, 25
  calendar, 4
  policies and procedures, 18
  programs, 51
  services, 29
  staff, 299
  standing, 18
  warning, 18
Accounting, 65
  graduate, 67
  courses, 152
Accreditation, 7
Adding courses, 20
Administration, University, 10, 292;
  State Boards, 291
Admission, 13
  of freshmen, 14
  of graduate students, 15, 143
  of transfer students, 14, 147
Admission to:
  College of Business Administration, 64
  College of Education, 69
  College of Engineering, 96
  College of Liberal Arts, 105
  Evening Sessions, 15
  Graduate study, 143
  Junior college teaching, 90
  University, 13
  Upper level, 21-22
Adult education
  adult degree program, 54
  continuing education, 52
  see also Vocational and Adult Education
Advanced Basic Studies, 61
Advanced placement, 27
Advising, academic, 25, 41
Afro-American Studies, 108
  courses, 154
Aging, Institute on, 137
  see also Gerontology
Aid, financial, 42
Alumni Association, 10
American Studies, 112
  courses, 155
Anthropology, 131
  courses, 157
Application
  for admission, 13
  for graduation, 22
  for graduate degree, 147
Art, see Visual Arts
Art Education
  undergraduate, 73
  graduate, 81
  courses, 177
Astronomy, 123
  courses, 158
Athletics, intercollegiate, 50
Audiovisual Education, see Library-
  Audiovisual Education
Audiovisual Services, 30
Audiology, 138
Audit, of courses, 20
Automobiles, 38
Availability of courses, 23
Bachelor's degrees, see Degrees
Bacteriology, 124
  courses, 163
Basic Engineering courses, 194
Basic physical education
  requirements, 61
  courses, 253
Basic Studies, 61
  courses, 160
Basic Studies, College of, 59
Biological Sciences, liberal arts, 123
Biology, interdisciplinary courses, 162
Biology, secondary education
  undergraduate, 78
  graduate, 84
Board of Regents, 291
Bookstore, 46
Botany, 124
  courses, 163
Broadcasting, 119
Broadcasting services, 30
Buildings, University, 7
Business Administration
  undergraduate, 65
  graduate, 67
  courses, see specific subject
  admission requirements, 64
  graduation requirements, 65
Business Education
undergraduate, 78
graduate, 88

Calendar, academic, 4
Campuses, 7, 9
Cancellation of registration, 20
Career Planning and Placement Center, 44
Center for Continuing Education, 8, 52
Center for Research and Development, 32, 137
Certification, of teachers, 71
Change, notice of, 23
Change of major, 22
Check cashing, 34
Chemistry
liberal arts, 126
secondary education, 76, 85
courses, 166
Class standing, 21
Classics and Ancient Studies, 75, 112
courses, 170
Clubs and organizations, 46
Colleges:
   Basic Studies, 59
   Business Administration, 63
   Education, 69
   Engineering, 93
   Liberal Arts, 105
Computer Research Center, 29
   Computer Systems and Technical
   Service courses, 209
Conduct, student, 37
Continuing Education, 8, 17, 52
Cooperative Education Program, 55
courses, 172
Correspondence directory, 2
Counseling, student, 41
Counseling Center for Human Development, 41
Course audits, 20
Course descriptions, 151
Course drops, 21
Course prefixes, 151
Course waivers, 59
Credit by examination, 26
Cultural events, 47
Curriculum (education), courses, 178

Dance, 109
courses, 173
Data processing, 29
Deans' List, 28
Degree applications
undergraduate, 22
graduate, 147
Degree status, change of, 21
Degrees:
   Bachelor of Arts, see major field
   Bachelor of Engineering Technology, 103
   Bachelor of Independent Studies, 54
   Bachelor of Science in Engineering, 97
   Bachelor of Science, Medical Technology, 62
   Master of Arts, see major field
   Master of Business Administration, 67
   Master of Engineering, 101
   Master of Fine Arts, 111
   Master of Music, 110
   Master of Science, Chemistry, 85;
   Management, 67
   Master of Science in Engineering, 100, 101
   Doctor of Philosophy, Biology, 125;
   Chemistry, 127; Education, 91
Deposit fee, 32
Description of courses, 151
   see also specific subject
Developmental courses, 174
Discipline, student, 37
Disqualification, 19
Dissertation (Ph.D.), 149, 150
Distributive Education
undergraduate, 78
graduate, 88
Divisions, College of Liberal Arts:
   Fine Arts, 109
   Language-Literature, 111
   Natural Science & Mathematics, 120
   Social Sciences, 130
Doctoral programs, see major field;
requirements, 148
Dormitories, 39
Double major, 22
Drama, see Theatre Arts
Dress, student, 37
Dropping courses, 21

Early Childhood Education
undergraduate, 73
graduate, 81
Economics
   business, 65
   liberal arts, 131
courses, 174
Education
undergraduate, 71
graduate, 78
courses, 177
see also specialized majors
Education, College of, 69
admission requirements, 69
graduation requirements, 70
Educational Resources, 30
Electrical and Electronic Systems, 96
courses, 197
Elementary Education
undergraduate, 72
graduate, 81
courses, 179
Energy Conversion, 96
courses, 200
Engineering, 97
courses, 179
Engineering, College of, 93
admission requirements, 96
degree requirements, 97
Engineering Technology, 103
English
liberal arts, 113
secondary education,
undergraduate, 75
graduate, 82
courses, education, 192
liberal arts, 210
Enrollment program, 38
Entrance requirements, see Admission
Evaluation Services, 31
Evening Sessions, 15, 52
Events, cultural, 47
Examination, credit by, 27
Exchange programs, 24
Expenses, 33
Extra credit loads, 28
Faculty, 299
Fees, 32; payment of, 17; refund, 34
Film library, 30
Final academic warning, 18
Finance, 66
courses, 214
Financial aids, 42
Fine Arts, Division of, 109
intradivisional courses, 215
Florida certification for teachers, 71
Florida College exchange program, 24
Florida residency, 16, 34
Food Service, 40
Foreign Languages
liberal arts, 114
secondary education, 76, 82
courses, basic studies, 160; education, 195
see also specific languages
Foundation, USF, 10
Foundations (education), courses, 181
Fraternities, 47
French, 114
courses, 216
General Business Administration
courses, 218
General information, 7
Geography, 131
courses, 219
Geology, 128
courses, 220
German, 114
courses, 224
Gerontology, 137
courses, 225
Gifts and bequests, see Foundation
Glossary of terms, 290
Goals, University, 11
Government, student, 38
Grade point average, 29
Grades, 28
Grading system, 28
Graduate programs, 142
see also specific programs
Graduate study, 141
regulations, master's 146; doctorate, 148
Graduation, application for, 22, 147
Graduation requirements, 22
College of Business Administration, 65
College of Education, 70
College of Engineering, 97
College of Liberal Arts, 106
Graduation with honors, 23
Graphic services, 30
Greek, see Classics and Ancient Studies
Guidance, 83
courses, 183
Health Service, 40
History, 132
courses, 226
History of the University, 7
Honorary societies, 48
Honors, convocation, 28; graduation
with, 23
Housing, 39, 40
Humanities,
basic studies, 61
education, 83
courses, basic studies, 230; education, 195
Independent Studies, 54
Independent study, 27
Industrial Education, graduate, 89
Industrial Systems, 96
courses, 203
Institute on Aging, 137
Institute on Exceptional Children and Adults, 139
Instructional Materials Center, 30
Insurance, 38
Intercollegiate athletics, 50
Interdisciplinary Language-Literature, 116
courses, 233
International Relations, 133
International students, graduate, 145
International Studies, 133
International Trade, 65
Intra-American exchange program, 24
Intramural sports, 49
Italian, 114
courses, 232

Journalism, see Mass Communications
Junior College Teaching, 90
courses, 184

K-12 (kindergarten through 12th grade)
teacher requirements, undergraduate, 73
graduate, Plan I, 81; Plan II, 89

Language curricula, see Foreign Languages or specific language
Language-Literature, Division of, 111
courses, interdisciplinary, 223
Language placement, 61
Latin, see Classics and Ancient Studies
Latin-American Studies, 134
Law, see Pre-Law
Learning Laboratory, 30
Leisure Program, 108
Liberal Arts, College of, 105
admission requirements, 105
graduation requirements, 106
Library, 31
Library-Audiovisual Education
undergraduate, 73
secondary education, 76
graduate, 83
courses, 184
Linguistics, 116
courses, 234

Literary magazine, 47
Loans, 42

Major, change of, 22; double, 22;
second, 23
Management, 66; graduate, 67
courses, 235
Marine Biology, 126
Marine Geology, 128
Marine Science, 138
courses, 238
Marine Science Institute, 9, 137
Marketing, 66
courses, 238
Mass Communications, 117
courses, 240
Massachusetts, Univ. of, exchange programs, 24
Master's degree, 146; see also Degrees
Mathematics
liberal arts, 129
secondary education, 76, 84
courses, 242
Mechanical Design courses, 200
Medical examination, 40
Medical Technology, 62
Medicine, see Pre-Medicine
Mentally retarded, teaching, see Special Education
Music Arts, 109
courses, 246
Music Education
undergraduate, 74
graduate, 84
courses, 186

Natural Sciences, divisional major, 121
education courses, 187
Natural Sciences, Division of, 120
Newspaper, campus, 47, 117
Non-degree student, 14
certification, 71
graduate, 15, 144
Non-Western Studies, 133
Notice of change, 23
Oceanography, 126; see also Marine Science
Off-campus credit courses, 52
non-credit programs, 53
Off-campus housing, 40
Off-campus term program, 107
Organization, University, 10, 292
Organizations, student, 46
Orientation, 38
INDEX 323

Payment of fees, 17
Pending status, 20
Personal property insurance, 38
Petition for readmission, 19

Philosophy, 118
courses, 251
Photographic Services, 30
Physical Education, basic requirements, 62
basic courses, 253
education major, see below

Physical Education for Teachers, 73
courses, 188

Physics
liberal arts, 130
secondary education, 76, 85
courses, 254

Placement of language students, 61
Placement services, 44

Political Science, 134
courses, 258

Practice teaching, 70
Prefixes, of courses, 151

Pre-Law, 135
Pre-Medicine, 122
Probation, 19
Production Services, 30
Psychiatric Services, 41

Psychology, 135
courses, 261

Publications, student, 47, 117

Purpose and goals, University, 11

Radio station, WUSF-FM, 30

Reading Education, 81, 84
courses, 190

Reading Service, 41
Readmission, 15, 19
Reapplication, 14
Recreational sports, 50
Refund of fees, 34

Regents, Board of, 291
Registration, 17
Registration fee, 17, 33
Rehabilitation Institute, 139
courses, 265

Religious organizations, 48

Religious Studies, 118
courses, 267

Research & Development Center, 32, 137
Residence halls, 39
Residency, Florida, 34

Rhetoric and Public Address, 119

Room and board, costs, 33

Russian, 114
courses, 268

St. Petersburg Campus, 9
Scholarships, 42

Science Education, 76, 84

Secondary Education
undergraduate, 75
graduate, Plan I, 81
Plan II, 89

Selective Service certification, 24

Service clubs, 48
Social fraternities, 47
Social Science, Division of, 130

Social Science
liberal arts, 136
courses, 270
secondary education, 77
courses, 195

Social Security certification, 25

Sociology, 136
courses, 271
Sororities, social, 47

Spanish, 114
courses, 274

Special Education, 74, 85
courses, 190

Speech, 119
courses, 276

Speech and Hearing Service, 41

Speech Pathology
clinical, 138
education, 74, 87
courses, 279

Speech Pathology & Audiology Institute, 138

Sponsored Research, 32

Sports, intercollegiate, 50; recreational, 50

Staff, academic, 299
Standing, academic, 18; class, 21

Structures, Materials, & Fluids, 96
courses, 206

Student Affairs, 36

Student conduct, 37
Government, 38
health, 40
organizations, 46
welfare, 36

Study skills, 41

Summer Session, 51
Tampa Campus, 7
Teacher certification, 71
Teacher education curricula, 71
Teaching internship, 70
Television Services, 30
Television station, WUSF-TV, 30
Theatre Arts, 110
courses, 281
Thesis, 148
Transfer credits, undergraduate, 15;
graduate, 16
Transfer students, 14, 64
Transient students, 14
Travel insurance, 38
Traveling Scholar Program, 24, 145
Tuition, 33
Tutoring, 41

University Center, 45
USF Foundation, 10

Upper level, admission to, 21–22
Veterans Administration certification, 24
Visiting the University, 2
Visual Arts, 111
courses, 284
Vocational & Adult Education, 78, 88
courses, 193
Vocational rehabilitation, 41

Waiver, Basic Studies courses, 59, 60
Warning, academic, 18
Withdrawal, class, 21; University, 21
WUSF-FM, WUSF-TV, 30

Yearbook, student, 47

Zoology, 124
courses, 287
ST. PETERSBURG CAMPUS

WINTER QUARTER 1970-71
Course Offerings

UNIVERSITY OF SOUTH FLORIDA
### COLLEGE OF BASIC STUDIES

<table>
<thead>
<tr>
<th>CBS</th>
<th>401 601 (3)</th>
<th>Senior Seminar</th>
<th>1:00 - 4:00 W</th>
<th>Carpenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBS</td>
<td>401 602 (3)</td>
<td>Senior Seminar</td>
<td>1:00 - 4:00 M</td>
<td>Garrett</td>
</tr>
</tbody>
</table>

### COLLEGE OF BUSINESS ADMINISTRATION

<table>
<thead>
<tr>
<th>ACC</th>
<th>301 601 (3)</th>
<th>Intermediate Accounting</th>
<th>2:00 - 5:00 W</th>
<th>McClung</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC</td>
<td>302 601 (3)</td>
<td>Intermediate Accounting</td>
<td>12:00 - 2:00 T, 12:00 - 1:00 R</td>
<td>McClung</td>
</tr>
<tr>
<td>ECN</td>
<td>313 601 (5)</td>
<td>Collective Bargaining</td>
<td>8:00 - 10:00 T R, 9:00 - 10:00 F</td>
<td>Kennedy</td>
</tr>
<tr>
<td>ECN</td>
<td>331 601 (5)</td>
<td>Bus &amp; Econ Statistic I</td>
<td>10:00 - 12:00 T R, 10:00 - 11:00 F</td>
<td>Cloninger</td>
</tr>
<tr>
<td>FIN</td>
<td>301 601 (5)</td>
<td>Principles of Finance</td>
<td>10:00 - 12:00 M W, 11:00 - 12:00 F</td>
<td>Bolles</td>
</tr>
<tr>
<td>GBA</td>
<td>362 601 (5)</td>
<td>Business Law II</td>
<td>12:00 - 2:00 M, 12:00 - 1:00 F</td>
<td>Dunn</td>
</tr>
<tr>
<td>MAN</td>
<td>311 601 (3)</td>
<td>Management Systems</td>
<td>12:00 - 2:00 M, 12:00 - 1:00 W</td>
<td>Tyree</td>
</tr>
<tr>
<td>MAN</td>
<td>331 601 (3)</td>
<td>Industrial Relations</td>
<td>2:00 - 3:00 T, 1:00 - 3:00 R</td>
<td>English</td>
</tr>
<tr>
<td>MKT</td>
<td>301 601 (5)</td>
<td>Basic Marketing</td>
<td>8:00 - 10:00 M W, 8:00 - 9:00 F</td>
<td>Heath</td>
</tr>
</tbody>
</table>

### COLLEGE OF EDUCATION

PLEASE NOTE: The following courses preceded by asterisks are open only to students enrolled in "Elementary Block."

*EDC 498 601 (3) Senior Seminar: Elem. Education Hearn | 12:00 - 2:00 M |

*EDC 498 602 (3) Senior Seminar: Elem. Education Hearn | 2:00 - 4:00 W |

*EDC 499 604 (4) Supervised Teaching | McClendon | 12:00 - 2:00 M |
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Instructor</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDE 411 601 (4)</td>
<td>Language Arts, Early Childhood</td>
<td>Dwyer</td>
<td>12:00 - 3:00 R</td>
</tr>
<tr>
<td>EDE 411 602 (4)</td>
<td>Language Arts, Early Childhood</td>
<td>Dwyer</td>
<td>12:00 - 3:00 T</td>
</tr>
<tr>
<td>EDE 413 601 (4)</td>
<td>Literature for the Child</td>
<td>Towery</td>
<td>12:00 - 2:00 T</td>
</tr>
<tr>
<td>EDE 413 602 (4)</td>
<td>Literature for the Child</td>
<td>Towery</td>
<td>12:00 - 2:00 R</td>
</tr>
<tr>
<td>EDE 413 603 (4)</td>
<td>Literature for the Child</td>
<td>Staff</td>
<td>2:00 - 4:00 M W</td>
</tr>
<tr>
<td>EDE 415 601 (5)</td>
<td>Arithmetic for the Child</td>
<td>Weeks</td>
<td>12:00 - 2:00 M W</td>
</tr>
<tr>
<td>EDE 419 601 (5)</td>
<td>Social Studies for the Child</td>
<td>Keeler</td>
<td>2:00 - 4:00 M W</td>
</tr>
<tr>
<td>EDE 419 602 (5)</td>
<td>Social Studies for the Child</td>
<td>Keeler</td>
<td>12:00 - 2:00 M W</td>
</tr>
<tr>
<td>EDE 423 601 (2)</td>
<td>Music for the Child: Skills</td>
<td>Turney</td>
<td>3:00 - 4:00 T R</td>
</tr>
<tr>
<td>EDE 424 601 (3)</td>
<td>Music for the Child: Methods</td>
<td>Turney</td>
<td>12:00 - 2:00 R</td>
</tr>
<tr>
<td>EDE 424 602 (3)</td>
<td>Music for the Child: Methods</td>
<td>Turney</td>
<td>12:00 - 2:00 T</td>
</tr>
<tr>
<td>EDE 425 601 (4)</td>
<td>Health &amp; PE for the Child</td>
<td>Staff</td>
<td>12:00 - 3:00 T</td>
</tr>
<tr>
<td>EDE 425 602 (4)</td>
<td>Health &amp; PE for the Child</td>
<td>Staff</td>
<td>12:00 - 3:00 R</td>
</tr>
<tr>
<td>EDE 440 601 (4)</td>
<td>Teaching Methods: Elem. School</td>
<td>Hearn</td>
<td>2:00 - 3:00 T R</td>
</tr>
<tr>
<td>EDC 401 601 (5)</td>
<td>Curriculum &amp; Instruction</td>
<td>Dwyer</td>
<td>1:00 - 3:00 M W</td>
</tr>
<tr>
<td>EDC 485 601 (1)</td>
<td>Directed Reading</td>
<td>Pierce</td>
<td></td>
</tr>
<tr>
<td>EDC 485 602 (2)</td>
<td>Directed Reading</td>
<td>Pierce</td>
<td></td>
</tr>
<tr>
<td>EDC 485 603 (3)</td>
<td>Directed Reading</td>
<td>Pierce</td>
<td></td>
</tr>
<tr>
<td>EDC 485 604 (4)</td>
<td>Directed Reading</td>
<td>Pierce</td>
<td></td>
</tr>
<tr>
<td>EDE 409 601 (5)</td>
<td>Reading for the Child</td>
<td>Enright</td>
<td>11:00 - 1:00 M W</td>
</tr>
<tr>
<td>EDE 421 601 (4)</td>
<td>Art for the Child</td>
<td>Bryant</td>
<td>9:00 - 11:00 T R</td>
</tr>
<tr>
<td>EDF 305 601 (4)</td>
<td>Human Development &amp; Learning</td>
<td>Musgrove</td>
<td>11:00 - 1:00 T R</td>
</tr>
<tr>
<td>EDF 307 601 (4)</td>
<td>Social Foundations of Education</td>
<td>Bridges</td>
<td>9:00 - 11:00 M W</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Instructor</td>
<td>Time</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------</td>
<td>------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>OGY 541 601</td>
<td>Physical Oceanography</td>
<td>Carder</td>
<td>3:00 - 5:00 T R</td>
</tr>
<tr>
<td>OGY 691 601</td>
<td>Graduate Seminar</td>
<td>Staff</td>
<td>10:00 - 11:00 M</td>
</tr>
<tr>
<td>OGY 681 601-9</td>
<td>Graduate Research</td>
<td>Staff</td>
<td></td>
</tr>
<tr>
<td>OGY 699 601-9</td>
<td>M.A. Thesis</td>
<td>Staff</td>
<td></td>
</tr>
<tr>
<td>ENG 306 601</td>
<td>American Writers to 1912</td>
<td>Wells</td>
<td>9:00 - 11:00 T R</td>
</tr>
<tr>
<td>ENG 335 601</td>
<td>World Literature</td>
<td>Deer</td>
<td>11:00 - 1:00 M W</td>
</tr>
<tr>
<td>ENG 521 601</td>
<td>Restoration, 16th Century Lit.</td>
<td>Deer</td>
<td>3:00 - 5:00 M W</td>
</tr>
<tr>
<td>ENG 523 601</td>
<td>19th Century British Lit.</td>
<td>Garrett</td>
<td>1:00 - 3:00 T R</td>
</tr>
<tr>
<td>ENG 528 601</td>
<td>Contemporary Brit/Amer Fiction</td>
<td>Wells</td>
<td>3:00 - 5:00 T R</td>
</tr>
<tr>
<td>GER 310 601</td>
<td>German Literature in Translation</td>
<td>Stelzmann</td>
<td>1:00 - 3:00 M W</td>
</tr>
<tr>
<td>PHI 301 601</td>
<td>Problems of Philosophy</td>
<td>Carpenter</td>
<td>9:00 - 11:00 T R</td>
</tr>
<tr>
<td>SPE 321 601</td>
<td>Fundamentals of Oral Reading</td>
<td>Downs</td>
<td>1:00 - 3:00 M W</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1:00 - 2:00 F</td>
</tr>
<tr>
<td>MTH 211 601</td>
<td>Elementary Calculus I</td>
<td>Kelley</td>
<td>3:00 - 5:00 T R</td>
</tr>
<tr>
<td>MTH 323 601</td>
<td>Linear Algebra</td>
<td>Kelley</td>
<td>12:00 - 2:00 T R</td>
</tr>
<tr>
<td>GPY 308 601</td>
<td>Human Geography</td>
<td>LaForest</td>
<td>10:00 - 12:00 T R</td>
</tr>
<tr>
<td>HTY 316 601</td>
<td>The South After 1865</td>
<td>Silver</td>
<td>12:00 - 2:00 T R</td>
</tr>
<tr>
<td>HTY 320 601</td>
<td>20th Century, U.S.A.</td>
<td>Mayer</td>
<td>10:00 - 12:00 T R</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10:00 - 11:00 R</td>
</tr>
<tr>
<td>HTY 426 601</td>
<td>Reformation</td>
<td>Burke</td>
<td>12:00 - 2:00 M</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12:00 - 1:00 W</td>
</tr>
<tr>
<td>HTY 428 601</td>
<td>Enlightenment</td>
<td>Burke</td>
<td>3:00 - 5:00 M</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3:00 - 4:00 W</td>
</tr>
<tr>
<td>Course</td>
<td>Credits</td>
<td>Title</td>
<td>Time</td>
</tr>
<tr>
<td>--------</td>
<td>---------</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>POL 351</td>
<td>3</td>
<td>Intro. to Public Administration</td>
<td>2:00 - 4:00 T R</td>
</tr>
<tr>
<td>PSY 312</td>
<td>1</td>
<td>Research Methods Laboratory</td>
<td>2:00 - 4:00 W</td>
</tr>
<tr>
<td>PSY 335</td>
<td>4</td>
<td>Adjustment</td>
<td>10:00 - 12:00 M W</td>
</tr>
<tr>
<td>PSY 341</td>
<td>4</td>
<td>Child Psychology</td>
<td>10:00 - 12:00 T R</td>
</tr>
<tr>
<td>PSY 403</td>
<td>4</td>
<td>Developmental Psychology</td>
<td>1:00 - 3:00 T R</td>
</tr>
<tr>
<td>PSY 436</td>
<td>4</td>
<td>Psychological Assessment</td>
<td>1:00 - 3:00 M W</td>
</tr>
<tr>
<td>PSY 481</td>
<td>1</td>
<td>Selected Topics: Research</td>
<td></td>
</tr>
<tr>
<td>PSY 481</td>
<td>2</td>
<td>Selected Topics: Research</td>
<td></td>
</tr>
<tr>
<td>PSY 481</td>
<td>3</td>
<td>Selected Topics: Research</td>
<td></td>
</tr>
<tr>
<td>PSY 481</td>
<td>4</td>
<td>Selected Topics: Research</td>
<td></td>
</tr>
<tr>
<td>PSY 485</td>
<td>1</td>
<td>Selected Topics: Reading</td>
<td></td>
</tr>
<tr>
<td>PSY 485</td>
<td>2</td>
<td>Selected Topics: Reading</td>
<td></td>
</tr>
<tr>
<td>PSY 485</td>
<td>3</td>
<td>Selected Topics: Reading</td>
<td></td>
</tr>
<tr>
<td>PSY 485</td>
<td>4</td>
<td>Selected Topics: Reading</td>
<td></td>
</tr>
<tr>
<td>SSI 301</td>
<td>4</td>
<td>Social Science Statistics</td>
<td>3:00 - 5:00 T R</td>
</tr>
</tbody>
</table>

**EVENING OFFERINGS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Title</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBS 401</td>
<td>3</td>
<td>Senior Seminar</td>
<td>6:00 - 9:00 T</td>
</tr>
<tr>
<td>CBS 401</td>
<td>3</td>
<td>Senior Seminar</td>
<td>6:00 - 9:00 R</td>
</tr>
</tbody>
</table>

**COLLEGE OF BUSINESS ADMINISTRATION**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Title</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 412</td>
<td>3</td>
<td>Federal Taxes</td>
<td>7:00 - 9:00 R</td>
</tr>
<tr>
<td>ACC 502</td>
<td>3</td>
<td>Accounting Concepts &amp; Methodology</td>
<td>7:00 - 9:00</td>
</tr>
<tr>
<td>ACC 602</td>
<td>3</td>
<td>Managerial Accounting &amp; Control</td>
<td>7:00 - 9:00 M</td>
</tr>
<tr>
<td>ECN 502</td>
<td>3</td>
<td>Nat'l Income Theory</td>
<td>7:00 - 9:00 R</td>
</tr>
<tr>
<td>MAN 321</td>
<td>3</td>
<td>Behav. Factors in Organizations</td>
<td>7:00 - 9:00 T</td>
</tr>
<tr>
<td>MAN 501</td>
<td>3</td>
<td>Survey of Management</td>
<td>7:00 - 9:00 W</td>
</tr>
<tr>
<td>MKT 601</td>
<td>3</td>
<td>Advanced Marketing Problems</td>
<td>7:00 - 9:00 T</td>
</tr>
</tbody>
</table>
COLLEGE OF EDUCATION

EDC 501 691 (5) Curriculum & Instruction (Elem.) 5:00 - 9:00 R  Staff
EDC 501 692 (5) Curriculum & Instruction (Sec.) 5:00 - 9:00 R  Staff
EDC 673 691 (4) School Law 6:00 - 9:00 T  Craig
EDC 426 691 (3) Creative Arts, Early Childhood 6:00 - 8:00 T  Kaufman
EDC 529 691 (5) Programs in Early Childhood 5:00 - 9:00 R  Auleta
EDC 619 691 (4) Trends in Social Studies Instr. 5:00 - 8:00 T  Johnson
EDF 605 691 (4) Foundations of Measurement 6:00 - 9:00 T  Neel
EDF 611 691 (4) Psch. Foundations of Education 5:00 - 8:00 R  Musgrove
EDF 617 691 (5) Meas. Individual Intelligence 5:00 - 7:00 M W  Musgrove
EDF 621 691 (4) Socio-Econ Found. of Amer Educ. 6:00 - 9:00 W  Bridges
EDF 623 691 (4) Hist. Found. of Amer. Educ. 6:00 - 9:00 M  Urban
EDG 581 691 (4) Principles of Guidance 5:00 - 8:00 W  Ferguson
EDL 513 691 (4) General Reference Sources 6:00 - 9:00 W  Gates
EDL 625 691 (4) Reading Guidance Programs 6:00 - 9:00 W  Anderson
EDR 509 691 (4) Trends in Reading (Sec.) 6:00 - 9:00 W  Lowe
EDR 530 691 (4) Corrective Reading 5:00 - 8:00 W  Enright
EDC 311 691 (4) Exceptional Children 5:00 - 8:00 R  Singh
EDS 531 691 (4) Behavioral Disorders 5:00 - 8:00 T  Guetzloe

COLLEGE OF ENGINEERING

EGS 407 691/761 (3) Engineering Valuation II 6:00 - 9:00 R  Cowell
EGS 507 691/761 (3) Engineering Valuation Studies 6:00 - 9:00 R  Bull
EGS 542 691/761 (3) Num. Meth. Systems Engineering II 6:00 - 9:00 T  Doty
EGS 560 691/761 (3) Industrial Statistic 6:00 - 9:00 T  Rhodes
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Section</th>
<th>Credits</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGS 581</td>
<td>693/763</td>
<td>3</td>
<td>6:00 - 9:00 T</td>
<td>Payne</td>
</tr>
<tr>
<td>ETK 302</td>
<td>691/761</td>
<td>2</td>
<td>6:00 - 8:00 M</td>
<td>Naehring</td>
</tr>
<tr>
<td>ETK 501</td>
<td>691/761</td>
<td>3</td>
<td>6:00 - 9:00 W</td>
<td>Henry</td>
</tr>
</tbody>
</table>

**INSTITUTES**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Section</th>
<th>Credits</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>REH 501</td>
<td>691</td>
<td>5</td>
<td>6:00 - 10:00 M</td>
<td>Ebra</td>
</tr>
</tbody>
</table>

**LANGUAGE-LITERATURE**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Section</th>
<th>Credits</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 321</td>
<td>691</td>
<td>4</td>
<td>7:00 - 10:00 T</td>
<td>McClintock</td>
</tr>
<tr>
<td>ENG 531</td>
<td>691</td>
<td>4</td>
<td>6:00 - 10:00 M</td>
<td>Hall</td>
</tr>
<tr>
<td>ENG 535</td>
<td>691</td>
<td>4</td>
<td>6:00 - 10:00 R</td>
<td>Garrett</td>
</tr>
<tr>
<td>PHI 407</td>
<td>691</td>
<td>4</td>
<td>6:00 - 10:00 T</td>
<td>Carpenter</td>
</tr>
</tbody>
</table>

**MATHEMATICS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Section</th>
<th>Credits</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 583</td>
<td>695</td>
<td>3</td>
<td>6:00 - 9:00 R</td>
<td>Rose</td>
</tr>
</tbody>
</table>

**SOCIAL SCIENCE**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Section</th>
<th>Credits</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPY 371</td>
<td>691</td>
<td>5</td>
<td>6:00 - 10:00 M</td>
<td>LaForest</td>
</tr>
<tr>
<td>GPY 405</td>
<td>691</td>
<td>5</td>
<td>6:00 - 10:00 W</td>
<td>LaForest</td>
</tr>
<tr>
<td>HTY 321</td>
<td>691</td>
<td>4</td>
<td>6:00 - 9:00 W</td>
<td>Tsangadas</td>
</tr>
<tr>
<td>HTY 465</td>
<td>691</td>
<td>4</td>
<td>6:00 - 9:00 M</td>
<td>Swanson</td>
</tr>
<tr>
<td>POL 561</td>
<td>691</td>
<td>4</td>
<td>6:00 - 10:00 R</td>
<td>Horrigan</td>
</tr>
<tr>
<td>PSY 311</td>
<td>691</td>
<td>4</td>
<td>6:00 - 10:00 W</td>
<td>Fowler</td>
</tr>
<tr>
<td>PSY 404</td>
<td>691</td>
<td>4</td>
<td>6:00 - 10:00 M</td>
<td>Rahn</td>
</tr>
<tr>
<td>PSY 491</td>
<td>691</td>
<td>4</td>
<td>6:00 - 10:00 T</td>
<td>Toth</td>
</tr>
<tr>
<td>SOC 301</td>
<td>691</td>
<td>4</td>
<td>6:00 - 9:00 R</td>
<td>Emond</td>
</tr>
<tr>
<td>SOC 331</td>
<td>691</td>
<td>4</td>
<td>6:00 - 9:00 M</td>
<td>Senior</td>
</tr>
<tr>
<td>SOC 535</td>
<td>691</td>
<td>4</td>
<td>6:00 - 9:00 T</td>
<td>Nesman</td>
</tr>
<tr>
<td>SOC 583</td>
<td>691</td>
<td>4</td>
<td>6:00 - 9:00 W</td>
<td>Hansen</td>
</tr>
<tr>
<td>SSI 345</td>
<td>691</td>
<td>4</td>
<td>6:00 - 10:00 M</td>
<td>Hechiche</td>
</tr>
<tr>
<td>SSI 415</td>
<td>691</td>
<td>4</td>
<td>6:00 - 10:00 W</td>
<td>Reiner</td>
</tr>
</tbody>
</table>
WINTER QUARTER, 1970 CALENDAR

November 25  LAST DAY TO APPLY FOR ADMISSION OR READMISSION

December 9  Registration on St. Petersburg Campus

January 4 and 5  Registration on Tampa Campus

January 6  Classes begin

March 19  End of Quarter

REGISTRATION INSTRUCTIONS

New students, former students returning* and students currently enrolled in the University who wish to enroll ONLY for courses on the St. Petersburg Campus may register on the St. Petersburg Campus on Wednesday, December 9 from 3:00 - 6:00 P.M. (see registration appointment instructions below) or by appointment on the Tampa Campus on January 4 or 5 (see Class Schedule to be published by Office of the Registrar for registration instructions).

Students who wish to enroll simultaneously for courses on both campuses must register on the Tampa Campus on January 4 or 5 by appointment.

*Former students, returning after an absence of two or more years, must complete an application for readmission by November 25, incurring no additional fee.

FEES

Application Fee .......................................................... $15.00

Registration Fee:
1) Less than 7 quarter hours, per hour:

<table>
<thead>
<tr>
<th>Florida Residents</th>
<th>Non Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate:</td>
<td>$14.00</td>
</tr>
<tr>
<td>Graduate:</td>
<td>$16.00</td>
</tr>
</tbody>
</table>

2) Seven or more credit hours:

<table>
<thead>
<tr>
<th>Florida Residents</th>
<th>Non Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate:</td>
<td>$150.00</td>
</tr>
<tr>
<td>Graduate:</td>
<td>$175.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Florida Residents</th>
<th>Non Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate:</td>
<td>$14.00</td>
</tr>
<tr>
<td>Graduate:</td>
<td>$16.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Florida Residents</th>
<th>Non Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate:</td>
<td>$150.00</td>
</tr>
<tr>
<td>Graduate:</td>
<td>$175.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Florida Residents</th>
<th>Non Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate:</td>
<td>$39.00</td>
</tr>
<tr>
<td>Graduate:</td>
<td>$41.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Florida Residents</th>
<th>Non Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate:</td>
<td>$450.00</td>
</tr>
<tr>
<td>Graduate:</td>
<td>$475.00</td>
</tr>
</tbody>
</table>
All courses offered on the St. Petersburg Campus have full resident status. New students who wish to enroll for Quarter II (Winter, 1970) must apply for admission to the university by November 25. Application forms and other information may be obtained by calling 898-7411 or writing:

University of South Florida
St. Petersburg Campus
830 First Street, South
St. Petersburg, Florida 33701

REGISTRATION BY APPOINTMENT
St. Petersburg Campus
Appointments will be scheduled in the alphabetical sequence listed below. CURRENTLY ENROLLED STUDENTS need simply arrive at their appointed time. NEW STUDENTS and FORMER STUDENTS RETURNING should bring with them their letter of admission. No appointment card is necessary to register on the St. Petersburg Campus.

<table>
<thead>
<tr>
<th>Pre-Registration Advising</th>
<th>AB 3:00</th>
<th>CD 3:15</th>
<th>EF 3:30</th>
<th>GH 3:45</th>
<th>IJ 4:00</th>
<th>KL 4:15</th>
<th>MN 4:30</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OP 4:45</td>
<td>QR 5:00</td>
<td>ST 5:15</td>
<td>UV 5:30</td>
<td>WX 5:45</td>
<td>YZ 6:00</td>
<td></td>
</tr>
</tbody>
</table>

Courses of interest to you may be added to the Winter Quarter schedule following the printing of this brochure. For information about new courses, call the Office for Academic Affairs, 898-7411.

The University of South Florida is an affirmative action Equal Opportunity Employer.
# DAYTIME OFFERINGS

## COLLEGE OF BASIC STUDIES

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Title</th>
<th>Instructor</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBS 401 601</td>
<td>3</td>
<td>SS: Freedom &amp; Responsibility</td>
<td>Garrett</td>
<td>9:00 - 12:00 R</td>
</tr>
</tbody>
</table>

## COLLEGE OF BUSINESS ADMINISTRATION

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Title</th>
<th>Instructor</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 303 601</td>
<td>3</td>
<td>Intermediate Accounting III</td>
<td>McClung</td>
<td>3:00 - 5:00 T R</td>
</tr>
<tr>
<td>ACC 401 601</td>
<td>3</td>
<td>Advanced Accounting I</td>
<td>McClung</td>
<td>12:00 - 2:00 T R</td>
</tr>
<tr>
<td>ECN 331 601</td>
<td>5</td>
<td>Bus. Econ. Statistics I</td>
<td>Cloninger</td>
<td>2:00 - 4:00 M W F</td>
</tr>
<tr>
<td>FIN 411 601</td>
<td>5</td>
<td>Adv. Corporation Finance</td>
<td>Smith</td>
<td>10:00 - 12:00 T. R.</td>
</tr>
</tbody>
</table>

## COLLEGE OF EDUCATION

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Title</th>
<th>Instructor</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDC 401 601</td>
<td>5</td>
<td>Curriculum &amp; Instruction</td>
<td>Dwyer</td>
<td>9:00 - 11:00 T R</td>
</tr>
<tr>
<td>*EDC 480 604</td>
<td>4</td>
<td>DS: I-C Environment Problems</td>
<td>Hearn/Thompson</td>
<td>9:00 - 12:00 M T W R</td>
</tr>
<tr>
<td>*EDC 480 614</td>
<td>4</td>
<td>DS: I-C Social Problems</td>
<td>Hearn/Thompson</td>
<td>9:00 - 12:00 M T W R</td>
</tr>
<tr>
<td>*EDC 480 624</td>
<td>4</td>
<td>DS: I-C Cultural Problems</td>
<td>Hearn/Thompson</td>
<td>9:00 - 12:00 M T W R</td>
</tr>
<tr>
<td>EDC 485 601</td>
<td>1</td>
<td>Directed Reading</td>
<td>Pierce</td>
<td></td>
</tr>
<tr>
<td>EDC 485 602</td>
<td>2</td>
<td>Directed Reading</td>
<td>Pierce</td>
<td></td>
</tr>
<tr>
<td>EDC 485 603</td>
<td>3</td>
<td>Directed Reading</td>
<td>Pierce</td>
<td></td>
</tr>
<tr>
<td>EDC 485 604</td>
<td>4</td>
<td>Directed Reading</td>
<td>Pierce</td>
<td></td>
</tr>
<tr>
<td>EDC 501 601</td>
<td>5</td>
<td>Curriculum &amp; Instruction (Elem.,)</td>
<td>McClendon</td>
<td>9:00 - 11:00 T R</td>
</tr>
<tr>
<td>EDC 501 602</td>
<td>5</td>
<td>Curriculum &amp; Instruction (Sec.,)</td>
<td>McClendon</td>
<td>9:00 - 11:00 T R</td>
</tr>
<tr>
<td>EDC 671 601</td>
<td>4</td>
<td>Principles of Educ. Administration</td>
<td>Cleary</td>
<td>1:00 - 3:00 M W</td>
</tr>
<tr>
<td>EDE 409 601</td>
<td>5</td>
<td>Reading For The Child</td>
<td>Dwyer</td>
<td>9:00 - 11:00 M W</td>
</tr>
</tbody>
</table>

*Open ONLY to Elementary “Block” Students.
EDE 411 601 (4) Language Arts For The Child
12:00 - 2:00 T R  
Dwyer

EDE 425 601 (4) Health & P. E. For The Child
1:00 - 3:00 M W  
Weinberg

EDE 440 601 (4) Teaching Methods, Elem. School
9:00 - 11:00 T R  
Dwyer

EDE 529 601 (5) Programs, Early Child Educ.
11:00 - 1:00 M W  
Schwartz

EDE 609 601 (4) Trends In Reading, Elem. School
9:00 - 11:00 M W  
Dwyer

EDE 611 601 (4) Trends In Language Instruction
12:00 - 2:00 T R  
Dwyer

EDE 617 601 (4) Trends In Science Instruction
2:00 - 5:00 M  
2:00 - 4:00 W  
Barfield

EDF 307 601(4) Social Foundations of Education
2:00 - 4:00 T R  
Bridges

EDF 605 601 (4) Foundations of Measurement
10:00 - 12:00 T R  
Musgrove

EDF 611 601 (4) Psychological Found. of Educ.
2:00 - 4:00 T R  
Musgrove

EDS 322 601 (4) Intro. Mental Retardation
11:00 - 1:00 T R  
Smitzes

-------------------------------

COLLEGE OF LIBERAL ARTS

COM 301 601 (4) Popular Arts in America
1:00 - 3:00 T R  
Deer

COM 351 601 (3) Literature And The Film
9:00 - 12:00 T  
Deer

COM 530 601 (3) Spec. Studies in Mass Communication
2:00 - 4:00 M W  
Deer

ENG 307 601 (4) Brit. Amer. Writers to 1945
9:00 - 11:00 M W  
Wells

ENG 325 601 (4) Adv. Expository Writing
3:00 - 5:00 M W  
Garrett

ENG 411 601 (4) Plays of Shakespeare
11:00 - 1:00 M W  
Deer

ENG 528 601 (4) Contemp. Brit. Amer. Fiction
3:00 - 5:00 T R  
Wells

ENG 481 601 (1) Individual Research  
Staff
ENG 481 602 (2) Individual Research  
Staff
ENG 481 603 (3) Individual Research  
Staff
ENG 481 604 (4) Individual Research  
Staff
HTY 311 601 (4) History of The South Silver
10:00 - 12:00 T R

HTY 423 601 (4) Medieval Thought & Culture Burke
3:00 - 5:00 M W

HTY 485 601 (1) Directed Reading Staff
HTY 485 602 (2) Directed Reading Staff
HTY 485 603 (3) Directed Reading Staff
HTY 485 604 (4) Directed Reading Staff

PSY 335 601 (4) Adjustment Toth
1:00 - 3:00 T R

PSY 401 601 (4) General Psychology Fowler
1:00 - 3:00 M W

PSY 402 601 (4) Learning Fowler
1:00 - 3:00 T R

PSY 404 601 (4) Social Psychology Rahn
10:00 - 12:00 T R

PSY 452 601 (4) Personality Toth
10:00 - 12:00 M W

PSY 481 601 (1) ST: Research Staff
PSY 481 602 (2) ST: Research Staff
PSY 481 603 (3) ST: Research Staff
PSY 481 604 (4) ST: Research Staff

PSY 485 601 (1) ST: Readings Staff
PSY 485 602 (2) ST: Readings Staff
PSY 485 603 (3) ST: Readings Staff
PSY 485 604 (4) ST: Readings Staff

SOC 371 601 (4) Race & Ethnic Relations Senior
9:00 - 11:00 M W

EVENING OFFERINGS

COLLEGE OF BASIC STUDIES

CBS 401 691 (3) SS: Freedom and Responsibility Wells
6:00 - 9:00 R

COLLEGE OF BUSINESS ADMINISTRATION

ACC 502 691 (3) Acctng. Concepts & Methods II McClung
6:00 - 10:00 M

ECN 607 691 (3) Aggregate Economics Cooke
7:00 - 10:00 R

FIN 305 691 (5) Principles of Real Estate Rappold
6:00 - 9:00 M W

COLLEGE OF EDUCATION

EDC 661 691 (4) Principles of Edu. Supervision Beasley
6:00 - 10:00 R
EDE 415 691 (5) Arithmetic For The Child 6:00 - 10:00 M McClendon
EDE 421 691 (4) Art For The Child 6:00 - 10:00 T Bryant
EDE 531 691 (4) Language in Early Childhood Educ. 6:00 - 10:00 R Schwartz
EDE 621 691 (4) Art For Elem. School Teacher 6:00 - 10:00 T Bryant
EDF 305 691 (4) Human Development & Learning 5:00 - 9:00 W Musgrove
EDF 621 691 (4) Soci-Econ Found. of Amer. Educ. 6:00 - 10:00 W Tuttle
EDG 581 691 (4) Principles of Guidance 6:00 - 10:00 T Ferguson

COLLEGE OF ENGINEERING
EGB 337 691 (3) Engineering Valuation I 761 6:00 - 10:00 W Staff
EGS 407 691 (3) Engineering Valuation II 761 6:00 - 10:00 R Payne
ETK 422 691 (3) Prin. Industrial Operations II 761 6:00 - 10:00 T Payne

COLLEGE OF LIBERAL ARTS
ENG 301 691 (4) Current Literature 6:00 - 10:00 T Wells
ENG 430 691 (4) 19th Cent. British Novel 6:00 - 10:00 W Garrett
ENG 535 691 (4) Transformational Grammar 6:00 - 10:00 M Garrett
HTY 304 691 (4) Expansion And Development 6:00 - 10:00 M Belohlavek
HTY 464 691 (4) Fascism & Totalitarianism 7:00 - 10:00 W Kleine
HTY 587 691 (4) Theory of History 6:00 - 10:00 T Burke
HTY 591 695 (4) PS: 20th Century Cuba 6:00 - 10:00 R Perez
MTH 573 691 (3) Set Theory & Algebra 6:00 - 10:00 R Kelley
MTH 583 691 (3) Logic Foundations 6:00 - 10:00 T Kelley
POL 561 691 (4) Politics in Developing Areas 6:00 - 10:00 M Horrigan
PSY  341 691 (4)  Child Psychology  Rahn  
       6:00 - 10:00 M

PSY  491 691 (4)  St. Drugs & Behavior  Toth  
       6:00 - 10:00 T

PSY  491 692 (4)  St. Behavior Modification  Rahn  
       6:00 - 10:00 W

REL  300 691 (4)  Introduction to Religion  Hoffmann  
       6:00 - 10:00 W

SOC  563 691 (4)  Juvenile Delinquency  Senior  
       6:00 - 10:00 T

SSI  301 691 (4)  Social Science Statistics  Fowler  
       6:00 - 10:00 R

---

INSTITUTE

REH  505 691 (5)  Spec. Prob. in Rehab. Counseling  Pinkard  
       6:00 - 10:00 R

---

MARINE SCIENCE INSTITUTE

(Six Week Session — June 15 - July 24)

BOT  543 601 (5)  Phycology  Humm  
       9:00 - 5:00 M W F

OGY  521 601 (4)  Chemical Oceanography  Martin  
       9:00 - 5:00 T R

OGY  681 601 (1)  Graduate Research  Staff
OGY  681 602 (2)  Graduate Research  Staff
OGY  681 603 (3)  Graduate Research  Staff
OGY  681 604 (4)  Graduate Research  Staff
OGY  681 605 (5)  Graduate Research  Staff

OGY  699 601 (1)  M. A. Thesis  Staff
OGY  699 602 (2)  M. A. Thesis  Staff
OGY  699 603 (3)  M. A. Thesis  Staff
OGY  699 604 (4)  M. A. Thesis  Staff

ZOO  519 601 (5)  Marine Ichthyology  Baird  
       9:00 - 5:00 M W F

ZOO  546 601 (5)  Marine Invertebrate Zoology  Staff  
       9:00 - 5:00 M W F

*ZOO  615 601 (4)  Zooplankton Systematics  Hopkins  
       9:00 - 5:00 T R

* For Graduate Students Only.
SUMMER QUARTER, 1971

Wednesday, May 12  Last day for DEGREE-SEEKERS to apply for admission or readmission. (NON-DEGREE-SEEKERS, please see special application instructions below.)

Wednesday, June 9  Registration on St. Petersburg Campus

Monday, May 24 thru Friday, May 28  Registration, for Continuing Students, on Tampa Campus

Monday, June 14  Registration for New Students and cleanup registration for Continuing Students, on Tampa Campus.

Tuesday, June 15  Classes begin

Friday, August 13  End of Summer Quarter

APPLICATION INSTRUCTIONS FOR NON-DEGREE-SEEKERS

The application deadline will be extended for transient students and for teachers who wish to enroll as non-degree seekers for certification purposes. These students may obtain and file the admission application at the time of registration.

Transient students must present a statement indicating good standing, or authorization to attend here by their parent institution. Teachers must be prepared to present proof of employment, or their certification.

Students filing this special admission application are entitled to summer enrollment ONLY and must complete a regular application for admission to the University of South Florida by the appropriate application deadline if they desire to attend the University in any subsequent quarter. This application may be completed in the Office of Admissions during the Summer Quarter. All required credentials must be submitted for review before a decision can be made regarding acceptance to the University.

HOW TO APPLY

When you write for an application, indicate whether you need FRESHMAN (no previous college), TRANSFER (attended Florida colleges), OUT-OF-STATE TRANSFER (attended out-of-state colleges) or GRADUATE application papers. Make your request to Office of Admissions, University of South Florida, Tampa, Florida 33620.

It is wise to request your application early — AND PLEASE NOTE: All applicants must enter their Social Security Number on the application. Applications will be returned to the applicant if they do not include Social Security Number and/or the $15 non-refundable application fee.
Pre-registration Advising

Advisers representing the various colleges will be available at the following times:

**College of Business Administration:**
- Monday, June 7: 3:00 - 5:00
- Tuesday, June 8: 4:00 - 7:00

**College of Education:**
- Monday, June 7 (Undergraduates only): 1:00 - 5:00
- Tuesday, June 8 (Graduates only): 3:00 - 6:00

**College of Engineering:**
- Monday, June 7: 3:00 - 6:00
- Tuesday, June 8: 9:00 - 3:00

**College of Liberal Arts:**
- Monday, June 7: 3:00 - 6:00
- Tuesday, June 8: 3:00 - 6:00

Registration Instructions

New students, former students returning* and students currently enrolled in the University who wish to enroll only for courses on the St. Petersburg Campus may register on the St. Petersburg Campus on Wednesday, June 9 (see schedule below), or on the Tampa Campus on Monday, June 14. Appointments for registration on the Tampa Campus will not be mailed to continuing students this summer. Instead, a listing of alphabetical groups and the registration time assigned to each group will be published in the University Class Schedule and posted on various campus bulletin boards.

*Students returning after an absence of one or more quarters must file an Update Application with the Office of Admissions (St. Petersburg Campus, Administration Building Room 128) prior to registration.

Continuing students who wish to enroll simultaneously on both campuses must register on the Tampa Campus between May 24 - May 28, or on June 14.

New and returning students who wish to enroll simultaneously on both campuses must register on the Tampa Campus at the centralized open registration on Monday, June 14.
REGISTRATION BY APPOINTMENT
St. Petersburg Campus

Appointments will be scheduled in the alphabetical sequence below. CURRENTLY ENROLLED STUDENTS and FORMER STUDENTS RETURNING need simply arrive at their appointed time. NEW STUDENTS should bring with them their letter of admission. No appointment card is necessary for registration on the St. Petersburg Campus.

3:30 P.M.          A-B
3:45 P.M.          C-D
4:00 P.M.          E-F
4:15 P.M.          G-H-I
4:30 P.M.          J-K-L
4:45 P.M.          M-N
5:00 P.M.          O-P-Q
5:15 P.M.          R-S
5:30 P.M.          T-U
5:45 P.M.          V-W
6:00 P.M.          X-Y-Z

FEES

Application Fee ........................................ $15.00

Registration Fee:

1) Less than 7 quarter hours, per hour:

   Florida Residents       Non Residents
   Undergraduate: $14.00    Undergraduate: $39.00
   Graduate: $16.00        Graduate: $41.00

2) Seven or more credit hours:

   Florida Residents       Non Residents
   Undergraduate: $150.00   Undergraduate: $450.00
   Graduate: $175.00       Graduate: $475.00

All courses offered on the St. Petersburg campus have full resident status. Courses of interest to you may be added to the Spring Quarter schedule following publication of this brochure. For information, please call the Office of Admissions and Records, 898-7411, or write to:

The University of South Florida
St. Petersburg Campus
830 First Street, South
St. Petersburg, Florida 33701

* * * * * * *

No person shall, on the basis of race, color or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity at the University of South Florida. The University is an affirmative action Equal Opportunity Employer.
The University of South Florida
St. Petersburg Campus
830 First Street, South
St. Petersburg, Florida 33701